

# 2017 Budget Document



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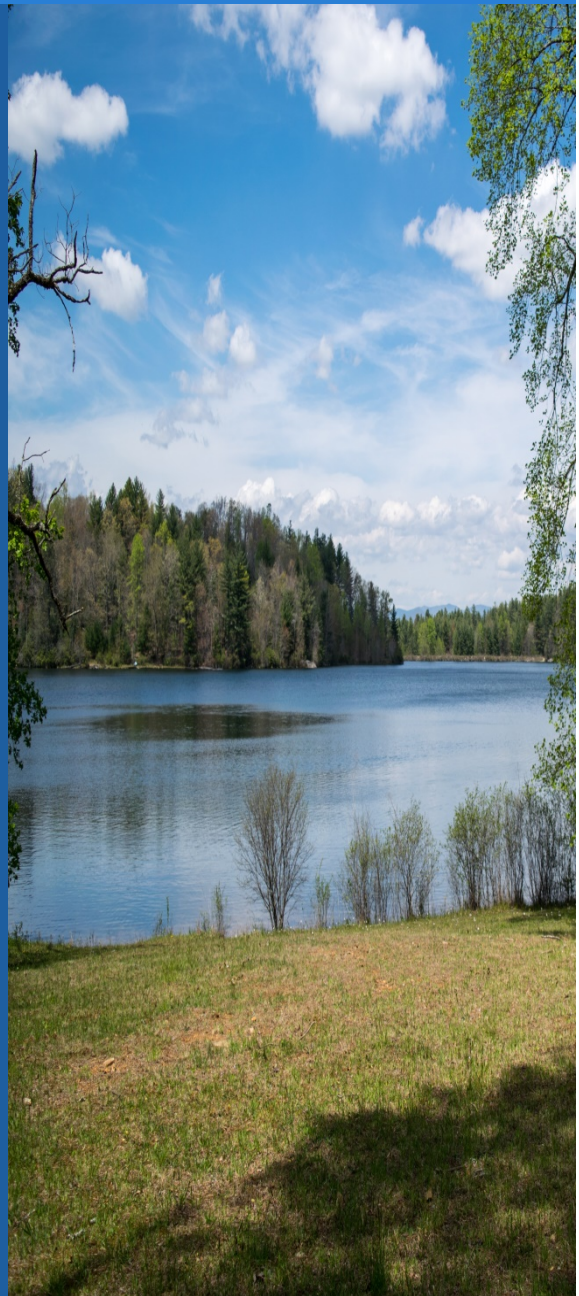


# 2016-2017

## Budget Document

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W. Scott Powell, CLGFO	Director of Finance



**Phone:** (828) 254-9646  
**Website:** [www.msdbc.org](http://www.msdbc.org)

## 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, 2015. This is the nineteenth 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 FY2017 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

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## OF BUNCOMBE COUNTY, NORTH CAROLINA

June 15, 2016

Members of the Board

Metropolitan Sewerage District of Buncombe County, North Carolina

W. H. Mull Building

2028 Riverside Drive

Asheville, North Carolina 28804

**Subject:** 2017 Budget Document

Dear Members of the Board,

We respectfully present the FY17 Budget for the Metropolitan Sewerage District of Buncombe County, North Carolina. The budget incorporates staff recommendations presented to and accepted by the Personnel Committee, which met on April 26, 2016, the Capital Improvement Program Committee, which met on April 28, 2016, and the Finance Committee, which met on May 5, 2016.

We have developed the FY17 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 FY16, the District's domestic and industrial revenue is 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 approximate 2.5% 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 including minimizing the occurrence of sanitary sewer overflows (SSOs).

The SS Construction Department continues to expand its participation in sewerline rehabilitation and replacement efforts to minimize SSOs. Goals for FY17 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 FY16, the District will begin the construction phase of the \$11.5 million Headworks project. This project includes installing new bar screens and grit removal systems along with fine screens and a surge system for peak flows.

## **Operating Budget**

The proposed \$16.1 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 3.0% salary adjustment—CPI increased 1.6% 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 a \$252,000 net impact on current year expenditures.
  - ✦ An 8.7% increase in funding for North Carolina retirement cost—In 2016, the Local Governmental Employees' Retirement Systems (LERS) adopted a rate stabilization policy to allow for predictability and stability in the contribution rates, while continuing to keep the local retirement system one of the best-funded systems in the country. Subsequently, LERS raised the District's contribution rate from 6.67% to 7.25% of total salary and wages. Over the next five years, contribution rates are projected to increase to an amount slightly over 8.25%. This has a \$48,737 impact on current year expenditures.
  - ✦ A 10% 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 has 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. These changes have been endorsed by the Employee Advisory Committee. The two groups continue to work on a

long-term strategic plan to address controllable medical issues. The 10% increase in the employer contribution is in line with medical and prescription trend and has a \$173,512 impact on current year expenditures.

- ✕ Funding for Post-Employment Health Benefit—Starting in FY09, GASB 45 required recognition of cost for Post-Employment Health Benefits. An actuarial study was done in the current year, which stated that FY17 funding should be \$270,000. Current funding has been implemented into the proposed FY17 budget and the current business plan and represents 1.7% of total operations.

- ◀ **Materials, Supplies, and Service expenditures increased 0.68% 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. The District has increased specific line items to address regulatory and operational needs (i.e. Title V Air Permit). Discretionary expenditures have been limited where practicable. This has a \$43,109 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 FY17 is \$22 million, which is comprised of an estimated \$20.9 million in construction, \$100,000 of reimbursement and \$1 million in contingency. A detailed list of individual projects and planned expenditures by year was presented at the April 28, 2016 CIP meeting.

The Board has consistently financed its Capital Improvement Program through revenue bonds and pay-as-you-go moneys. As of June 30, 2016, the District will have \$95.31 million in outstanding revenue bond debt, with total debt service of \$7.96 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, and will improve the operational performance and extend the life of the collection system. The estimated cost over a 10-year period is approximately \$184.8 million out of a total CIP budget of \$211.5 million. 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 have been completed, our focus has been redirected to rehabilitation of the State-mandated 250,000 feet of sewerline every five (5) 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, and 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, and severity of defects, and 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 FY17 include the \$588,000 South French Broad Interceptor Grouting Project with approximately 7,008 linear feet, \$583,500 Arco Road with over 2,022 linear feet, \$1,377,000 Lining Contract No. 8 with over 11,000 linear, \$532,573 Sandhill at Russell/Davenport with over 2,341 linear feet, and \$400,726 Stratford Road at Oxford Court, with over 1,960 linear feet. In FY17, Treatment Plant Headworks improvements are scheduled to cost \$5.5 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 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 \$11.5 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. Design is planned for FY16 and construction is scheduled to begin in FY17.
- **High Rate Primary Treatment Project:** This \$9.61 million project will provide primary clarification by removing solids before the biological treatment stage. This will provide a more effective treatment, and will also 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 is planned for FY17 and construction is scheduled to begin in FY18.

Long-term alternatives focused on the biological treatment aspect (currently RBC's). Specific alternatives will be evaluated if and when future regulatory requirements change over time. The two projects noted above allow for flexibility among the viable options for biological treatment.

### Impact of CIP on Operations

For most municipal and county governments, capital improvements often result in higher operating costs. For example, larger buildings increase utility expenses, and new facilities such as libraries or swimming pools involve hiring additional staff. The opposite holds true for the District.

Through major rehabilitation projects to the sewer collection system, the District is expected to realize a modest cost reduction in wastewater treatment operations by reducing infiltration of groundwater and inflow of surface water into the sewer system. Mud and grit, which accompany infiltration/inflow, will also be reduced, thereby increasing the life of pumps and other treatment equipment adversely effected by abrasion.

Other savings are realized from capital expenditures as new or rehabilitated sewer lines also require less maintenance and are not as susceptible to frequent blockages and overflows as older and smaller lines.

The District's major environmental responsibility is reduction of Sewer System Overflows (SSOs). Staff has estimated the average cost of responding to an SSO to be approximately \$2,175. During FY 2000, the District experienced more than 289 SSOs, which have been reduced to less than 30 in recent years. Thus,

the District has been able to focus approximately \$500,000 additional dollars annually on preventative maintenance as opposed to responding to spill events.

Moreover, the North Carolina Department of Environment and Natural Resources has the discretion to levy fines up to \$25,000 per day per SSO if the District does not follow through on renovations and rehabilitations planned for areas identified as requiring capital improvements. Therefore, the CIP has a positive impact on operations by reducing repair and replacement while avoiding environmental penalties.

### **Sewer Rate Increase**

Staff recommends a 2.5% increase in domestic sewer rates and meter fees for FY17, 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 50,000 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 increase 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 FY17 are shown below:

	FY12	FY13	FY14	FY15	FY16	FY17
Rate Increase %	3.0%	2.5%	2.5%	2.5%	2.5%	2.5%
Meter, Maintenance & Billing Fees	\$7.05	\$8.34	\$8.53	\$8.73	\$8.90	\$9.08
Flow Rate (per ccf)	\$3.88	\$3.98	\$4.08	\$4.18	\$4.28	\$4.39
Avg. Monthly Bill (5ccf)	\$26.45	\$27.14	\$27.81	\$28.49	\$29.15	\$29.88

### **Distinguished Budget Award**

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to the Metropolitan Sewerage District of Buncombe County,

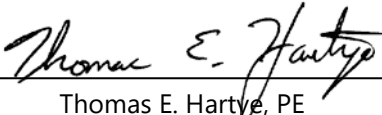
North Carolina for its annual budget for the fiscal year beginning July 1, 2015. This is the nineteenth consecutive year that the MSD has received this award. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communication device.

This award is valid for a period of one year only. We believe our FY17 budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

### **In Closing**

The Budget represents the combined efforts and guidance of the Board, its Committees and staff. A special thanks to Teresa Gilbert for assembling the budget documents, 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.

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

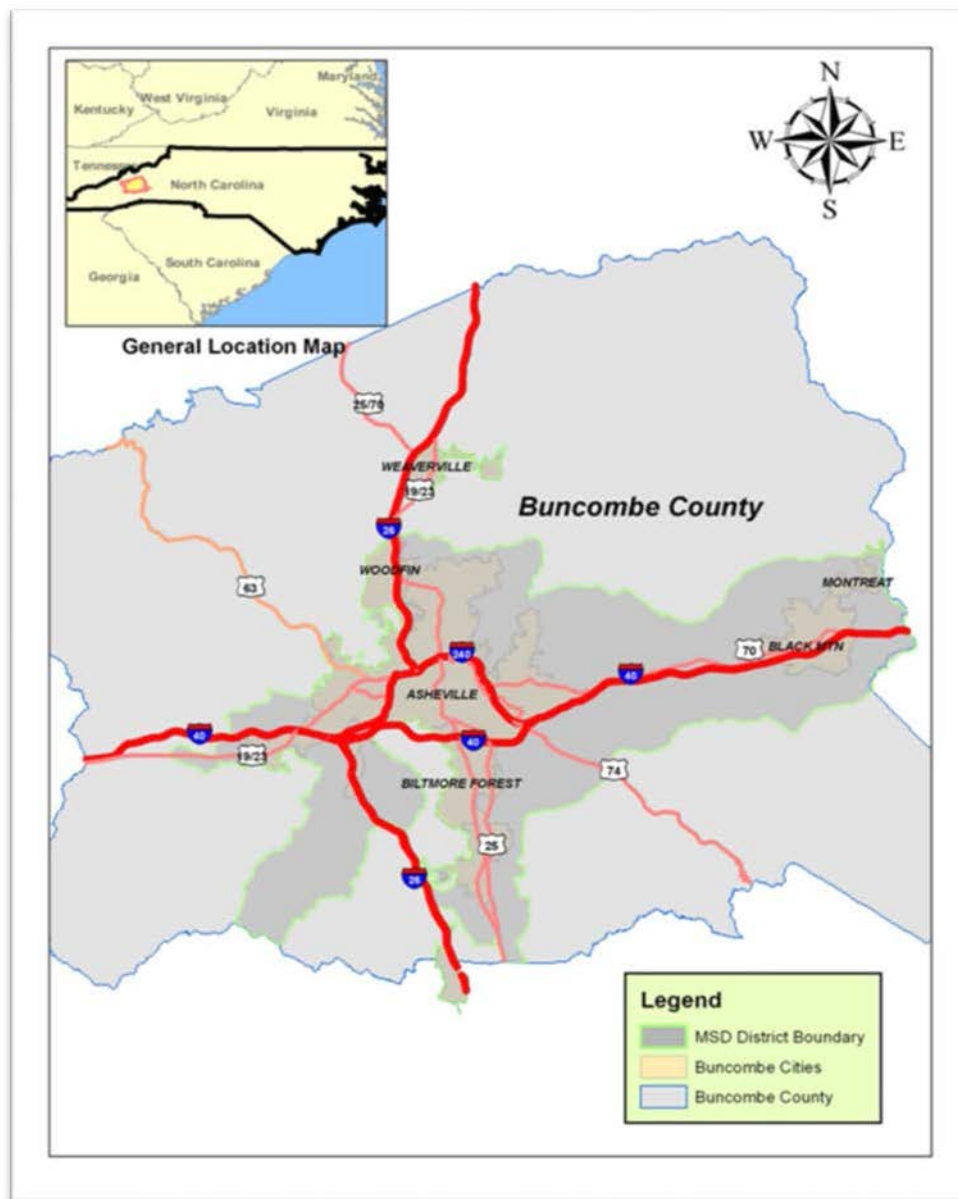
The District Board consists of twelve appointed members. Three (3) from the County of Buncombe, three (3) from the City of Asheville, and one (1) each from the Woodfin Sanitary Water & Sewer District, and the Towns of Biltmore Forest, Black Mountain, Montreat, Woodfin, and Weaverville.

## About MSD, City of Asheville & Buncombe County (continued)

### About MSD (continued)

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 (continued)

### 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
<b>1970</b>	145,056	42,804
<b>1980</b>	160,897	58,580
<b>1990</b>	174,727	69,378
<b>2000</b>	206,316	89,173
<b>2010</b>	238,318	106,742
<b>2015</b>	253,178	111,149

Located in approximately 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 located 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.



Buncombe County's topography ranges from fertile valleys to rugged mountains. Mt. Mitchell, the highest point in eastern North America (6,684 feet), is located 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



## About MSD, City of Asheville & Buncombe County (continued)

### Population and Growth Statistics (continued)

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 37° for the City of Asheville and the average temperature in July is 74°. The City of Asheville receives an average of 46 inches of rainfall a year.

However, because the City of Asheville is located 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 North Carolina Employment Security Commission, 128,817 people were employed in Buncombe County as of April 2016. The number of persons in the labor force has increased by 3,150 over the previous year.

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

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 & Hospital*, an acute care medical center licensed for more than 735 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.

## About MSD, City of Asheville & Buncombe County (continued)

### Employment and Major Industries (continued)

Also located in Buncombe County is *CarePartners Rehabilitation Hospital*, a private, nonprofit 80-bed facility for the rehabilitation and treatment of stroke and ambulation dysfunction victims, traumatic brain/head injuries, and amputation.

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.

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 located 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, immediately 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 *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 13.6% in Buncombe County and 4.3% in the City of Asheville since 2009. According to the U. S. Department of Commerce, for the year 2014, median household income in the City of Asheville was \$44,077 and in Buncombe County was \$45,642. This compares with \$46,693 for the State of North Carolina and \$53,482 for the nation as a whole.

## About MSD, City of Asheville & Buncombe County (continued)

### Education

Buncombe County has two public school systems: the Asheville City Administrative Unit, which serves about 3,996 students, consisting of (5) elementary schools and (3) secondary (high schools) and the Buncombe County Administrative Unit, which serves approximately 25,597 students, consisting of (23) elementary schools, (17) secondary schools (high schools) and (2) combined schools.

Asheville-Buncombe Technical Community College is a public, two-year college, serving more than 24,000 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 1,000 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 1,100 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 3,800 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 approximately an hour away in Greer, South Carolina.

Major air passenger and cargo services are available through the Asheville Regional Airport and served by Allegiant, Delta, United, and American. These carriers offer approximately 30 daily non-stop flights to 10 popular destinations and enplaned 392,713(787,037) passengers in the calendar year ending December 31, 2015.

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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.
- ▲ **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.

## Financial Plan (continued)

- ▲ **Statistical Information**—Includes historical summaries of District financial information, plant operational data, and local demographic and economic statistics.
- ▲ **Appendix**—Provides supplemental narrative about the District and local economy, details of capital equipment expenditures budgeted and staffing information.
- ▲ **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 50,000 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 977 miles of collector sewers, 29,000 manholes, and 31 pump stations. The District is responsible for current operation and maintenance of this infrastructure, as well as for planning for future operations and capacity. An expanded section on the history and composition of the District along with an overview of the regional economy is located in the Appendix.

### 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.

## Financial Plan (continued)

**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)
4. Coordinate, to the extent practicable, with other governmental and private entities for cooperative provision of sewer service to gain optimum economies of scale, reduced capital cost, and improved efficiency. (Goals # 1-4)
5. Participate in two-way communications with customers, elected officials, and other stakeholders in matters of mutual concern such as regulations, policies, and fees. (Goals # 1-4)
6. Provision of information and education concerning stewardship of water resources. (Goals # 1-4)

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

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

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

## Financial Plan (continued)

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

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



## Rate Projections & Budgetary Forecast

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

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

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

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

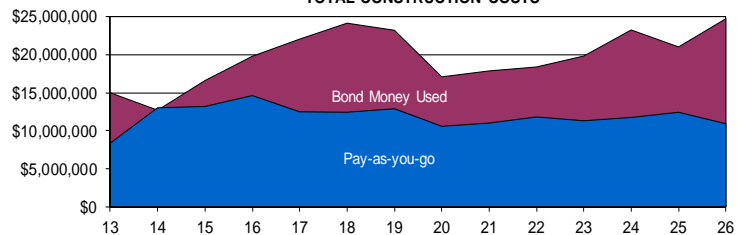
Using consumption data projected from the recent historical population growth statistics within the Asheville-Buncombe County area, the District anticipates annual rate increases of 2.5% for the next ten years. Construction costs are fairly level reflecting the District's Master Plan to consistently rehabilitate approximately 50,000 linear feet of pipe per year. The CIP expenditure forecast for FY17 reflects a continuation of a major rehabilitation project at the Wastewater Treatment Plant.

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.

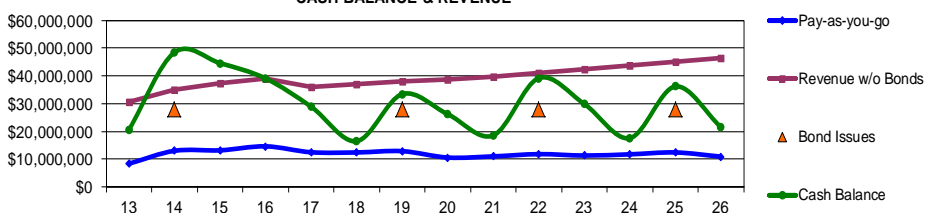
# Budgetary Forecast Based on Current Business Plan

Business Plan FY17	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	Sewer Rate Increase
	\$27.14	\$27.81	\$28.49	\$29.15	\$29.88	\$30.63	\$31.39	\$32.18	\$32.98	\$33.81	\$34.65	\$35.52	\$36.41	\$37.32	Average Monthly Bill
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Assumptions
July 1- Available for Construction	26,606,688	20,669,346	48,486,528	44,585,099	39,085,709	28,907,128	16,483,603	33,443,078	26,216,912	18,568,520	39,206,353	29,894,591	17,592,887	36,199,190	Minimum of 365 Days Cash on Hands
<b>REVENUE:</b>															<b>Consumption and Account Growth</b>
Domestic Users	25,743,801	26,913,949	28,154,062	28,959,278	29,922,929	30,902,466	31,898,172	32,968,443	34,056,344	35,162,188	36,286,298	37,488,870	38,711,272	40,128,858	<b>0.75% Increase</b>
Industrial Users (No growth)	1,824,034	2,656,078	3,725,584	3,276,044	2,943,043	2,980,220	2,963,369	3,033,315	3,104,773	3,178,017	3,253,093	3,330,045	3,408,921	3,314,769	
Billing and Collections (User Fee)	701,015	717,413	738,239	750,000	772,500	795,675	819,545	844,132	869,456	895,539	922,405	950,078	978,580	1,007,937	
Tap Fees	313,040	373,800	389,090	500,000	200,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	
Facility Fees	2,253,595	4,056,675	3,922,165	5,000,000	1,500,000	1,500,000	1,500,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
Interest & Non-operating Revenues	160,909	121,357	180,162	180,000	339,964	340,430	374,450	447,450	335,891	577,749	691,009	474,875	537,921	577,808	
City of Asheville (annex-Enka)	37,023	37,126	37,167	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	
Rental Income	70,356	71,081	71,226	69,950	71,399	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	
Transfer from Reserves (to / from)	(768,978)	(261,683)	(116,059)	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous	219,456	225,275	177,248	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	
<b>Total Revenues</b>	<b>30,554,251</b>	<b>34,911,071</b>	<b>37,278,884</b>	<b>38,912,272</b>	<b>35,926,836</b>	<b>36,872,432</b>	<b>37,909,177</b>	<b>38,646,981</b>	<b>39,720,105</b>	<b>41,167,134</b>	<b>42,506,446</b>	<b>43,597,509</b>	<b>44,990,335</b>	<b>46,383,013</b>	Bond Issues figured at: 5.0% yield FY19 5.5% yield FY22 5.5% yield FY25
State and Federal (EPA) Grants															
Revenue Bonds/Stimulus		28,000,000					28,000,000			28,000,000			28,000,000		
<b>Total Funds Available</b>	<b>57,160,939</b>	<b>83,580,417</b>	<b>85,765,412</b>	<b>83,497,371</b>	<b>75,012,545</b>	<b>65,779,560</b>	<b>82,392,780</b>	<b>72,090,059</b>	<b>65,937,016</b>	<b>87,735,654</b>	<b>81,712,799</b>	<b>73,492,099</b>	<b>90,583,222</b>	<b>82,582,203</b>	3% inflation in O & M, Replacement Funds and Engineering Force Account
<b>EXPENSES:</b>															ENR 10-year Construction Index @ 3.02%
Operations & Maintenance	12,888,006	13,483,913	13,901,595	14,890,170	15,481,490	16,492,738	17,082,355	17,696,866	18,346,490	19,000,360	19,683,846	20,398,578	21,146,384	21,958,972	General Sewer Rehab to cover 50,000 lineal ft / year
Replacement Funds (WRF & Fleet)	500,000	500,000	500,000	625,000	625,000	720,000	730,000	730,000	800,000	800,000	805,000	810,000	810,000	810,000	Target Debt Coverage 1.5
Debt Service	8,114,665	8,408,166	10,184,160	9,109,708	7,956,840	7,950,460	7,936,215	10,363,936	10,362,251	10,350,312	11,511,562	11,449,786	11,417,129	13,505,914	No growth in Industries - Rate Parity for Flow in 2020
<b>CIP (including Bond Projects)</b>	<b>14,988,922</b>	<b>12,701,810</b>	<b>16,594,558</b>	<b>19,786,784</b>	<b>22,042,087</b>	<b>24,132,760</b>	<b>23,201,132</b>	<b>17,082,346</b>	<b>17,859,756</b>	<b>18,378,629</b>	<b>19,817,800</b>	<b>23,240,848</b>	<b>21,010,519</b>	<b>24,725,729</b>	District 10yr CIP \$211.5 Million
<b>Total Expenses</b>	<b>36,491,593</b>	<b>35,093,889</b>	<b>41,180,313</b>	<b>44,411,662</b>	<b>46,105,417</b>	<b>49,295,958</b>	<b>48,949,702</b>	<b>45,873,148</b>	<b>47,368,497</b>	<b>48,529,301</b>	<b>51,818,208</b>	<b>55,899,212</b>	<b>54,384,032</b>	<b>61,000,615</b>	District total 10yr Budget \$509.2 Million
Pay-as-you-go (Current Revenue only)	8,377,997	13,018,992	13,193,129	14,623,235	12,488,506	12,429,235	12,890,608	10,586,179	11,011,364	11,816,462	11,311,038	11,749,145	12,426,822	10,918,127	
Debt Coverage (User Fees only)	1.8	2.0	1.8	2.0	2.3	2.3	2.3	1.8	1.9	1.9	1.8	1.9	1.9	1.7	
Debt Coverage with Total Revenue	2.1	2.5	2.3	2.6	2.5	2.5	2.6	2.0	2.0	2.1	2.0	2.0	2.1	1.8	
<b>April 13, 2016</b>	<b>10-Year Capital Improvement Program</b>														
<b>Active Plan CIP</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	
Interceptor/Wet Weather Rehabilitation	15,698	634,790	5,480	618,050	760,970	587,214	2,120,501	0	0	38,318	5,218,233	6,672,519	849,200	5,946,055	
General Sewer Rehabilitation	7,947,823	8,009,720	11,317,853	9,437,167	8,859,631	9,729,563	10,883,494	13,396,005	14,624,514	15,055,868	11,237,837	12,934,256	15,369,575	11,221,531	
Private Sewer Rehabilitation	17,920	40,700	34,000	2,000	646,000	10,920	0	386,613	0	0	0	192,860	0	0	
Treatment Plant / Pump Stations	4,567,989	1,579,600	3,028,300	7,181,959	8,129,000	11,046,216	7,369,751	401,811	271,458	252,967	260,607	268,477	1,545,324	4,206,103	
Engineering Force Account	2,439,492	2,437,000	2,208,925	2,447,608	2,546,486	2,658,847	2,727,386	2,797,917	2,863,784	2,931,476	3,001,123	3,072,736	3,146,420	3,252,040	
Reimbursements	0	0	0	100,000	100,000	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										
<b>Capital Improvement Program Totals</b>	<b>14,988,922</b>	<b>12,701,810</b>	<b>16,594,558</b>	<b>19,786,784</b>	<b>22,042,087</b>	<b>24,132,760</b>	<b>23,201,132</b>	<b>17,082,346</b>	<b>17,859,756</b>	<b>18,378,629</b>	<b>19,817,800</b>	<b>23,240,848</b>	<b>21,010,519</b>	<b>24,725,729</b>	

TOTAL CONSTRUCTION COSTS



CASH BALANCE &amp; REVENUE



## Fiscal Policy

### 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 ❶to ensure that moderate rate increases will be adequate to provide current and future funds to support the District's mission and goals; and ❷to 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.
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.

## Fiscal Policy (continued)

### Revenue Policy (continued)

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.
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.

## Fiscal Policy (continued)

### 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.

### 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.



## Fiscal Policy (continued)

### Accounting Policy (continued)

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.

### 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.

## Fiscal Policy (continued)

### Cash Management and Investment Policy

4. **Treasury Services**—The District shall consider the advisability of preparing a Request for Proposal (RFP) for banking services every three (3) years.

### Reserve Policy

1. **Capital Reserves**—The District shall maintain a Capital Reserve Fund in the amount of 6% of current expenses in the adopted annual Operation & Maintenance Fund Budget as set forth in the Bond Order. This fund may be used only for debt service payments in the event of inadequate revenues or for unusual and extraordinary repair and maintenance expenses.
2. **Fleet**—The District shall maintain a Fleet Equipment Replacement 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.

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).

## **Budget Process** (continued)

### **Budgetary Adoption** (continued)

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

### **Budget Amendment**

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

## Budget Calendar

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

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

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

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

D A T E	T I M E	S U B J E C T
April 26	9:00 a.m.	<b>Personnel Committee Meeting</b>
		<ul style="list-style-type: none"> <li>Cost of Living &amp; Merit Pay</li> </ul>
		<ul style="list-style-type: none"> <li>Benefit Allocations</li> </ul>
April 28	8:30 a.m.	<b>CIP Committee Meeting</b>
		<ul style="list-style-type: none"> <li>Update of Ten-Year Capital Improvement Program</li> </ul>
		<ul style="list-style-type: none"> <li>Update Construction Program Financing</li> </ul>
		<ul style="list-style-type: none"> <li>2016-2017 Construction Fund Budget</li> </ul>
May 5	9:00 a.m.	<b>Finance Committee Meeting</b>
		<ul style="list-style-type: none"> <li>Nine Month Revenue/Expenditure Report</li> </ul>
		<ul style="list-style-type: none"> <li>Self-Funded Medical &amp; Dental Program</li> </ul>
		<ul style="list-style-type: none"> <li>Proposed FY17 Construction Fund Budget</li> </ul>
		<ul style="list-style-type: none"> <li>Proposed FY17 Operating Budget &amp; Sewer Rates</li> </ul>
May 18	2:00 p.m.	<b>Board Meeting</b>
		<ul style="list-style-type: none"> <li>Preliminary FY17 Budgets &amp; Sewer Rates</li> </ul>
June 15	2:00 p.m.	<b>Board Meeting</b>
		<ul style="list-style-type: none"> <li>Public Hearing</li> </ul>
		<ul style="list-style-type: none"> <li>Adoption of FY17 Budgets &amp; Sewer Rates</li> </ul>
July 1		<b>Start of Fiscal Year 2016-2017</b>



## Budgetary Basis of Accounting

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

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

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

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

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

## Budgetary Basis of Accounting (continued)

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: ❶the Revenue Fund from which operational and maintenance expenditures are made, ❷the General Fund that transfers pay-as-you-go funding authorized for construction, ❸the Construction Fund that incorporates CIP expenditures, ❹the Insurance Funds that provides funding for self-funded employee medical, general liability, worker's compensation and post-employment, ❺the Replacement Funds that provides funding for Fleet and WRF equipment and ❻the Debt Service Funds.

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

- **Revenue Fund**—The Bond Order requires all revenues from user charges to be deposited to a revenue fund. The first order of payments is current expenses, defined as the costs of controlling, operating, managing, and maintaining the sewerage system and wastewater treatment plant, which are paid directly from the revenue fund. Remaining revenues may be transferred as budgeted to other funds for use in debt service, construction, or any other lawful purpose.
- **General Fund**—The District may use funds from the General Fund for any lawful purpose. Due to the provisions of the 1985 and 1999 Bond Orders, the former which provided that operating expenses were to be paid from the O&M fund, and the latter which calls for current expenditures to be paid from the Revenue Fund, the General Fund has been used primarily to accumulate pay-as-you-go financing for construction.
- **Construction Fund**—This fund was established in accordance with the bond order to account for construction projects funded by sewer revenue bonds. The fund is currently used to record expenditures of capital construction, regardless of funding source.
- **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 FY14 budget document. Each Department, Division, 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.

## Fund Structure (continued)

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, 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 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.

## Fund Structure (continued)

- ▲ **Fleet Replacement**—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 Plant Director and Supervisors have prepared 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.
- ▲ **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 and Supervisors have prepared 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.
- **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.





## 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 and WRF 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 2015 Actual Total	FY 2016 Budget	FY 2017 Proposed Budget	Increase (Decrease)	% Change
<b>REVENUES &amp; FINANCING SOURCES</b>					
Domestic User Fees	\$ 28,240,719	\$ 28,962,278	\$ 29,922,929	\$ 960,651	3.32%
Industrial User Fees	3,725,584	3,155,799	2,943,043	(212,756)	-6.74%
Billing and Collection	738,239	734,708	772,500	37,792	5.14%
Facility and Tap Fees	4,311,259	1,605,000	1,700,000	95,000	5.92%
Interest and Misc. Income	431,677	485,094	599,032	113,938	23.49%
Rental Income	71,226	69,950	71,399	1,449	2.07%
City of Asheville (Enka Bonds)	37,167	37,000	37,000	-	0.00%
Employee Contributions to Health Fund	426,769	413,000	415,000	2,000	0.48%
Use of (Contributions to) Available Funds	2,966,919	12,021,748	10,548,760	(1,472,988)	-12.25%
<b>Total Revenues &amp; Financing Sources</b>	<b>\$ 40,949,559</b>	<b>\$ 47,484,577</b>	<b>\$ 47,009,663</b>	<b>\$ (474,914)</b>	<b>-1.00%</b>
<b>EXPENDITURES</b>					
Operations and Maintenance	\$ 14,115,455	\$ 15,745,161	\$ 16,038,288	\$ 293,127	1.86%
Construction	16,594,558	21,849,858	22,042,087	192,229	0.88%
Capital Equipment	534,566	779,850	972,448	192,598	24.70%
Bond Principal and Interest	9,704,980	9,109,708	7,956,840	(1,152,868)	-12.66%
<b>Total Expenditures</b>	<b>\$ 40,949,559</b>	<b>\$ 47,484,577</b>	<b>\$ 47,009,663</b>	<b>\$ (474,914)</b>	<b>-1.00%</b>

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

## Component Fund Chart

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

	Operating and Construction			Equipment Replacement			Debt Services	Appropriated Funds
	Revenue/O&M	General	Construction	Fleet Repl. Reserve	WWTP Reserve	Pump Station Reserve	Bond Service	
<b>Projected Net Position at 6/30/16</b>	<b>30,130,080</b>	<b>8,916,220</b>	<b>250</b>	<b>594,258</b>	<b>469,597</b>	<b>-</b>	<b>5,115,182</b>	<b>45,225,587</b>
Revenues and Other Financing Sources:								
Domestic User Charges	29,922,929	-	-	-	-	-	-	29,922,929
Industrial User Charges	2,943,043	-	-	-	-	-	-	2,943,043
Billing and Collection Fees	772,500	-	-	-	-	-	-	772,500
Facility and tap fees	-	1,700,000	-	-	-	-	-	1,700,000
Proceeds from Revenue Bonds	-	-	-	-	-	-	-	-
Stimulus Loan/Grant	-	-	-	-	-	-	-	-
Sale of Surplus Property	-	-	-	80,160	-	-	-	80,160
Non-governmental Grants	-	-	-	-	-	-	-	-
Capital Contributions	-	-	-	-	-	-	-	-
Investment interest & misc.	386,679	85,285	8,000	8,914	7,044	-	50	495,972
City of Asheville for Enka Bond	37,000	-	-	-	-	-	-	37,000
Rental Income	71,399	-	-	-	-	-	-	71,399
Employee/Retirees Medical Contributions	-	-	-	-	-	-	-	-
<b>Total Revenues and Fin. Sources</b>	<b>34,133,550</b>	<b>1,785,285</b>	<b>8,000</b>	<b>89,074</b>	<b>7,044</b>	<b>-</b>	<b>50</b>	<b>36,023,003</b>
Expenditures and Other Financing Uses								
Operating Expenses	(12,394,818)	-	-	-	-	-	-	(12,394,818)
Debt--Principal	-	-	-	-	-	-	(4,325,825)	(4,325,825)
Debt--Interest	-	-	-	-	-	-	(3,631,015)	(3,631,015)
Construction	-	-	(22,042,087)	-	-	-	-	(22,042,087)
Capitalized Equipment Expenditures	(87,298.00)	-	-	(668,000)	(162,150)	(55,000)	-	(972,448)
<b>Total Expenditures and Other Financing Uses</b>	<b>(12,482,116)</b>	<b>-</b>	<b>(22,042,087)</b>	<b>(668,000)</b>	<b>(162,150)</b>	<b>(55,000)</b>	<b>(7,956,840)</b>	<b>(43,366,193)</b>
<b>Interfund/account transfers</b>	<b>(23,388,796)</b>	<b>(10,701,505)</b>	<b>22,034,087</b>	<b>425,000</b>	<b>100,000</b>	<b>100,000</b>	<b>7,956,840</b>	<b>(3,474,374)</b>
<b>Excess (Deficit) of Revenues over Expenditures</b>	<b>(1,737,362)</b>	<b>(8,916,220)</b>	<b>-</b>	<b>(153,926)</b>	<b>(55,106)</b>	<b>45,000</b>	<b>50</b>	<b>(10,817,564)</b>
<b>Projected Net Position at 06/30/17</b>	<b>28,392,718</b>	<b>-</b>	<b>250</b>	<b>440,332</b>	<b>414,491</b>	<b>45,000</b>	<b>5,115,232</b>	<b>34,408,023</b>

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
<b>Projected Net Position at 6/30/16</b>	<b>825,665</b>	<b>166,352</b>	<b>592,352</b>	<b>303,204</b>	<b>955,886</b>	<b>2,843,459</b>	<b>48,069,046</b>
Revenues and Other Financing Sources:							
Domestic User Charges	-	-	-	-	-	-	29,922,929
Industrial User Charges	-	-	-	-	-	-	2,943,043
Billing and Collection Fees	-	-	-	-	-	-	772,500
Facility and tap fees	-	-	-	-	-	-	1,700,000
Proceeds from Revenue Bonds	-	-	-	-	-	-	-
Stimulus Loan/Grant	-	-	-	-	-	-	-
Sale of Surplus Property	-	-	-	-	-	-	80,160
Non-governmental Grants	-	-	-	-	-	-	-
Capital Contributions	-	-	-	-	-	-	-
Investment interest & misc.	2,500	8,000	1,100	1,500	9,800	22,900	518,872
City of Asheville for Enka Bond	-	-	-	-	-	-	37,000
Rental Income	-	-	-	-	-	-	71,399
Employee/Retirees Medical Contributions	395,000	20,000	-	-	-	415,000	415,000
<b>Total Revenues and Fin. Sources</b>	<b>397,500</b>	<b>28,000</b>	<b>1,100</b>	<b>1,500</b>	<b>9,800</b>	<b>437,900</b>	<b>36,460,903</b>
Expenditures and Other Financing Uses							
Operating Expenses	(2,737,631)	(55,000)	(577,839)	(273,000)	-	(3,643,470)	(16,038,288)
Debt--Principal	-	-	-	-	-	-	(4,325,825)
Debt--Interest	-	-	-	-	-	-	(3,631,015)
Construction	-	-	-	-	-	-	(22,042,087)
Capitalized Equipment Expenditures	-	-	-	-	-	-	(972,448)
<b>Total Expenditures and Other Financing Uses</b>	<b>(2,737,631)</b>	<b>(55,000)</b>	<b>(577,839)</b>	<b>(273,000)</b>	<b>-</b>	<b>(3,643,470)</b>	<b>(47,009,663)</b>
<b>Interfund/account transfers</b>	<b>2,608,628</b>	<b>45,000</b>	<b>547,746</b>	<b>273,000</b>	<b>-</b>	<b>3,474,374</b>	<b>-</b>
<b>Excess (Deficit) of Revenues over Expenditures</b>	<b>268,497</b>	<b>18,000</b>	<b>(28,993)</b>	<b>1,500</b>	<b>9,800</b>	<b>268,804</b>	<b>(10,548,760)</b>
<b>Projected Net Position at 06/30/17</b>	<b>1,094,162</b>	<b>184,352</b>	<b>563,359</b>	<b>304,704</b>	<b>965,686</b>	<b>3,112,263</b>	<b>37,520,286</b>

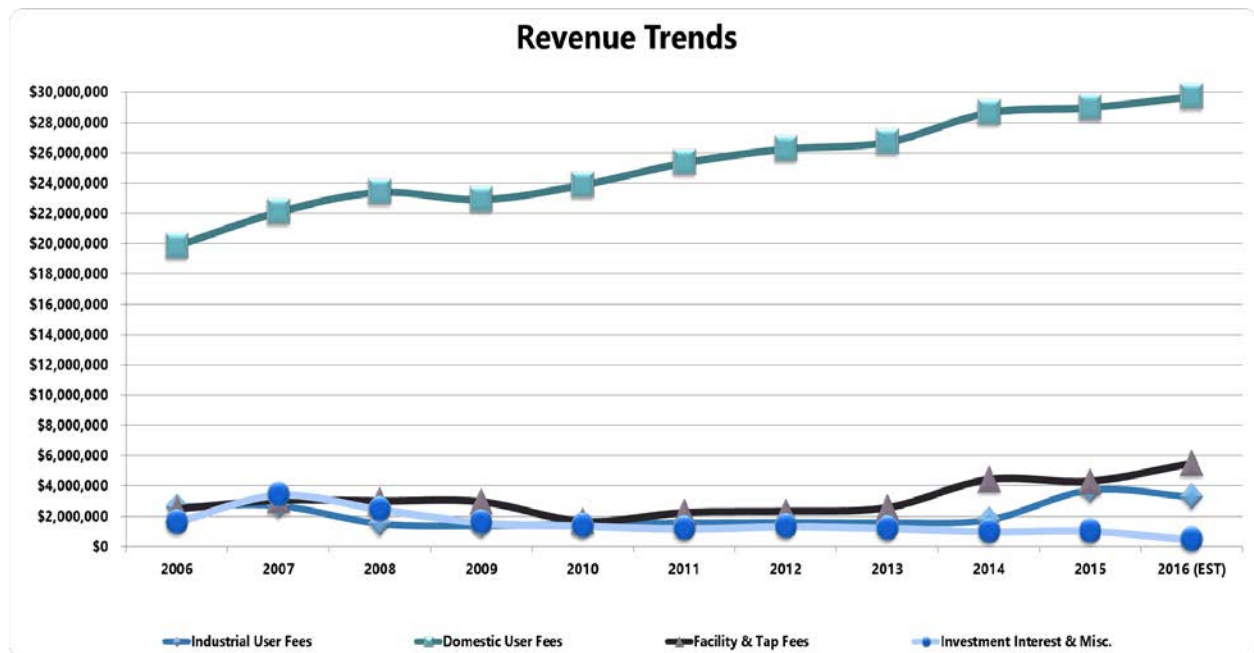
Now that the Districts' financial overview has been presented, we will examine revenues and various expenditures in detail.

## Revenue

### Overview

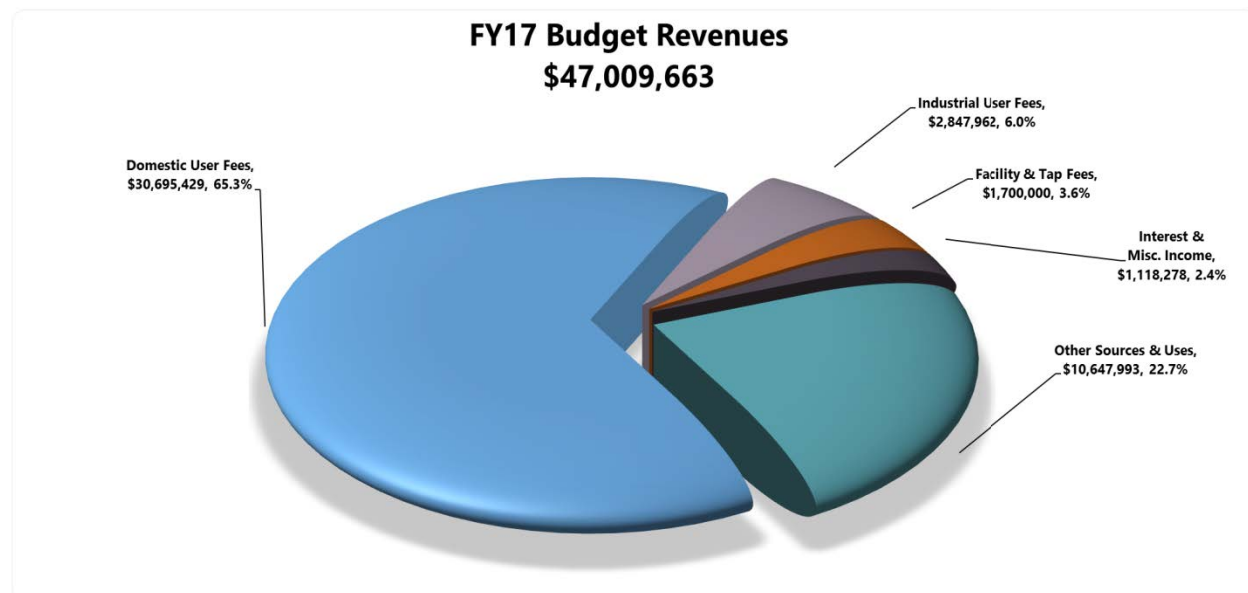
The District has the authority to establish rates and charges for service to be approved by a budget resolution of the District Board of Directors. The District has established separate rates for domestic and industrial customers, adopted a schedule of facility and sewer connection fees applying to new 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 FY16 is estimated to be slightly higher than in FY15.



## Revenue (continued)

### Revenue Summary



When projecting FY17 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 53,000 accounts. The District direct bills approximately 350 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:

2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
3.0%	2.5%	2.5%	2.5%	2.5%	2.5%

### 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.



## Revenue (continued)

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 1.0%.

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 Facility Fees

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.

In FY10, the District instituted a one-year moratorium on the five-year sewer facility fee parity plan due to the recession. As of the end of FY12, the District has completed the aforementioned plan. Effective in FY17, sewer facility fees ranged from \$670 to \$2,500 for residential users based on size of structure, and from \$2,500 to \$237,500 for nonresidential customers based on meter size.

### 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 2011. The cost for installing a tap is \$650, with additional charges up to \$2,200 if pavement disturbance 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.

## Revenue (continued)

### Billings & Collections

The District will pay the municipalities \$2.31 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.

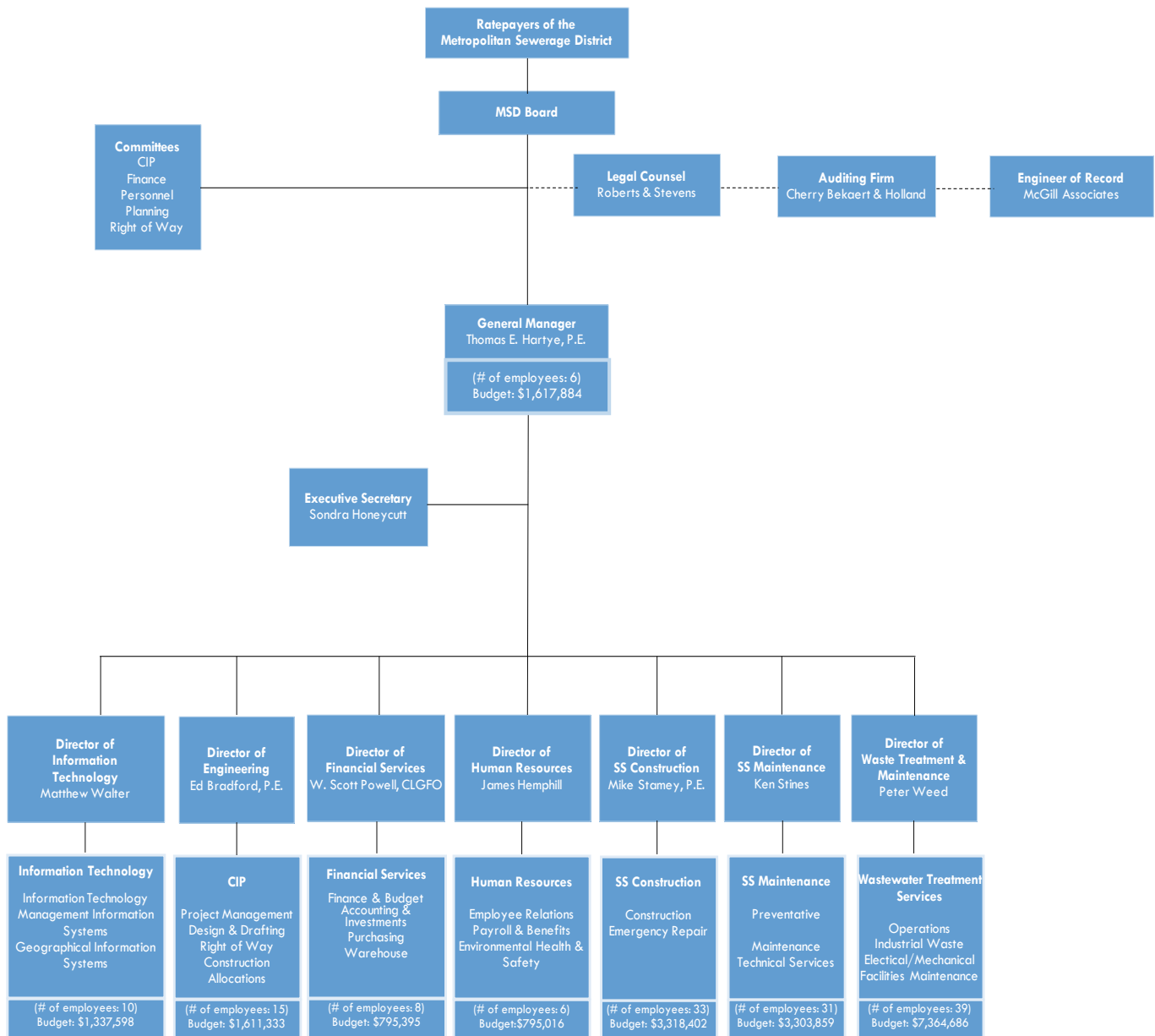
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# Operation & Maintenance Fund



# Operation & Maintenance Fund

## Organizational Chart



## Operation & Maintenance Fund

### Overview

The Operation & Maintenance Fund budget finances the program and administrative activities for the wastewater treatment plant, pump stations, and collection system. The FY17 Operation & Maintenance Fund budget totals \$16,106,490. This represents a 1.98% increase over the previous year. The District budgets to the Departmental level and are as follows:

Office of the General Manager	\$ 1,617,884
Human Resources	\$ 795,016
Information Technology	\$ 1,337,598
Financial Services	\$ 795,395
Wastewater Treatment Plant	\$ 7,364,686
SS Maintenance	\$ 3,303,859
SS Construction	\$ 3,318,402
Engineering	\$ 1,611,333
Total Expenditures	\$20,144,173
Less: Capitalized in Construction Funds	(4,037,683)
Net Operation & Maintenance Fund	\$16,106,490

	ACTUAL 2014-2015	APPROVED 2015-2016 BUDGET	ESTIMATED 2015-2016 ACTUAL	PROPOSED 2016-2017 BUDGET	INC(DEC) OVER PRIOR YR BUDGET
<b>SALARIES &amp; WAGES</b>	\$ 8,072,675	\$ 8,403,022	\$ 8,401,547	\$ 8,645,077	2.88%
<b>BENEFITS</b>	\$ 3,840,699	\$ 3,852,946	\$ 3,852,735	\$ 4,197,072	8.93%
<b>MATERIALS, SUPPLIES &amp; SERVICES</b>	\$ 5,386,014	\$ 6,343,000	\$ 6,039,850	\$ 6,387,509	0.70%
<b>REPLACEMENT FUNDS &amp; TRANSFERS</b>	\$ 691,224	\$ 823,648	\$ 823,000	\$ 827,217	0.43%
<b>CAPITAL EQUIPMENT</b>	\$ 146,681	\$ 144,189	\$ 143,000	\$ 87,298	-39.46%
<b>SUB-TOTAL O&amp;M FUND</b>	<b>\$ 18,137,293</b>	<b>\$ 19,566,804</b>	<b>\$ 19,260,132</b>	<b>\$ 20,144,173</b>	<b>2.95%</b>
<b>LESS:</b>					
<b>Capitalized Construction Expenses</b>	\$ (3,603,640)	\$ (3,773,678)	\$ (3,744,962)	\$ (4,037,683)	7.00%
<b>NET OPERATION &amp; MAINTENANCE FUND</b>	<b>\$ 14,533,654</b>	<b>\$ 15,793,126</b>	<b>\$ 15,515,170</b>	<b>\$ 16,106,490</b>	<b>1.98%</b>

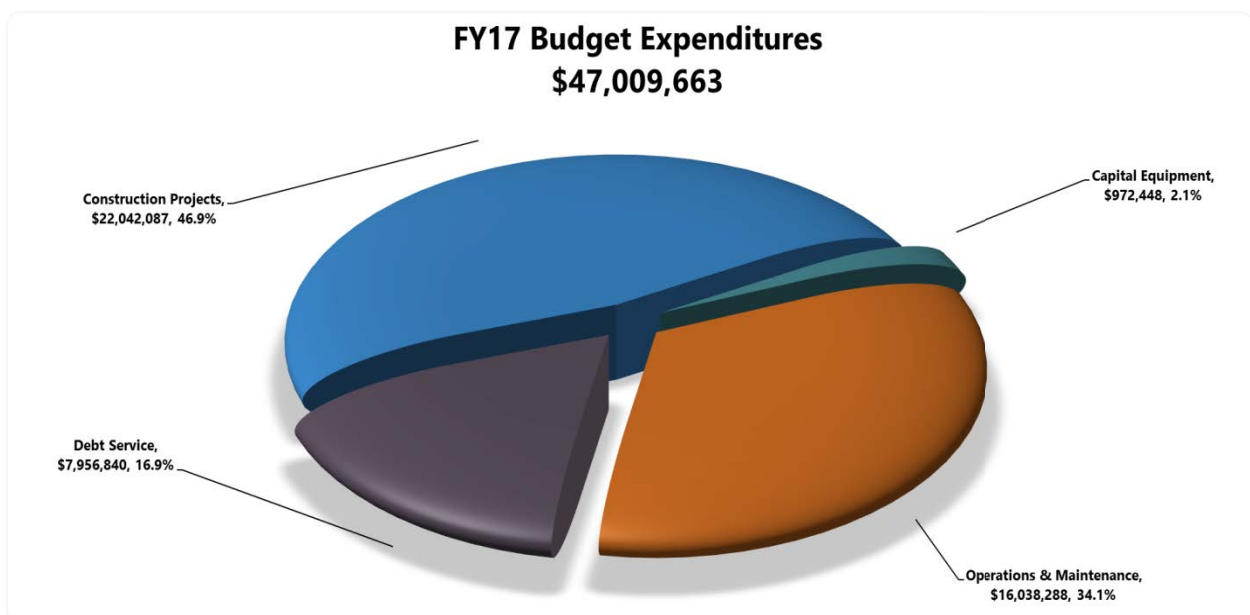
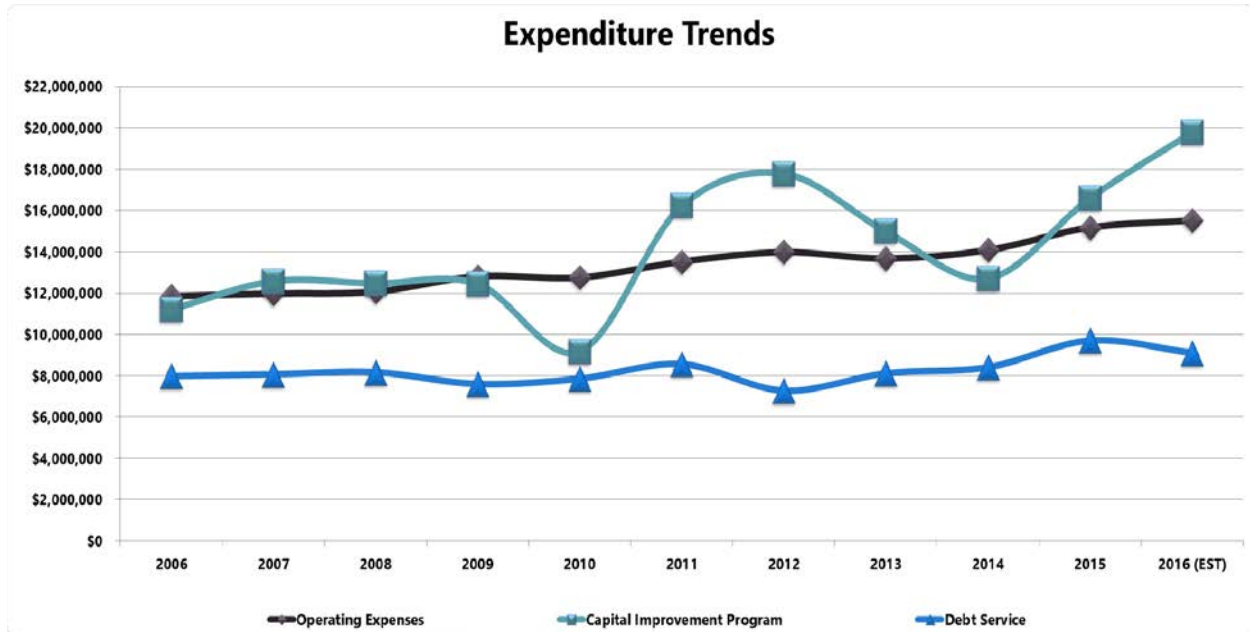
The major factors that impact our operating and maintenance budget include:

1. **Repairs and Maintenance**—A majority of the Districts' approximately 1,000 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 budgeted significant amounts for maintenance of equipment, buildings, and grounds as well as for in-house sewer line repair and maintenance.



## Operation & Maintenance Fund (continued)

2. **Salaries and Benefits**—A 3.0% salary adjustment as well as a 10.0% increase for the Self-Funded Health Insurance Plan. Personnel costs represent over 64% of the Operating and Maintenance budget.
3. **Post-Employment Health Benefit**—Starting in FY09, GASB45 requires the recognition of cost for Post-Employment Health Benefits. Current funding represents 1.7% of total operations.

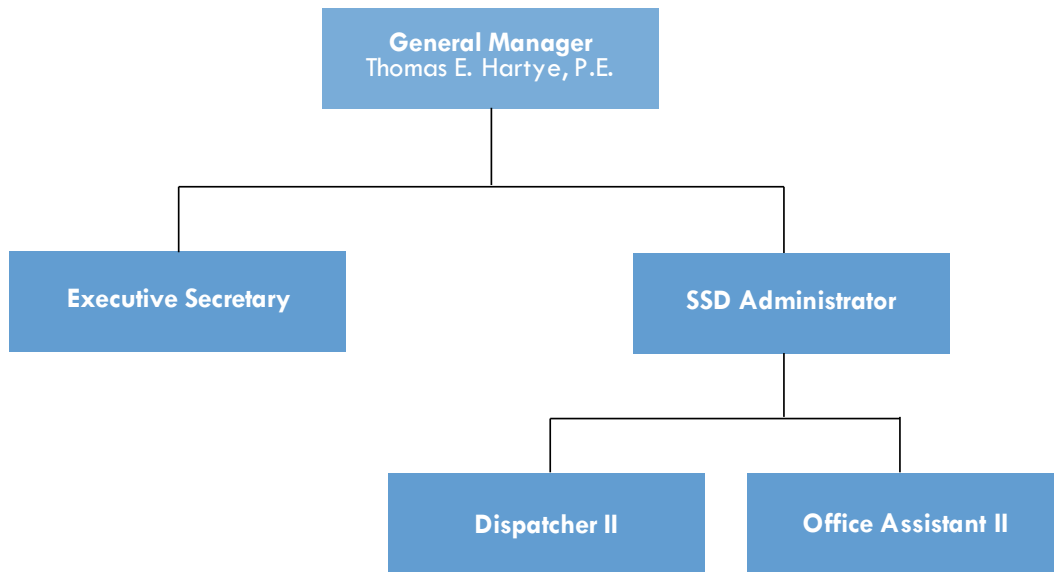


## FY17 Budget – All Departments Summary

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 7,537,244.35	\$ 7,511,808.67	\$ 7,822,788.68	\$ 8,107,122.00	\$ 8,107,122.00	100.0%	\$ 8,343,977.00	2.92%
51150	Overtime	\$ 271,219.95	\$ 355,457.78	\$ 249,885.92	\$ 295,900.00	\$ 294,425.00	99.5%	\$ 301,100.00	1.76%
<b>Total Salaries &amp; Wages</b>		<b>\$ 7,808,464.30</b>	<b>\$ 7,867,266.45</b>	<b>\$ 8,072,674.60</b>	<b>\$ 8,403,022.00</b>	<b>\$ 8,401,547.00</b>	<b>100.0%</b>	<b>\$ 8,645,077.00</b>	<b>2.88%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 524,754.70	\$ 558,541.37	\$ 569,223.92	\$ 560,482.00	\$ 560,383.00	100.0%	\$ 634,548.00	13.21%
51250	Payroll Taxes	\$ 565,237.14	\$ 569,105.17	\$ 584,714.82	\$ 642,831.00	\$ 642,719.00	100.0%	\$ 661,346.00	2.88%
51300	Medical, Dental & Life	\$ 1,782,116.00	\$ 1,833,116.00	\$ 2,045,496.63	\$ 1,735,116.00	\$ 1,735,116.00	100.0%	\$ 1,908,628.00	10.00%
51325	Post Retirement Insurance	\$ 175,900.00	\$ 156,800.00	\$ 77,100.00	\$ 261,500.00	\$ 261,500.00	100.0%	\$ 270,000.00	3.25%
51350	Worker's Compensation	\$ 215,312.00	\$ 215,312.00	\$ 201,145.36	\$ 215,312.00	\$ 215,312.00	100.0%	\$ 273,000.00	26.79%
51360	State Unemployment Benefits	\$ 21,632.38	\$ 48,039.49	\$ 23,962.99	\$ 32,340.00	\$ 32,340.00	100.0%	\$ 32,340.00	0.00%
51450	Automobile Allowance	\$ 1,848.08	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
51500	401-K/457 Plan	\$ 303,860.03	\$ 310,161.48	\$ 339,055.67	\$ 405,365.00	\$ 405,365.00	100.0%	\$ 417,210.00	2.92%
<b>Total Benefits</b>		<b>\$ 3,590,660.33</b>	<b>\$ 3,691,075.51</b>	<b>\$ 3,840,699.39</b>	<b>\$ 3,852,946.00</b>	<b>\$ 3,852,735.00</b>	<b>100.0%</b>	<b>\$ 4,197,072.00</b>	<b>8.93%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 11,399,124.63</b>	<b>\$ 11,558,341.96</b>	<b>\$ 11,913,373.99</b>	<b>\$ 12,255,968.00</b>	<b>\$ 12,254,282.00</b>	<b>100.0%</b>	<b>\$ 12,842,149.00</b>	<b>4.78%</b>
<b>Materials, Supplies &amp; Services</b>									
52010	Advertising	\$ 31,010.30	\$ 21,019.18	\$ 25,523.03	\$ 24,103.00	\$ 23,603.00	97.9%	\$ 25,300.00	4.97%
52050	Dues & Subscriptions	\$ 47,654.78	\$ 35,067.94	\$ 46,092.18	\$ 50,310.00	\$ 48,700.00	96.8%	\$ 51,240.00	1.85%
52100	Postage	\$ 7,252.03	\$ 11,195.11	\$ 9,452.22	\$ 11,000.00	\$ 11,000.00	100.0%	\$ 11,000.00	0.00%
52150	Travel, Mtgs & Training	\$ 105,335.73	\$ 114,203.86	\$ 119,837.27	\$ 150,242.00	\$ 139,776.55	93.0%	\$ 144,018.00	-4.14%
52160	Tuition Assistance	\$ 468.50	\$ 1,822.38	\$ 4,229.42	\$ 6,000.00	\$ 6,000.00	100.0%	\$ 7,000.00	16.67%
52170	Directors Fees & Expenses	\$ 42,108.87	\$ 22,620.01	\$ 22,791.28	\$ 33,500.00	\$ 33,500.00	100.0%	\$ 35,000.00	4.48%
52180	Liability Insurance	\$ 605,434.00	\$ 605,434.00	\$ 497,820.01	\$ 605,434.00	\$ 605,434.00	100.0%	\$ 547,746.00	-9.53%
52200	Telephone/Telefax	\$ 36,119.13	\$ 32,231.84	\$ 30,645.80	\$ 31,396.80	\$ 31,396.80	100.0%	\$ 31,800.00	1.28%
52210	Communications	\$ 79,331.49	\$ 88,223.00	\$ 93,518.10	\$ 117,105.00	\$ 114,438.00	97.7%	\$ 121,460.00	3.72%
52240	Uniforms	\$ 62,558.89	\$ 66,863.89	\$ 62,640.92	\$ 76,970.00	\$ 73,975.00	96.1%	\$ 80,250.00	4.26%
52250	Office Supplies	\$ 28,039.19	\$ 25,199.60	\$ 18,892.49	\$ 30,300.00	\$ 26,835.19	88.6%	\$ 30,450.00	0.50%
52260	Special Dept Supplies	\$ 391,430.23	\$ 399,078.28	\$ 407,240.20	\$ 419,578.00	\$ 415,763.67	99.1%	\$ 429,550.00	2.38%
52270	Safety Equip/Supplies	\$ 53,934.71	\$ 58,885.91	\$ 60,727.31	\$ 68,542.21	\$ 67,950.00	99.1%	\$ 72,450.00	5.70%
52280	Maint Supp/Small Tools	\$ 120,497.91	\$ 119,168.81	\$ 109,319.52	\$ 122,464.00	\$ 114,000.00	93.1%	\$ 127,000.00	3.70%
52290	Chemical Supplies	\$ 406,339.32	\$ 421,393.22	\$ 388,293.43	\$ 530,845.91	\$ 518,750.00	97.7%	\$ 531,900.00	0.20%
52300	Line Cleaning Supplies	\$ 61,508.17	\$ 43,272.40	\$ 53,527.63	\$ 54,000.00	\$ 53,750.00	99.5%	\$ 53,750.00	-0.46%
52330	Legal Fees	\$ 40,270.87	\$ 49,270.37	\$ 35,412.41	\$ 47,500.00	\$ 32,500.00	68.4%	\$ 56,500.00	18.95%
52350	Prof/Contractual Svcs	\$ 439,167.21	\$ 407,042.69	\$ 420,368.31	\$ 604,871.53	\$ 561,150.00	92.8%	\$ 588,800.00	-2.66%
52410	Maint-Buildings & Grounds	\$ 138,346.20	\$ 125,264.57	\$ 125,999.81	\$ 141,000.00	\$ 140,600.00	99.7%	\$ 143,400.00	1.70%
52420	Maintenance-Equipment	\$ 463,133.22	\$ 435,585.13	\$ 468,576.15	\$ 485,300.00	\$ 477,575.00	98.4%	\$ 459,600.00	-5.30%
52430	Landscape Restoration	\$ 13,728.61	\$ 14,858.44	\$ 9,180.32	\$ 17,000.00	\$ 17,000.00	100.0%	\$ 17,000.00	0.00%
52440	Pump Maintenance	\$ 23,104.28	\$ 42,718.44	\$ 33,951.84	\$ 40,000.00	\$ 40,000.00	100.0%	\$ 90,000.00	125.00%
52450	Equipment Rental	\$ 5,658.74	\$ 4,500.76	\$ 5,922.50	\$ 26,450.00	\$ 26,421.00	99.9%	\$ 25,500.00	-3.59%
52460	Motor Fuel & Lubricants	\$ 239,881.43	\$ 234,550.21	\$ 176,658.06	\$ 271,148.15	\$ 200,000.00	73.8%	\$ 262,000.00	-3.37%
52470	Outside Vehicle Maint	\$ 3,746.03	\$ 5,877.23	\$ 9,368.84	\$ 15,000.00	\$ 15,000.00	100.0%	\$ 15,000.00	0.00%
52500	Rents/Leases	\$ 29,318.53	\$ 34,432.92	\$ 37,393.63	\$ 47,208.00	\$ 45,000.00	95.3%	\$ 49,500.00	4.86%
52510	Permits/Fees/Software Licenses	\$ 119,522.17	\$ 98,452.80	\$ 189,637.60	\$ 238,397.59	\$ 234,846.69	98.5%	\$ 240,820.00	1.02%
52650	Utilities	\$ 903,570.19	\$ 946,729.40	\$ 1,026,485.57	\$ 1,202,750.00	\$ 1,095,000.00	91.0%	\$ 1,243,000.00	3.35%
52690	Freight	\$ 4,976.68	\$ 4,756.12	\$ 6,737.82	\$ 5,000.00	\$ 4,950.00	99.0%	\$ 5,000.00	0.00%
52715	Safety Incentive Program	\$ 1,069.45	\$ 1,228.64	\$ 1,845.91	\$ 2,500.00	\$ 1,800.00	72.0%	\$ 2,500.00	0.00%
52725	Wellness Program	\$ 4,128.82	\$ 8,010.44	\$ 4,592.67	\$ 8,000.00	\$ 7,000.00	87.5%	\$ 8,000.00	0.00%
52730	Employee Asst Program	\$ 4,255.00	\$ 4,255.00	\$ 4,255.00	\$ 4,500.00	\$ 4,355.00	96.8%	\$ 4,500.00	0.00%
52900	Other Operating Expenses	\$ 1,240.91	\$ 1,286.28	\$ 467.94	\$ 4,000.00	\$ 3,000.00	75.0%	\$ 4,000.00	0.00%
52910	Non-Capital Equipment	\$ 87,573.72	\$ 88,938.23	\$ 140,310.15	\$ 95,583.31	\$ 94,005.32	98.3%	\$ 94,975.00	-0.64%
52915	Copiers Printers & Faxes	\$ -	\$ -	\$ 60.41	\$ 5,000.00	\$ 4,775.00	95.5%	\$ 5,000.00	0.00%
52920	Billing & Collections	\$ 701,014.95	\$ 717,412.77	\$ 738,238.51	\$ 750,000.00	\$ 750,000.00	100.0%	\$ 772,500.00	3.00%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 5,302,730.26</b>	<b>\$ 5,290,849.87</b>	<b>\$ 5,386,014.26</b>	<b>\$ 6,342,999.50</b>	<b>\$ 6,039,850.22</b>	<b>95.2%</b>	<b>\$ 6,387,509.00</b>	<b>0.70%</b>
<b>Interfund Transfers</b>									
52340	Debt Administration Expenses	\$ 338,507.16	\$ 220,782.82	\$ 191,223.71	\$ 198,648.00	\$ 198,000.00	99.7%	\$ 202,217.00	1.80%
53040	Fleet Replacement Charges	\$ 400,000.00	\$ 400,000.00	\$ 400,000.00	\$ 425,000.00	\$ 425,000.00	100.0%	\$ 425,000.00	0.00%
53050	Wwtp Replacement Charges	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 200,000.00	\$ 200,000.00	100.0%	\$ 200,000.00	0.00%
53070	Pump Maintenance Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
<b>Total Interfund Transfers</b>		<b>\$ 838,507.16</b>	<b>\$ 720,782.82</b>	<b>\$ 691,223.71</b>	<b>\$ 823,648.00</b>	<b>\$ 823,000.00</b>	<b>99.9%</b>	<b>\$ 827,217.00</b>	<b>0.43%</b>
<b>Capital Outlay</b>									
54010	Capital Equipment - New	\$ 192,750.73	\$ 36,871.65	\$ 57,871.48	\$ 30,300.00	\$ 30,300.00	100.0%	\$ 20,450.00	-32.51%
54020	Capital Equip-Software	\$ 18,555.81	\$ 23,404.39	\$ 11,250.00	\$ 13,738.50	\$ 13,700.00	99.7%	\$ 13,248.00	-3.57%
54030	Capital Equip - Replacement	\$ 81,003.95	\$ 233,361.46	\$ 77,559.66	\$ 100,150.00	\$ 99,000.00	98.9%	\$ 53,600.00	-46.48%
<b>Total Capital Outlay</b>		<b>\$ 292,310.49</b>	<b>\$ 293,637.50</b>	<b>\$ 146,681.14</b>	<b>\$ 144,188.50</b>	<b>\$ 143,000.00</b>	<b>99.2%</b>	<b>\$ 87,298.00</b>	<b>-39.46%</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 17,832,672.54</b>	<b>\$ 17,863,612.15</b>	<b>\$ 18,137,293.10</b>	<b>\$ 19,566,804.00</b>	<b>\$ 19,260,132.22</b>	<b>98.4%</b>	<b>\$ 20,144,173.00</b>	<b>2.95%</b>
59200	LESS:								
	Chargebacks to General Fund for CIP	\$ (2,439,492.20)	\$ (2,292,057.23)	\$ (2,293,656.56)	\$ (2,447,046.00)	\$ (2,418,330.41)	98.8%	\$ (2,498,272.00)	2.09%
	Chargebacks to General Fund for SSD	\$ (1,294,092.88)	\$ (1,279,053.00)	\$ (1,309,983.00)	\$ (1,326,632.00)	\$ (1,326,632.00)	100.0%	\$ (1,539,411.00)	16.04%
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 14,099,087.46</b>	<b>\$ 14,292,501.92</b>	<b>\$ 14,533,653.54</b>	<b>\$ 15,793,126.00</b>	<b>\$ 15,515,169.81</b>	<b>98.2%</b>	<b>\$ 16,106,490.00</b>	<b>1.98%</b>

## Office of the General Manager

### Organizational Chart



## Office of the General Manager (continued)

### Mission Statement

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

### Key Responsibilities

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

### Staffing History

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Department of Office of the General Manager</b>			
General Manager	1	1	1
<b>Total General Manager</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Office Support:</b>			
Executive Secretary GM/Board	1	1	1
<b>Total Office Support</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Total – Office of the General Manager Department</b>	<b>2</b>	<b>2</b>	<b>2</b>

### Accomplishments for FY 2015-2016

1. Completed 20-year Facilities Plan Update for the Treatment Plant
2. Completed heat exchange, multi-venturi, and new membrane technology for the Incinerator and Air Emissions System
3. Incorporated \$35 million of Treatment Plant improvements within 10-year CIP
4. Replaced or rehabbed 50,000 feet of sewer line

## Office of the General Manager (continued)

### Accomplishments for FY 2015-2016 (continued)

5. Upgraded Weaverville #1 Pump Station
6. Completed replacement of the adjustable frequency drives at the Influent Pump Station
7. Completed design of new \$11.5 million Headworks Project
8. ISO Recertification for entire organization

### Budget Highlights/Changes for FY 2016-2017

1. Keep rate increases low and consistent based on long-term financial model
2. Includes completing Capital Improvements of approximately \$22 Million
3. Reflects 10% increase in medical plan costs, plus plan adjustments
4. A 3.0% salary adjustment
5. Increase GASB45 requirements and increase to LGERS contribution

### Goals & Objectives

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

### Performance Measures

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

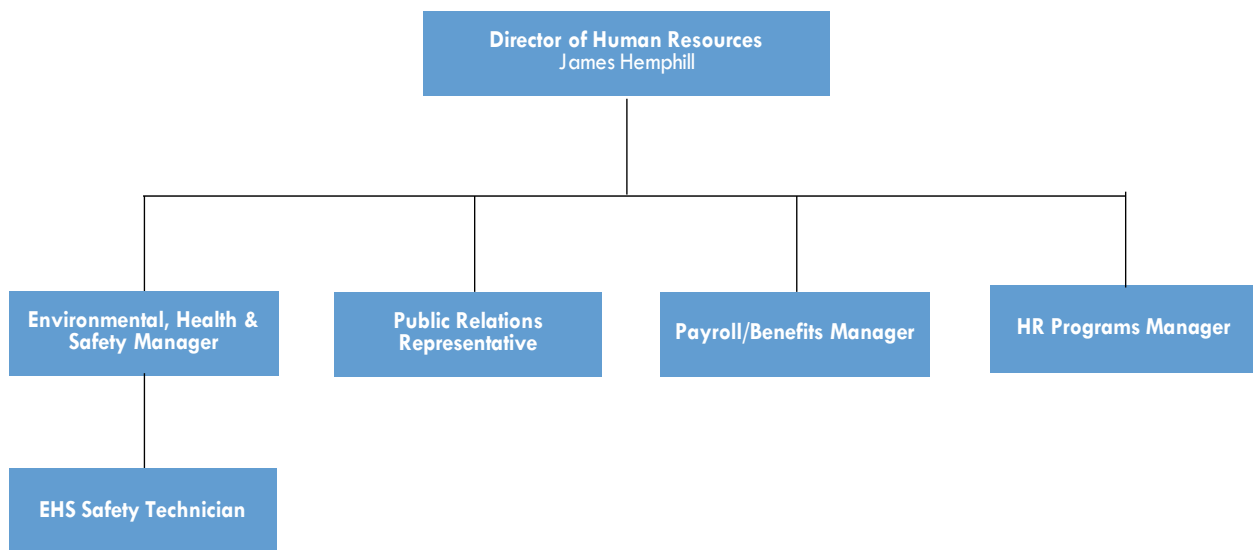
# FY17 Budget – Office of the General Manager

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 218,679.16	\$ 221,127.17	\$ 237,055.57	\$ 231,630.00	\$ 231,630.00	100.0%	\$ 243,626.00	5.18%
<b>Total Salaries &amp; Wages</b>		<b>\$ 218,679.16</b>	<b>\$ 221,127.17</b>	<b>\$ 237,055.57</b>	<b>\$ 231,630.00</b>	<b>\$ 231,630.00</b>	<b>100.0%</b>	<b>\$ 243,626.00</b>	<b>5.18%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 14,746.57	\$ 15,663.24	\$ 16,737.26	\$ 15,450.00	\$ 15,450.00	100.0%	\$ 17,882.00	15.74%
51250	Payroll Taxes	\$ 14,892.81	\$ 13,000.36	\$ 14,255.65	\$ 17,720.00	\$ 17,720.00	100.0%	\$ 18,637.00	5.17%
51300	Medical, Dental & Life	\$ 23,920.87	\$ 24,605.00	\$ 27,829.86	\$ 23,607.00	\$ 23,607.00	100.0%	\$ 25,792.00	9.26%
51325	Post Retirement Insurance	\$ 2,361.13	\$ 2,105.00	\$ 1,048.99	\$ 3,558.00	\$ 3,558.00	100.0%	\$ 3,649.00	2.56%
51350	Worker's Compensation	\$ 2,890.00	\$ 2,890.00	\$ 2,736.28	\$ 2,929.00	\$ 2,929.00	100.0%	\$ 3,689.00	25.95%
51360	State Unemployment Benefits	\$ -	\$ 428.00	\$ 326.03	\$ 440.00	\$ 440.00	100.0%	\$ 440.00	0.00%
51500	401-K/457 Plan	\$ 7,783.89	\$ 7,975.13	\$ 8,545.50	\$ 11,582.00	\$ 11,582.00	100.0%	\$ 12,182.00	5.18%
<b>Total Benefits</b>		<b>\$ 66,595.27</b>	<b>\$ 66,666.73</b>	<b>\$ 71,479.57</b>	<b>\$ 75,286.00</b>	<b>\$ 75,286.00</b>	<b>100.0%</b>	<b>\$ 82,271.00</b>	<b>9.28%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 285,274.43</b>	<b>\$ 287,793.90</b>	<b>\$ 308,535.14</b>	<b>\$ 306,916.00</b>	<b>\$ 306,916.00</b>	<b>100.0%</b>	<b>\$ 325,897.00</b>	<b>6.18%</b>
<b>Materials, Supplies &amp; Services</b>									
52010	Advertising	\$ 10,832.62	\$ 11,816.63	\$ 12,241.81	\$ 13,000.00	\$ 13,000.00	100.0%	\$ 12,500.00	-3.85%
52050	Dues & Subscriptions	\$ 10,447.57	\$ 10,791.90	\$ 11,391.47	\$ 12,000.00	\$ 12,000.00	100.0%	\$ 12,000.00	0.00%
52100	Postage	\$ 7,252.03	\$ 11,195.11	\$ 9,452.22	\$ 11,000.00	\$ 11,000.00	100.0%	\$ 11,000.00	0.00%
52150	Travel, Mtgs & Training	\$ 4,411.87	\$ 4,828.47	\$ 7,244.85	\$ 7,000.00	\$ 7,000.00	100.0%	\$ 7,000.00	0.00%
52170	Directors Fees & Expenses	\$ 42,108.87	\$ 22,620.01	\$ 22,791.28	\$ 33,500.00	\$ 33,500.00	100.0%	\$ 35,000.00	4.48%
52180	Liability Insurance	\$ 116,167.00	\$ 116,167.00	\$ 95,518.68	\$ 116,167.00	\$ 116,167.00	100.0%	\$ 105,099.00	-9.53%
52210	Communications	\$ 1,805.93	\$ 1,854.26	\$ 2,510.77	\$ 3,000.00	\$ 3,000.00	100.0%	\$ 3,000.00	0.00%
52250	Office Supplies	\$ 646.65	\$ 568.70	\$ 270.99	\$ 700.00	\$ 700.00	100.0%	\$ 700.00	0.00%
52260	Special Dept Supplies	\$ 219.63	\$ 921.50	\$ 618.41	\$ 700.00	\$ 700.00	100.0%	\$ 700.00	0.00%
52330	Legal Fees	\$ 40,090.37	\$ 45,918.92	\$ 33,019.00	\$ 40,000.00	\$ 30,000.00	75.0%	\$ 50,000.00	25.00%
52350	Prof/Contractual Svcs	\$ 18,765.53	\$ 17,363.08	\$ 11,660.87	\$ 20,000.00	\$ 17,000.00	85.0%	\$ 20,000.00	0.00%
52410	Maint-Buildings & Grounds	\$ 111,772.55	\$ 113,538.60	\$ 117,581.30	\$ 120,000.00	\$ 120,000.00	100.0%	\$ 121,400.00	1.17%
52420	Maintenance-Equipment	\$ 215.70	\$ 243.31	\$ 230.00	\$ 400.00	\$ 375.00	93.8%	\$ 400.00	0.00%
52500	Rents/Leases	\$ 3,803.32	\$ 4,391.48	\$ 3,346.99	\$ 5,208.00	\$ 5,000.00	96.0%	\$ 5,500.00	5.61%
52510	Permits/Fees/Software Licenses	\$ 140.00	\$ 140.00	\$ 168.00	\$ 170.00	\$ 170.00	100.0%	\$ 170.00	0.00%
52650	Utilities	\$ 107,236.64	\$ 101,862.29	\$ 103,639.47	\$ 103,000.00	\$ 95,000.00	92.2%	\$ 118,000.00	14.56%
52690	Freight	\$ 4,976.68	\$ 4,756.12	\$ 6,737.82	\$ 5,000.00	\$ 4,950.00	99.0%	\$ 5,000.00	0.00%
52900	Other Operating Expenses	\$ 1,240.91	\$ 1,286.28	\$ 467.94	\$ 4,000.00	\$ 3,000.00	75.0%	\$ 4,000.00	0.00%
52910	Non-Capital Equipment	\$ -	\$ -	\$ 738.75	\$ -	\$ -	-	\$ -	-
52920	Billing & Collections	\$ 701,014.95	\$ 717,412.77	\$ 738,238.51	\$ 750,000.00	\$ 750,000.00	100.0%	\$ 772,500.00	3.00%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 1,183,148.82</b>	<b>\$ 1,187,676.43</b>	<b>\$ 1,177,869.13</b>	<b>\$ 1,244,845.00</b>	<b>\$ 1,222,562.00</b>	<b>98.2%</b>	<b>\$ 1,283,969.00</b>	<b>3.14%</b>
<b>Interfund Transfers</b>									
53040	Fleet Replacement Charges	\$ 6,937.00	\$ 7,546.00	\$ 7,546.00	\$ 8,018.00	\$ 8,018.00	100.0%	\$ 8,018.00	0.00%
<b>Total Interfund Transfers</b>		<b>\$ 6,937.00</b>	<b>\$ 7,546.00</b>	<b>\$ 7,546.00</b>	<b>\$ 8,018.00</b>	<b>\$ 8,018.00</b>	<b>100.0%</b>	<b>\$ 8,018.00</b>	<b>0.00%</b>
<b>Capital Outlay</b>									
54010	Capital Equipment - New	\$ -	\$ -	\$ 1,543.00	\$ -	\$ -	-	\$ -	-
<b>Total Capital Outlay</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,543.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>-</b>	<b>\$ -</b>	<b>-</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 1,475,360.25</b>	<b>\$ 1,483,016.33</b>	<b>\$ 1,495,493.27</b>	<b>\$ 1,559,779.00</b>	<b>\$ 1,537,496.00</b>	<b>98.6%</b>	<b>\$ 1,617,884.00</b>	<b>3.73%</b>
59200	LESS:								
	Chargebacks to General Fund for CIP	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
	Chargebacks to General Fund for SSD	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 1,475,360.25</b>	<b>\$ 1,483,016.33</b>	<b>\$ 1,495,493.27</b>	<b>\$ 1,559,779.00</b>	<b>\$ 1,537,496.00</b>	<b>98.6%</b>	<b>\$ 1,617,884.00</b>	<b>3.73%</b>



## 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.

### Staffing History

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Department of Human Resources</b>			
<b>Management:</b>			
Director of Human Resources	1	1	1
<b>Total Management</b>	<b>1</b>	<b>1</b>	<b>1</b>

## Human Resources (continued)

### Staffing History (continued)

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Human Resources:</b>			
Public Relations Representative	1	1	1
HR Programs Manager	1	1	1
Payroll/Benefits Manager	1	1	1
<b>Total Human Resources</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Environmental, Health &amp; Safety:</b>			
EHS Safety Technician	1	1	1
Environmental, Health & Safety Manager	1	1	1
<b>Total Environmental, Health &amp; Safety</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Total – Human Resources Department</b>	<b>6</b>	<b>6</b>	<b>6</b>

### Accomplishments for FY 2015-2016

1. Changed Pharmacy Benefit Manager to CIGNA
2. Added step therapy, mail order and pre-certification for high dollar drugs
3. Increased Wellness activities to reduce medical insurance costs
4. Coordinated retirement and replacement activities
5. Identified, provided training, and promoted employees as part of the Succession Plan
6. Rewrote and distributed Employee Handbook
7. Coordinated a variety of Safety Training programs: trenching, saw usage, rigging, PPE, gas monitor use, traffic flagger, confined space, lockout/ tag out,
8. Completed Arc Flash study & marked equipment per NFPA; Employee assessments under way
9. Piloted improved PPE (safety glasses, hearing protection, gloves, chemical protection
10. Initiated trials on safer cutoff saw blades, diamond blade pavement cutters

### Budget Highlights/Changes for FY 2016-2017

1. Funds allocated for Wage survey
2. Funds allocated for additional atmosphere monitors
3. Funds allocated for Arc Flash training

## Human Resources *(continued)*

### 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)
- ★ **Goal:** Promote District employment opportunities at community job fairs. (MSD Objective 3)
  - *Objective:* Attend at least one job fair annually in Buncombe and Madison Counties
- ★ **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
- ★ **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:* Have at least 75% of employees participate in Health Fair
- ★ **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:** Process payroll in a timely and accurate manner. (Objective 3)
  - *Objective 1:* No errors in paychecks
- ★ **Goal:** Promote efficient utilization of employee benefits. (Objective 3)
  - *Objective 1:* Provide quarterly education or updates to employees concerning different types of benefits or other personal financial issues
- ★ **Goal:** Promote efficient utilization of employee benefits. (Objective 3)
  - *Objective 2:* Resolve employee payroll and benefit concerns within two business days

## Human Resources (continued)

### Goals & Objectives (continued)

- ★ **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:** 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.

### Performance Measures

Task		13-14	14-15	15-16 <sup>est</sup>
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	7	2	6
4.	Avg. # of days to fill vacancies	25	25	30
5.	Avg. advertising cost per vacancy	\$500	\$380	\$400
6.	Percentage of paychecks reissued or modified	<.1%	<.01%	<.1%
7.	Percentage of payroll tax and benefit withholdings timely remitted	100%	100%	100%
8.	Number of employee benefit education sessions	22	11	8
9.	Percentage of employee payroll and benefit concerns resolved within two business days	99%	99%	99%
10.	Number of Injuries (calendar year)	12	5	5
11.	Number of Lost Time Injuries (calendar year)	3	1	1
12.	Incident Rate NAICS (calendar year)	7.85	3.48	3.48
13.	Inspections/Audits (calendar year)	36	23	33/100+
14.	Random Alcohol and Drug Tests for CDL drivers (calendar year)	30	30	33
15.	EHS Training classes conducted (calendar year)	77	78	53

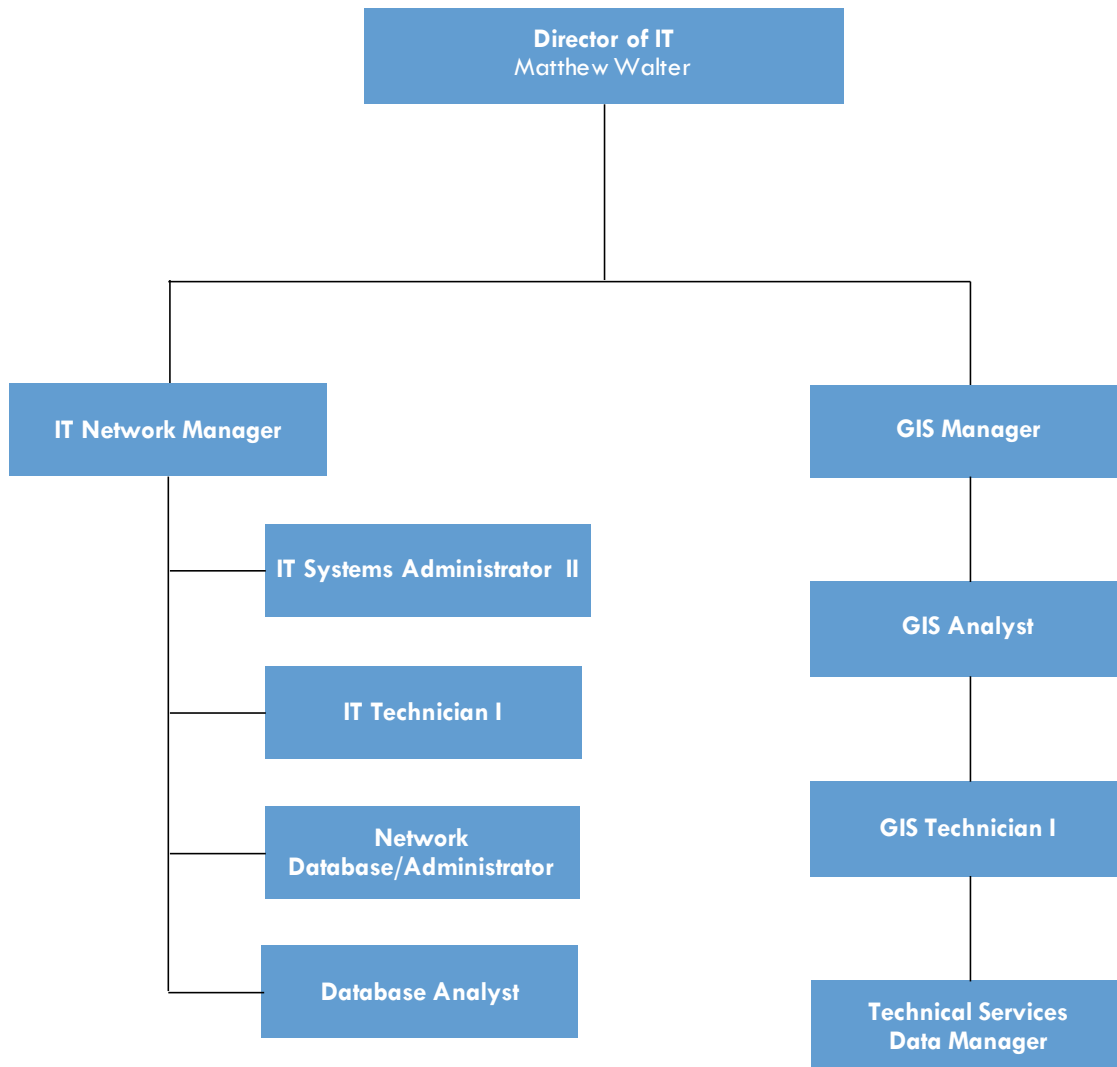
## FY17 Budget – Human Resources

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 338,062.87	\$ 352,525.71	\$ 365,870.22	\$ 411,471.00	\$ 411,471.00	100.0%	\$ 427,776.00	3.96%
51150	Overtime	\$ 280.01	\$ 310.93	\$ 138.78	\$ 250.00	\$ 250.00	100.0%	\$ 250.00	0.00%
<b>Total Salaries &amp; Wages</b>		<b>\$ 338,342.88</b>	<b>\$ 352,836.64</b>	<b>\$ 366,009.00</b>	<b>\$ 411,721.00</b>	<b>\$ 411,721.00</b>	<b>100.0%</b>	<b>\$ 428,026.00</b>	<b>3.96%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 22,525.34	\$ 25,016.54	\$ 25,845.65	\$ 27,462.00	\$ 27,462.00	100.0%	\$ 31,417.00	14.40%
51250	Payroll Taxes	\$ 24,323.75	\$ 27,326.22	\$ 28,506.74	\$ 31,497.00	\$ 31,497.00	100.0%	\$ 32,744.00	3.96%
51300	Medical, Dental & Life	\$ 71,762.61	\$ 73,816.00	\$ 83,489.58	\$ 70,821.00	\$ 70,821.00	100.0%	\$ 77,377.00	9.26%
51325	Post Retirement Insurance	\$ 7,083.39	\$ 6,314.00	\$ 3,146.97	\$ 10,674.00	\$ 10,674.00	100.0%	\$ 10,946.00	2.55%
51350	Worker's Compensation	\$ 8,670.00	\$ 8,670.00	\$ 8,209.78	\$ 8,788.00	\$ 8,788.00	100.0%	\$ 11,067.00	25.93%
51360	State Unemployment Benefits	\$ -	\$ 1,281.96	\$ 978.08	\$ 1,320.00	\$ 1,320.00	100.0%	\$ 1,320.00	0.00%
51450	Automobile Allowance	\$ 1,848.08	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
51500	401-K/457 Plan	\$ 16,497.85	\$ 17,306.22	\$ 18,173.41	\$ 20,574.00	\$ 20,574.00	100.0%	\$ 21,390.00	3.97%
<b>Total Benefits</b>		<b>\$ 152,711.02</b>	<b>\$ 159,730.94</b>	<b>\$ 168,350.21</b>	<b>\$ 171,136.00</b>	<b>\$ 171,136.00</b>	<b>100.0%</b>	<b>\$ 186,261.00</b>	<b>8.84%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 491,053.90</b>	<b>\$ 512,567.58</b>	<b>\$ 534,359.21</b>	<b>\$ 582,857.00</b>	<b>\$ 582,857.00</b>	<b>100.0%</b>	<b>\$ 614,287.00</b>	<b>5.39%</b>
<b>Materials, Supplies &amp; Services</b>									
52010	Advertising	\$ 5,445.18	\$ 3,700.54	\$ 1,788.14	\$ 4,000.00	\$ 3,500.00	87.5%	\$ 4,000.00	0.00%
52050	Dues & Subscriptions	\$ 7,566.06	\$ 6,644.39	\$ 5,684.44	\$ 6,100.00	\$ 5,500.00	90.2%	\$ 6,100.00	0.00%
52150	Travel, Mtgs & Training	\$ 15,249.40	\$ 18,305.76	\$ 18,687.99	\$ 25,805.00	\$ 19,000.00	73.6%	\$ 25,150.00	-2.54%
52160	Tuition Assistance	\$ 468.50	\$ 1,822.38	\$ 4,229.42	\$ 6,000.00	\$ 6,000.00	100.0%	\$ 7,000.00	16.67%
52180	Liability Insurance	\$ 1,873.00	\$ 1,873.00	\$ 1,540.08	\$ 1,873.00	\$ 1,873.00	100.0%	\$ 1,695.00	-9.50%
52210	Communications	\$ 2,345.88	\$ 2,189.29	\$ 2,643.55	\$ 5,310.00	\$ 3,900.00	73.4%	\$ 5,310.00	0.00%
52240	Uniforms	\$ 886.88	\$ 900.70	\$ 839.52	\$ 1,300.00	\$ 1,300.00	100.0%	\$ 1,300.00	0.00%
52250	Office Supplies	\$ 3,647.52	\$ 3,402.57	\$ 2,929.53	\$ 3,900.00	\$ 3,900.00	100.0%	\$ 3,700.00	-5.13%
52260	Special Dept Supplies	\$ 2,642.90	\$ 606.19	\$ 1,455.54	\$ 3,300.00	\$ 3,200.00	97.0%	\$ 3,300.00	0.00%
52270	Safety Equip/Supplies	\$ 5,133.99	\$ 6,363.31	\$ 11,453.54	\$ 12,542.21	\$ 12,550.00	100.1%	\$ 13,000.00	3.65%
52330	Legal Fees	\$ -	\$ 3,103.45	\$ 2,393.41	\$ 4,000.00	\$ 2,500.00	62.5%	\$ 4,000.00	0.00%
52350	Prof/Contractual Svcs	\$ 41,486.46	\$ 36,890.97	\$ 48,920.68	\$ 64,700.00	\$ 52,000.00	80.4%	\$ 68,450.00	5.80%
52410	Maint-Buildings & Grounds	\$ 7,797.67	\$ 4,687.99	\$ 673.37	\$ 1,000.00	\$ 600.00	60.0%	\$ 1,000.00	0.00%
52420	Maintenance-Equipment	\$ 3,129.22	\$ -	\$ -	\$ 2,000.00	\$ 2,000.00	100.0%	\$ 2,000.00	0.00%
52510	Permits/Fees/Software Licenses	\$ 2,660.88	\$ 2,542.27	\$ 1,799.58	\$ 2,850.00	\$ 2,550.00	89.5%	\$ 2,850.00	0.00%
52715	Safety Incentive Program	\$ 1,069.45	\$ 1,228.64	\$ 1,845.91	\$ 2,500.00	\$ 1,800.00	72.0%	\$ 2,500.00	0.00%
52725	Wellness Program	\$ 4,128.82	\$ 8,010.44	\$ 4,592.67	\$ 8,000.00	\$ 7,000.00	87.5%	\$ 8,000.00	0.00%
52730	Employee Asst Program	\$ 4,255.00	\$ 4,255.00	\$ 4,255.00	\$ 4,500.00	\$ 4,355.00	96.8%	\$ 4,500.00	0.00%
52910	Non-Capital Equipment	\$ 16,688.37	\$ 10,046.08	\$ 19,977.58	\$ 11,457.79	\$ 11,458.00	100.0%	\$ 14,800.00	29.17%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 126,475.18</b>	<b>\$ 116,572.97</b>	<b>\$ 135,709.95</b>	<b>\$ 171,138.00</b>	<b>\$ 144,986.00</b>	<b>84.7%</b>	<b>\$ 178,655.00</b>	<b>4.39%</b>
<b>Interfund Transfers</b>									
53040	Fleet Replacement Charges	\$ -	\$ 1,952.00	\$ 1,952.00	\$ 2,074.00	\$ 2,074.00	100.0%	\$ 2,074.00	0.00%
<b>Total Interfund Transfers</b>		<b>\$ -</b>	<b>\$ 1,952.00</b>	<b>\$ 1,952.00</b>	<b>\$ 2,074.00</b>	<b>\$ 2,074.00</b>	<b>100.0%</b>	<b>\$ 2,074.00</b>	<b>0.00%</b>
<b>Capital Outlay</b>									
54010	Capital Equipment - New	\$ 24,246.76	\$ 2,047.42	\$ 5,490.00	\$ -	\$ -	-	\$ -	-
<b>Total Capital Outlay</b>		<b>\$ 24,246.76</b>	<b>\$ 2,047.42</b>	<b>\$ 5,490.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>-</b>	<b>\$ -</b>	<b>-</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 641,775.84</b>	<b>\$ 633,139.97</b>	<b>\$ 677,511.16</b>	<b>\$ 756,069.00</b>	<b>\$ 729,917.00</b>	<b>96.5%</b>	<b>\$ 795,016.00</b>	<b>5.15%</b>
59200	LESS:								
	Chargebacks to General Fund for CIP	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
	Chargebacks to General Fund for SSD	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 641,775.84</b>	<b>\$ 633,139.97</b>	<b>\$ 677,511.16</b>	<b>\$ 756,069.00</b>	<b>\$ 729,917.00</b>	<b>96.5%</b>	<b>\$ 795,016.00</b>	<b>5.15%</b>



## 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 ❶facilitating completion of work objectives, ❷improving communication, and ❸creating 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 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Department of Information Technology</b>			
<b>Management:</b>			
Director of IT	1	1	1
<b>Total Management</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Information Systems (IT):</b>			
IT Technician I	1	1	1
IT Systems Administrator II	1	1	1
IT Network Manager	1	1	1
Database Analyst	1	1	1
Network Database Administrator	1	1	1
<b>Total IT</b>	<b>5</b>	<b>5</b>	<b>5</b>

## Information Technology (continued)

### Staffing History (continued)

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b><i>Geographic Information Systems(GIS):</i></b>			
Technical Services Data Manager	1	1	1
GIS Analyst	1	1	1
GIS Technician II	1	1	1
GIS Manager	1	1	1
<b><i>Total GIS</i></b>	<b>4</b>	<b>4</b>	<b>4</b>
<b><i>Total – Information Technology Department</i></b>	<b>10</b>	<b>10</b>	<b>10</b>

### Accomplishments for FY 2015-2016

1. New Permits Licensing and Land module on Cityworks for Engineering that allows MSD customers to request service online through the Public Portal.
2. Dozens of custom reports on CityWorks and software customizations for MSD.
3. Implemented Freeance Mobile for CityWorks on iPads for offsite Field Operations.
4. Installed new Dell blade server to replace the Finance server and upgraded to the latest Navision software.
5. Increased Wi-Fi coverage on MSD campus from the Plant to the Warehouse.
6. Upgraded emissions monitoring PC and software for the Thermal Converter building.
7. Configuration and installation of 11 new SCADA PCs/servers to monitor systems at the Plant.
8. Rolled out over 10+ laptop replacements/installations, 30+ desktop replacements/installations for MSD users.
9. All MSD users have been migrated from Windows XP to Windows 7 or 10.
10. Ten (10) new scanner/copiers installed MSD wide.
11. Security gates/card readers installed at Fleet and Wash Bay.
12. Temperature monitors installed in three (3) IT server rooms with email alerts.
13. Improved road maintenance layer, depicting agencies of contact throughout the district
14. Produced a GIS layer capturing changes in parcel ownership and boundaries for assistance in tracking right-of-way transfers
15. Improved GIS video layers, reducing the number of pipe video re-inspections

## Information Technology (continued)

### Accomplishments for FY 2015-2016 (continued)

16. Improved mobile navigation, reducing the amount of time to find assets in the field
17. Improved security of MSD GIS websites
18. Developed a GIS application and data layer to capture active projects being inspected, who is inspecting them, and show them on a common map
19. Developed a prototype GIS application and data layer to track underground utilities and obstructions affecting sewer pipes
20. Completed mobile and tablet application development and implementation. It is now a popular, stable product
21. Completion of custom GIS websites for P&D and Finance
22. Improved GIS desktop support and training for Engineering and System Services users
23. Training and supervision of Cane Creek Water and Sewer District staff to update their sewer GIS layer
24. Improvements to SL Rat inspection application, including improving the speed and accuracy of data entry and inspection query functions
25. Successful transfer from FLEX to HTML-based GIS websites
26. Production of Upstream Trace, Downstream Trace, and Flow Monitor custom widgets for HTML-based GIS website
27. Produced and maintain a data layer depicting gated communities, deployed on AR for Truck
28. Completed a first phase mapping of gravity mains and manholes in the Water Reclamation Facility
29. Developed a clickable GIS data layer of scanned as-builts, from which a user can quickly view as-built plans and see past projects
30. Tested and troubleshooting ArcGIS in the Windows 10 environment
31. Begun the improvement of right-of-way easements mapping and tracking

### Goals & Objectives

- ★ **Goal:** Provide all MSD staff with outstanding customer service.
- ★ **Goal:** Continue to provide on-going training, support and application customization to all divisions. Maintain the servers, network, email, websites, public map access, phones, copiers, fax machines, printers, and security systems.
- ★ **Goal:** Continue testing and researching in preparation for upgrades, including Windows, Server, Cloud Computing, and Storage.

## Information Technology (continued)

### Goals & Objectives (continued)

- ★ **Goal:** Implement mobile solution for CityWorks to aid in paper reduction as well expanding use of Flex/ESRI Mapping systems
- ★ **Goal:** Assist in continued implementation and support of CityWorks software.
- ★ **Goal:** Move completely away from using old Work Order Management System, (WOMS).
- ★ **Goal:** Complete reporting structure for CityWorks.
- ★ **Goal:** Normalize data within the CityWorks system.
- ★ **Goal:** Create specific plans for projects in each area of MSD in regards to software needs so that end-users will know whom to contact.
- ★ **Goal:** Assist in providing IT hardware support as needed.
- ★ **Goal:** Continue application and geospatial data support for CityWorks, Granite XP, Flex, ArcGIS Desktop, and AR for Trucks software and processes.
- ★ **Goal:** Implement tighter Quality Control measures on existing data as well as research and correct any errors founds through these tighter controls.
- ★ **Goal:** Quantify existing data sources such as As-Builts to ensure they have been entered into the GIS system and scanned for digital copies. Field edits and tap maps should already be archived through Granite XP and/or CityWorks software and attachments available in CityWorks.
- ★ **Goal:** Continue to input geospatial data changes as requested by users.
- ★ **Goal:** Continue to process map requests and customer inquiries.
- ★ **Goal:** Continue to implement Local Government Information Model for Water Utilities maps and apps as well as utilizing ArcGIS Online environment.
- ★ **Goal:** Develop GIS web applications for additional environments.
- ★ **Goal:** Begin conversion from FLEX web mapping to HTML. ESRI no longer supports new development options for FLEX and plans to stop supporting the product in the future.
- ★ **Goal:** Continue application and geospatial data support for CityWorks, Granite XP, FLEX, ArcGIS Desktop, and AR for Trucks software processes.

## Information Technology (continued)

### Goals & Objectives (continued)

- ★ **Goal:** Develop Desktop GIS Applications to meet user needs that cannot be met by web and mobile GIS applications.
- ★ **Goal:** Continue assessment of existing data sources, such as as-builts and past work orders to ensure that they have been entered into the GIS system.
- ★ **Goal:** Expand web and mobile solutions to assist workflows where needed.
- ★ **Goal:** Continue to input geospatial data changes as requested by users.
- ★ **Goal:** Continue to process map requests and customer data inquiries.
- ★ **Goal:** Conduct pipe scoring on legacy video that has not been re-inspected by Granite or slated for capital improvement
- ★ **Goal:** Complete transfers of all FLEX-based GIS websites to HTML-based GIS websites
- ★ **Goal:** Application development of HTML site widgets, to provide more tools to WebGIS users
- ★ **Goal:** Continue application and Geospatial data support for CityWorks, Granite XP, FLEX, ArcGIS Desktop, and AR for Trucks software applications
- ★ **Goal:** Continue assessment of MSD hardcopy maps, survey, and standalone digital data that have not been entered into the system
- ★ **Goal:** Expand web and mobile solutions to assist workflows where needed
- ★ **Goal:** Continue user support for MSD Web, Mobile, and Desktop GIS users
- ★ **Goal:** Map Wastewater Reclamation Facility structures as they are changed and exposed by construction projects
- ★ **Goal:** Continue data entry of as-built sewer maps
- ★ **Goal:** Continue to process map requests and customer data inquiries
- ★ **Goal:** Improve Granite product visualization
- ★ **Goal:** Continued application and geospatial data support for CityWorks, Granite XP, FLEX, ArcGIS Desktop, and AR for Truck
- ★ **Goal:** Expanded web and mobile solutions to help streamline field navigation and workflows

## Information Technology (continued)

### Goals & Objectives (continued)

- ★ **Goal:** Continued data entry and process improvements
- ★ **Goal:** Continued processing of map requests and customer data inquiries
- ★ **Goal:** Continued pipe scoring of legacy video
- ★ **Goal:** Continued assessment MSD hardcopy map and survey resources that have not been entered into the GIS system

### Performance Measures

Task	13-14	14-15	15-16 <sup>est</sup>
1. In-house direct labor (except fiber optic repairs)	100%	100%	100%
2. Same day turnaround on user issues/assistance	93%	95%	95%

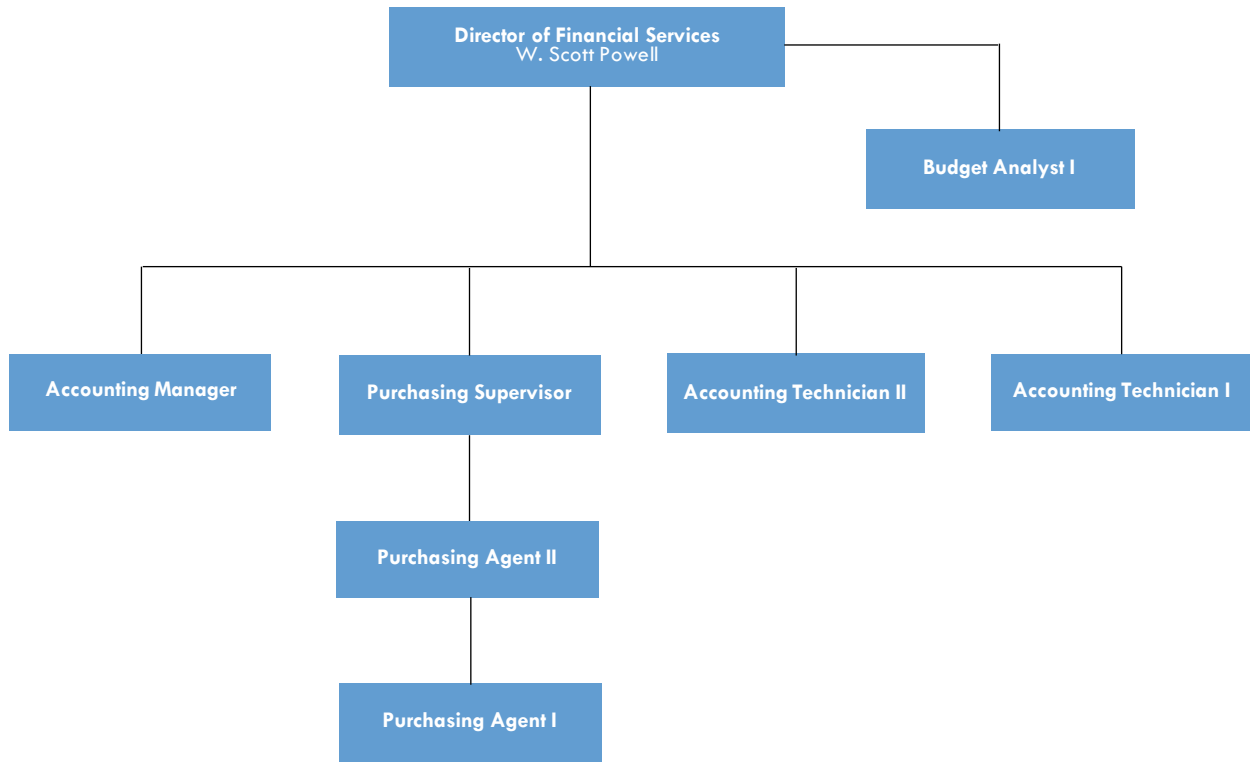


## FY17 Budget – Information Technology

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 552,617.31	\$ 547,024.17	\$ 622,852.62	\$ 635,761.00	\$ 635,761.00	100.0%	\$ 654,765.00	2.99%
51150	Overtime	\$ -	\$ 188.50	\$ -	\$ 500.00	\$ -	0.0%	\$ -	-100.00%
<b>Total Salaries &amp; Wages</b>		<b>\$ 552,617.31</b>	<b>\$ 547,212.67</b>	<b>\$ 622,852.62</b>	<b>\$ 636,261.00</b>	<b>\$ 635,761.00</b>	<b>99.9%</b>	<b>\$ 654,765.00</b>	<b>2.91%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 37,214.43	\$ 38,806.61	\$ 43,988.92	\$ 42,439.00	\$ 42,405.00	99.9%	\$ 48,060.00	13.24%
51250	Payroll Taxes	\$ 40,068.67	\$ 39,498.51	\$ 45,255.70	\$ 48,674.00	\$ 48,636.00	99.9%	\$ 50,089.00	2.91%
51300	Medical, Dental & Life	\$ 119,604.35	\$ 123,027.00	\$ 139,149.31	\$ 118,035.00	\$ 118,035.00	100.0%	\$ 128,962.00	9.26%
51325	Post Retirement Insurance	\$ 11,804.65	\$ 10,523.00	\$ 5,244.95	\$ 17,790.00	\$ 17,790.00	100.0%	\$ 18,243.00	2.55%
51350	Worker's Compensation	\$ 14,450.00	\$ 14,450.00	\$ 13,683.29	\$ 14,647.00	\$ 14,647.00	100.0%	\$ 18,445.00	25.93%
51360	State Unemployment Benefits	\$ 7,472.00	\$ 15,770.67	\$ 1,630.13	\$ 2,200.00	\$ 2,200.00	100.0%	\$ 2,200.00	0.00%
51500	401-K/457 Plan	\$ 14,688.43	\$ 16,886.60	\$ 25,100.28	\$ 31,789.00	\$ 31,789.00	100.0%	\$ 32,739.00	2.99%
<b>Total Benefits</b>		<b>\$ 245,302.53</b>	<b>\$ 258,962.39</b>	<b>\$ 274,052.58</b>	<b>\$ 275,574.00</b>	<b>\$ 275,502.00</b>	<b>100.0%</b>	<b>\$ 298,738.00</b>	<b>8.41%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 797,919.84</b>	<b>\$ 806,175.06</b>	<b>\$ 896,905.20</b>	<b>\$ 911,835.00</b>	<b>\$ 911,263.00</b>	<b>99.9%</b>	<b>\$ 953,503.00</b>	<b>4.57%</b>
<b>Materials, Supplies &amp; Services</b>									
52050	Dues & Subscriptions	\$ 50.00	\$ 129.00	\$ 377.00	\$ 500.00	\$ 350.00	70.0%	\$ 440.00	-12.00%
52150	Travel, Mtgs & Training	\$ 2,417.92	\$ 1,023.35	\$ 2,272.00	\$ 3,069.00	\$ 2,925.00	95.3%	\$ 3,500.00	14.04%
52180	Liability Insurance	\$ 11,670.00	\$ 11,670.00	\$ 9,595.69	\$ 11,670.00	\$ 11,670.00	100.0%	\$ 10,557.00	-9.54%
52200	Telephone/Telefax	\$ 33,597.07	\$ 29,506.09	\$ 28,692.57	\$ 31,200.00	\$ 31,200.00	100.0%	\$ 31,600.00	1.28%
52210	Communications	\$ 4,714.59	\$ 2,639.09	\$ 2,899.47	\$ 3,500.00	\$ 3,500.00	100.0%	\$ 3,500.00	0.00%
52240	Uniforms	\$ 159.53	\$ 101.54	\$ -	\$ 800.00	\$ -	0.0%	\$ 800.00	0.00%
52250	Office Supplies	\$ 400.41	\$ 440.34	\$ 93.41	\$ 650.00	\$ 625.00	96.2%	\$ 700.00	7.69%
52260	Special Dept Supplies	\$ 390.41	\$ 57.23	\$ 51.39	\$ 500.00	\$ 500.00	100.0%	\$ 500.00	0.00%
52270	Safety Equip/Supplies	\$ 78.52	\$ 84.07	\$ 77.28	\$ 100.00	\$ 100.00	100.0%	\$ 200.00	100.00%
52350	Prof/Contractual Svcs	\$ 3,357.81	\$ 7,372.33	\$ 17,345.05	\$ 12,500.00	\$ 9,500.00	76.0%	\$ 12,500.00	0.00%
52500	Rents/Leases	\$ 25,515.21	\$ 30,041.44	\$ 34,046.64	\$ 42,000.00	\$ 40,000.00	95.2%	\$ 44,000.00	4.76%
52510	Permits/Fees/Software Licenses	\$ 63,988.14	\$ 55,604.00	\$ 140,882.76	\$ 176,050.00	\$ 173,000.00	98.3%	\$ 179,800.00	2.13%
52910	Non-Capital Equipment	\$ 49,422.27	\$ 54,225.16	\$ 68,416.01	\$ 55,000.00	\$ 55,000.00	100.0%	\$ 55,000.00	0.00%
52915	Copiers Printers & Faxes	\$ -	\$ -	\$ 60.41	\$ 5,000.00	\$ 4,775.00	95.5%	\$ 5,000.00	0.00%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 195,761.88</b>	<b>\$ 192,893.64</b>	<b>\$ 304,809.68</b>	<b>\$ 342,539.00</b>	<b>\$ 333,145.00</b>	<b>97.3%</b>	<b>\$ 348,097.00</b>	<b>1.62%</b>
<b>Capital Outlay</b>									
54010	Capital Equipment - New	\$ 86,521.91	\$ -	\$ 3,055.26	\$ 5,500.00	\$ 5,500.00	100.0%	\$ 5,950.00	8.18%
54020	Capital Equip-Software	\$ 13,598.61	\$ 23,404.39	\$ 11,250.00	\$ 13,738.50	\$ 13,700.00	99.7%	\$ 13,248.00	-3.57%
54030	Capital Equip - Replacement	\$ 17,977.12	\$ 66,688.27	\$ 40,732.62	\$ 22,000.00	\$ 21,850.00	99.3%	\$ 16,800.00	-23.64%
<b>Total Capital Outlay</b>		<b>\$ 118,097.64</b>	<b>\$ 90,092.66</b>	<b>\$ 55,037.88</b>	<b>\$ 41,238.50</b>	<b>\$ 41,050.00</b>	<b>99.5%</b>	<b>\$ 35,998.00</b>	<b>-12.71%</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 1,111,779.36</b>	<b>\$ 1,089,161.36</b>	<b>\$ 1,256,752.76</b>	<b>\$ 1,295,612.50</b>	<b>\$ 1,285,458.00</b>	<b>99.2%</b>	<b>\$ 1,337,598.00</b>	<b>3.24%</b>
59200	<b>LESS:</b>								
	Chargebacks to General Fund for CIP	\$ (255,974.39)	\$ (239,081.92)	\$ (278,052.43)	\$ (288,225.00)	\$ (288,225.00)	100.0%	\$ (299,284.00)	3.84%
	Chargebacks to General Fund for SSD	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 855,804.97</b>	<b>\$ 850,079.44</b>	<b>\$ 978,700.33</b>	<b>\$ 1,007,387.50</b>	<b>\$ 997,233.00</b>	<b>99.0%</b>	<b>\$ 1,038,314.00</b>	<b>3.07%</b>

## Financial Services

### Organizational Chart



## Financial Services (continued)

### 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.

### 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.

### Staffing History

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Department of Financial Services</b>			
<b>Management</b>			
Director of Financial Services	1	1	1
<b>Total Management</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Finance &amp; Budget:</b>			
Budget Analyst	1	1	1
<b>Total Finance &amp; Budget</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Accounting, Investments &amp; Cash Flow Management:</b>			
Accounting Technician I	2	2	1
Accounting Technician II	1	1	1
Accounting Manager	1	1	1
<b>Total Acct., Investments &amp; Cash Flow Management</b>	<b>4</b>	<b>4</b>	<b>3</b>

## Financial Services (continued)

### Staffing History (continued)

Division & Position	Approved Positions	Approved Positions	Budgeted Positions
	14-15	15-16	16-17
<b><i>Purchasing &amp; Warehouse:</i></b>			
Purchasing Agent I	1	1	1
Purchasing Agent II	1	1	1
Purchasing Supervisor	1	1	1
<b><i>Total Purchasing &amp; Warehouse</i></b>	<b>3</b>	<b>3</b>	<b>3</b>
<b><i>Total – Financial Services Department</i></b>	<b>9</b>	<b>9</b>	<b>8</b>

### Accomplishments for FY 2015-2016

1. Received the GFOA "Excellence in Financial Reporting" award for the Comprehensive Annual Financial Report (CAFR) for FY ending June 30, 2015.
2. Received the GFOA "Distinguished Budget" award for the Budget Document prepared for FY ending June 30, 2016.
3. Continue to offer high level of Customer Service to all customers internal and external to the District.
4. Purchasing and Finance Team continue to implement and enhance its E-Payables program with Bank of America.
5. Successfully auctioned MSD surplus materials.
6. 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.

## Financial Services (continued)

### Goals & Objectives

- ★ **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:** 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:** Operate Finance Department in an efficient manner.
  - *Objective:* Minimize finance department expenditures in relation to total expenditures.
  
- ★ **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:** Maintain cost-effective and sufficient inventory levels.
  - *Objective:* To maintain an inventory loss level below 3%. (Purchasing Policy #2)
  - *Objective:* To minimize emergency purchases.

## Financial Services (continued)

### Performance Measures

Task	13-14	14-15	15-16 <sup>est</sup>
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 Ratings	Aa2/AA+/ AA+	Aa2/AA+/ AA+	Aa1/AA+/ AA+
5. Compliance with all provisions of bond order	yes	yes	yes
6. Southern Urban COL % increase	1.50%	1.60%	0.50%
7. MSD rate increase	2.50%	2.50%	2.50%
<i>Comments: Assesses affordability of sewer rate increases when compared to overall regional price increases.</i>			
8. Ratio of actual to budgeted sewer revenues	102.14%	105.48%	100.00%
9. Ratio of operating and maintenance total expenditures actual to budgeted	95.29%	93.57%	98.20%
<i>Comments: These illustrate the accuracy of financial projections and adequacy of revenues to meet expenditures.</i>			
10. Interest and debt management costs as a percentage of outstanding debt	2.48%	3.71%	4.23%
11. MSD Investment Yield	0.57%	0.59%	0.51%
12. NC Cash Management Trust (Money Market)	0.01%	0.04%	0.37%
13. 6-Month T-Bill Secondary Market (Calendar)	0.07%	0.09%	0.49%
<i>Comments: Rates of return reflect overall declining interest rates in the fixed income market.</i>			
14. Collection of internally billed residential accounts	95.25%	95.00%	95.25%
15. Collection of internally billed industrial accounts	100.00%	100.00%	100.00%
16. Percentage of voided accounts payable checks	3.50%	3.25%	3.00%
<i>Comments: This ratio illustrates the effectiveness of the cash disbursement process.</i>			
17. Percentage of total O&M costs expended on Finance function	5.32%	5.45%	4.94%
18. Purchase orders placed within 3 business days	98%	99%	99%
19. Requisitions for capital equipment to be bid within two (2) weeks from receipt of detailed specifications from division	99%	98.5%	98.5%
20. Maintain loss of inventory at Warehouse below 3% in value (Goal 2)	2.50%	2.50%	2.50%
21. Obtain the 12% goal for purchases with minority owned/operated businesses	11.90%	11.50%	11.50%

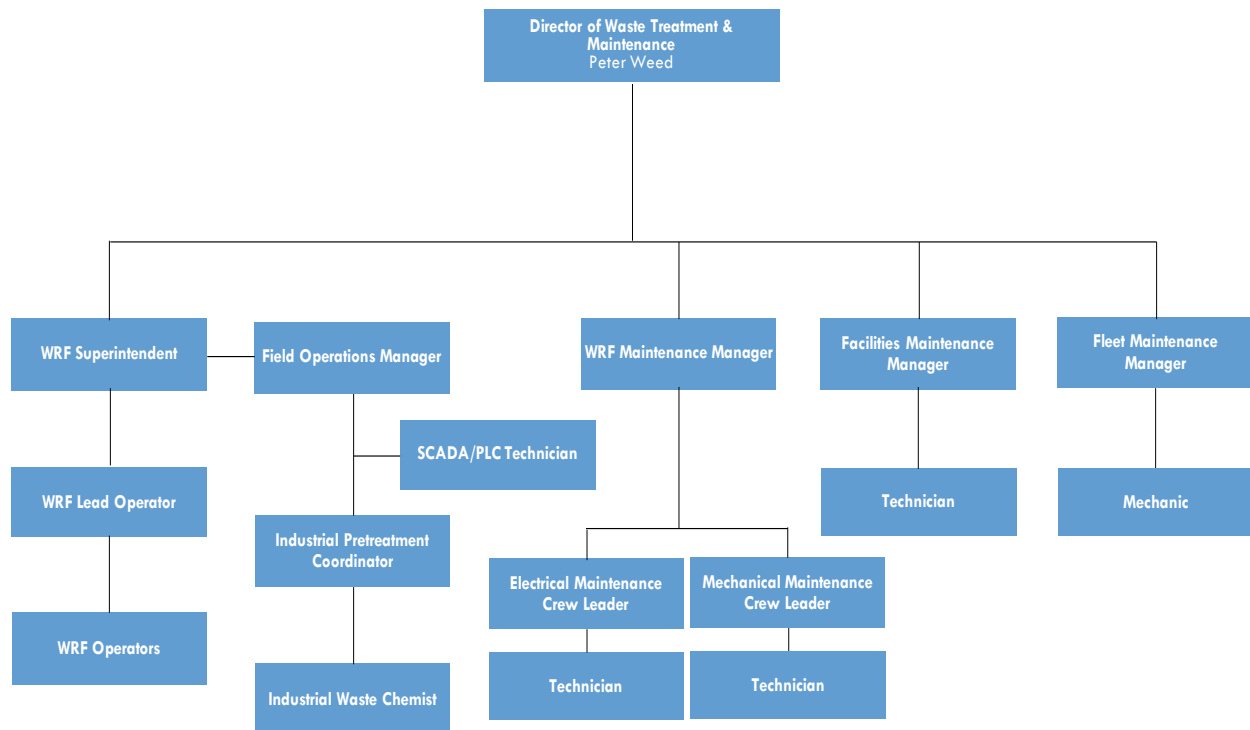
## FY17 Budget – Financial Services

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 464,619.84	\$ 472,515.70	\$ 488,785.88	\$ 514,431.00	\$ 514,431.00	100.0%	\$ 486,971.00	-5.34%
51150	Overtime	\$ -	\$ 100.62	\$ -	\$ 500.00	\$ 275.00	55.0%	\$ 500.00	0.00%
<b>Total Salaries &amp; Wages</b>		<b>\$ 464,619.84</b>	<b>\$ 472,616.32</b>	<b>\$ 488,785.88</b>	<b>\$ 514,931.00</b>	<b>\$ 514,706.00</b>	<b>100.0%</b>	<b>\$ 487,471.00</b>	<b>-5.33%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 31,834.97	\$ 33,569.24	\$ 34,518.19	\$ 34,346.00	\$ 34,331.00	100.0%	\$ 35,780.00	4.18%
51250	Payroll Taxes	\$ 34,077.87	\$ 33,759.69	\$ 35,216.81	\$ 39,392.00	\$ 39,375.00	100.0%	\$ 37,292.00	-5.33%
51300	Medical, Dental & Life	\$ 107,644.94	\$ 110,730.00	\$ 125,234.97	\$ 106,232.00	\$ 106,232.00	100.0%	\$ 103,169.00	-2.88%
51325	Post Retirement Insurance	\$ 10,625.06	\$ 9,471.00	\$ 4,720.31	\$ 16,010.00	\$ 16,010.00	100.0%	\$ 14,594.00	-8.84%
51350	Worker's Compensation	\$ 13,008.00	\$ 13,008.00	\$ 12,315.61	\$ 13,183.00	\$ 13,183.00	100.0%	\$ 14,757.00	11.94%
51360	State Unemployment Benefits	\$ -	\$ 1,883.89	\$ 1,467.12	\$ 1,980.00	\$ 1,980.00	100.0%	\$ 1,760.00	-11.11%
51500	401-K/457 Plan	\$ 21,518.32	\$ 21,643.47	\$ 21,984.34	\$ 25,722.00	\$ 25,722.00	100.0%	\$ 24,349.00	-5.34%
<b>Total Benefits</b>		<b>\$ 218,709.16</b>	<b>\$ 224,065.29</b>	<b>\$ 235,457.35</b>	<b>\$ 236,865.00</b>	<b>\$ 236,833.00</b>	<b>100.0%</b>	<b>\$ 231,701.00</b>	<b>-2.18%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 683,329.00</b>	<b>\$ 696,681.61</b>	<b>\$ 724,243.23</b>	<b>\$ 751,796.00</b>	<b>\$ 751,539.00</b>	<b>100.0%</b>	<b>\$ 719,172.00</b>	<b>-4.34%</b>
<b>Materials, Supplies &amp; Services</b>									
52050	Dues & Subscriptions	\$ 1,575.00	\$ 1,863.95	\$ 1,715.00	\$ 1,800.00	\$ 1,750.00	97.2%	\$ 1,800.00	0.00%
52150	Travel, Mtgs & Training	\$ 6,236.40	\$ 6,129.72	\$ 6,051.70	\$ 12,082.00	\$ 12,000.00	99.3%	\$ 12,173.00	0.75%
52210	Communications	\$ 1,316.88	\$ 1,158.25	\$ 2,244.69	\$ 2,595.00	\$ 2,550.00	98.3%	\$ 2,600.00	0.19%
52240	Uniforms	\$ 869.24	\$ 674.08	\$ 561.12	\$ 1,450.00	\$ 1,200.00	82.8%	\$ 1,450.00	0.00%
52250	Office Supplies	\$ 3,086.60	\$ 2,780.02	\$ 2,100.88	\$ 3,000.00	\$ 2,775.00	92.5%	\$ 3,000.00	0.00%
52260	Special Dept Supplies	\$ 597.02	\$ 1,422.49	\$ 1,069.28	\$ 1,200.00	\$ 1,175.00	97.9%	\$ 1,200.00	0.00%
52350	Prof/Contractual Svcs	\$ 56,121.44	\$ 49,408.31	\$ 54,150.39	\$ 52,000.00	\$ 50,000.00	96.2%	\$ 52,000.00	0.00%
52910	Non-Capital Equipment	\$ 942.86	\$ 1,481.13	\$ 630.45	\$ 3,800.00	\$ 3,525.00	92.8%	\$ 2,000.00	-47.37%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 70,745.44</b>	<b>\$ 64,917.95</b>	<b>\$ 68,523.51</b>	<b>\$ 77,927.00</b>	<b>\$ 74,975.00</b>	<b>96.2%</b>	<b>\$ 76,223.00</b>	<b>-2.19%</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 754,074.44</b>	<b>\$ 761,599.56</b>	<b>\$ 792,766.74</b>	<b>\$ 829,723.00</b>	<b>\$ 826,514.00</b>	<b>99.6%</b>	<b>\$ 795,395.00</b>	<b>-4.14%</b>
59200	LESS:								
	Chargebacks to General Fund for CIP	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
	Chargebacks to General Fund for SSD	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 754,074.44</b>	<b>\$ 761,599.56</b>	<b>\$ 792,766.74</b>	<b>\$ 829,723.00</b>	<b>\$ 826,514.00</b>	<b>99.6%</b>	<b>\$ 795,395.00</b>	<b>-4.14%</b>



# 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.

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

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.

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 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Department of Water Reclamation Facility</b>			
<b>Management:</b>			
Director of Waste Treatment & Maintenance Facility	1	1	1
<b>Total Management</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Office Support:</b>			
WWTP Office Manager	0	1	1
<b>Total Office Support</b>	<b>0</b>	<b>1</b>	<b>1</b>
<b>Plant Operations:</b>			
Lead Operator	2	2	2
Operations Manager	1	1	1
WWTP Operator	8	8	8
<b>Total Plant Operations</b>	<b>11</b>	<b>11</b>	<b>11</b>

## Wastewater Treatment Plant (continued)

### Staffing History (continued)

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b><i>Fleet Maintenance:</i></b>			
Fleet Mechanic III	3	3	3
Fleet/Mechanical Maintenance Supervisor	1	1	1
<b><i>Total Fleet Maintenance</i></b>	<b>4</b>	<b>4</b>	<b>4</b>
<b><i>Mechanical/Electrical Maintenance:</i></b>			
Electrical Maintenance Crew Leader	1	1	1
Electrical IV/Specialist	1	1	1
Instrumentation Specialist	1	0	0
Mechanic II	2	2	2
Mechanical Maintenance Crew Leader	1	1	1
Mechanical Specialist	1	1	1
Senior Electrician	2	2	2
Senior Mechanic	2	2	2
Electrical Maintenance Manager	1	1	1
<b><i>Total Mechanical/Electrical Maintenance</i></b>	<b>12</b>	<b>11</b>	<b>11</b>
<b><i>Industrial Waste:</i></b>			
Industrial Waste Chemist	1	1	1
Industrial Pretreatment Coordinator	1	1	1
SCADA/PLC Technician	2	2	2
Field Operations Manager	1	1	1
<b><i>Total Industrial Waste</i></b>	<b>5</b>	<b>5</b>	<b>5</b>
<b><i>Facilities Maintenance:</i></b>			
Facility Maintenance Technician	5	5	5
Facilities Maintenance Manager	1	1	1
<b><i>Total Structural Maintenance</i></b>	<b>6</b>	<b>6</b>	<b>6</b>
<b><i>Total – Wastewater Treatment Plant Department</i></b>	<b>39</b>	<b>39</b>	<b>39</b>

### Accomplishments for FY 2015-2016

1. Maintaining full compliance with NPDES and WNC Air Quality permits and standards.
2. Completion of WRF Headworks planning document for design of new fine screen facility, vortex grit removal system, and replacement of influent gates and ¾" bar screens.
3. Replacement of ten (10) failed RBCs' extending treatment reliability (30 units have been restored within last 18 months).
4. Completion of WRF Influent pump station controls and variable speed drives for three 400hp pumps. All atmospherically sensitive electrical systems are now in a protective environment.

## Wastewater Treatment Plant (continued)

### Accomplishments for FY 2015-2016 (continued)

5. Complete renovation of Incinerator air pollution control system; installation of state-of-the-art mercury removal filters, enhanced particulate and H<sub>2</sub>S scrubber installed, replacement of heat exchanger, and latest generation of computer-controlled SCADA instruments & technology.
6. Complete mechanical rehabilitation of southwest quadrant of the Intermediate Clarifier.
7. Demolition of obsolete gas chlorine building, anaerobic digester equipment and miscellaneous piping in preparation for new headworks installations.
8. Rehabilitation of the Weaverville 1 pump station; installation of third standby pump (diesel powered), bypass port for emergency pumping, relocation of H<sub>2</sub>S odor control station to site.
9. Completion of over 1,350 work orders; Motor Fleet, WRF Maintenance, and Facilities Maintenance combined.

### 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) (MSD Objective #2)
  - ▶ *Objective:* Achieve a carbonaceous biochemical oxygen demand (CBOD) removal efficiency of at least 85%
  - ▶ *Objective:* Achieve a total suspended solids (TSS) removal efficiency of 85%
  - ▶ *Objective:* Have NPDES permit non-compliance occurrence of zero (0)
  - ▶ *Objective:* Limit odor complaints by maintaining dissolved hydrogen sulfide (H<sub>2</sub>S) levels below 0.5 mg/L.
- ★ **Goal:** Timely and cost-efficient maintenance and rehabilitation of plant buildings and equipment (MSD Goals # 1 and 3)
  - ▶ *Objective:* Maintain annual rehab and replacement of key Building systems according to long-range plan (roofs, HVAC systems, Mechanical systems, exteriors, etc.)
  - ▶ *Objective:* Maintain a preventative to corrective maintenance ratio of at least 60/40
  - ▶ *Objective:* Maintain an equipment availability ratio of at least >95%
  - ▶ *Objective:* Maintain treatment costs (cost/MG) at/below NACWA average
- ★ **Goal:** Continual improvement of operations (MSD Goal #4)
  - ▶ *Objective:* Effectively manage divisional objective(s) identified in the ISO 14001 Environmental Management System
  - ▶ *Objective:* Continual development of WRF SCADA–integration of controls, reviews of standard operating procedures affecting Operations and Maintenance

## Wastewater Treatment Plant (continued)

### Goals & Objectives (continued)

- ★ **Goal:** For the MSD fleet to have minimal environmental impact to the service area (MSD 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:* With System Services, continue to evaluate heavy-duty vehicles essential for sewer line preventative maintenance

### Budget Highlights/Changes for FY 2016-2017

1. Replace ten RBC's to fully restore total treatment to 100% service level.
2. Fine tune performance of new Incinerator air emission control systems and perform quarterly mercury sorbent trap testing for meeting air quality standards.
3. Begin construction on Fine Screens, Vortex Grit removal system, and replacement of Influent bar screens (timing of bar screens replacement may be extended into FY18).
4. Replace third Influent Pump (last in series) and replace impeller on first replacement; net result will be the complete restoration on all influent pumps for 8 additional feet of vertical lift.
5. Select engineering team to complete design for High-rate Primary Clarifiers with fiscal year.
6. Continue with planned roof replacements & structural rehab projects at WRF, Mull Building, & remote Pump Stations.
7. Maintain adequate capital purchases of replacement vehicles assuring maximum efficiency and effectiveness of service.

## Wastewater Treatment Plant (continued)

### Performance Measures

Task	13-14	14-15	15-16 <sup>est</sup>
1. Daily (average) flow, treated MGD	22.9	19.1	19.5
2. Maximum daily flow treated, MGD	74.6	39.0	67.1
3. Dry tons of bio-solids processed	5,608	5,886	6,400
4. Cost per million gallons (MG), treated	\$614	\$735	\$725
5. Energy costs per MG, treated	\$101	\$115	\$115
6. CBOD removal efficiency, %	92%	92%	92%
7. TSS removal efficiency, %	96%	97%	96%
8. Number of NPDES permit non-compliance	0	0	0
9. Preventative to corrective maintenance ratio	30/70	35/65	30/70
10. Equipment availability percentage	>95%	>95%	>95%
11. In-house direct labor	97%	98%	97%
12. Direct labor spent on work orders	87%	85%	85%
13. Same day turnaround PM vehicles	96%	95%	95%

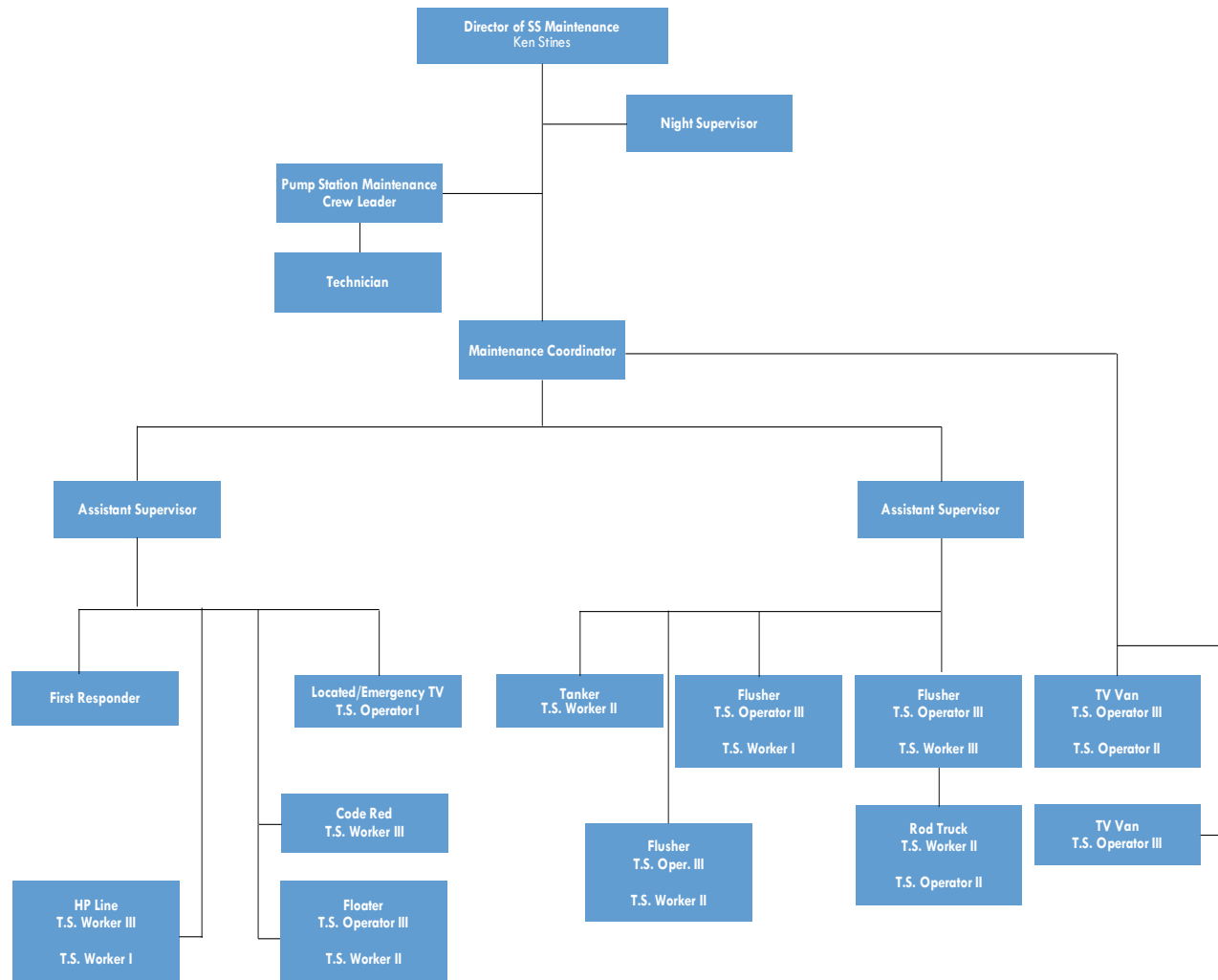
# FY17 Budget – Wastewater Treatment Plant

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 2,256,965.65	\$ 2,309,119.86	\$ 2,365,781.08	\$ 2,449,197.00	\$ 2,449,197.00	100.0%	\$ 2,346,690.00	-4.19%
51150	Overtime	\$ 99,472.40	\$ 144,696.33	\$ 113,250.91	\$ 117,000.00	\$ 117,000.00	100.0%	\$ 105,000.00	-10.26%
<b>Total Salaries &amp; Wages</b>		<b>\$ 2,356,438.05</b>	<b>\$ 2,453,816.19</b>	<b>\$ 2,479,031.99</b>	<b>\$ 2,566,197.00</b>	<b>\$ 2,566,197.00</b>	<b>100.0%</b>	<b>\$ 2,451,690.00</b>	<b>-4.46%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 158,338.91	\$ 174,212.36	\$ 174,084.23	\$ 171,165.00	\$ 171,165.00	100.0%	\$ 179,954.00	5.13%
51250	Payroll Taxes	\$ 170,288.59	\$ 178,235.58	\$ 180,452.56	\$ 196,313.00	\$ 196,313.00	100.0%	\$ 187,553.00	-4.46%
51300	Medical, Dental & Life	\$ 514,301.75	\$ 516,716.00	\$ 584,428.28	\$ 495,748.00	\$ 495,748.00	100.0%	\$ 502,949.00	1.45%
51325	Post Retirement Insurance	\$ 50,763.25	\$ 44,199.00	\$ 22,028.21	\$ 74,713.00	\$ 74,713.00	100.0%	\$ 71,148.00	-4.77%
51350	Worker's Compensation	\$ 62,137.00	\$ 60,691.00	\$ 57,470.37	\$ 61,518.00	\$ 61,518.00	100.0%	\$ 71,940.00	16.94%
51360	State Unemployment Benefits	\$ 1,004.38	\$ 9,285.27	\$ 6,846.56	\$ 9,240.00	\$ 9,240.00	100.0%	\$ 8,580.00	-7.14%
51500	401-K/457 Plan	\$ 91,031.91	\$ 97,031.68	\$ 101,066.56	\$ 122,463.00	\$ 122,463.00	100.0%	\$ 117,338.00	-4.18%
<b>Total Benefits</b>		<b>\$ 1,047,865.79</b>	<b>\$ 1,080,370.89</b>	<b>\$ 1,126,376.77</b>	<b>\$ 1,131,160.00</b>	<b>\$ 1,131,160.00</b>	<b>100.0%</b>	<b>\$ 1,139,462.00</b>	<b>0.73%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 3,404,303.84</b>	<b>\$ 3,534,187.08</b>	<b>\$ 3,605,408.76</b>	<b>\$ 3,697,357.00</b>	<b>\$ 3,697,357.00</b>	<b>100.0%</b>	<b>\$ 3,591,152.00</b>	<b>-2.87%</b>
<b>Materials, Supplies &amp; Services</b>									
52010	Advertising	\$ 13,841.44	\$ 2,474.93	\$ 6,101.58	\$ 2,603.00	\$ 2,603.00	100.0%	\$ 3,300.00	26.78%
52050	Dues & Subscriptions	\$ 16,107.20	\$ 5,054.44	\$ 15,859.78	\$ 15,260.00	\$ 15,260.00	100.0%	\$ 15,750.00	3.21%
52150	Travel, Mtgs & Training	\$ 16,987.24	\$ 15,544.27	\$ 20,506.02	\$ 21,146.00	\$ 19,930.00	94.2%	\$ 19,420.00	-8.16%
52180	Liability Insurance	\$ 258,200.00	\$ 258,200.00	\$ 212,305.77	\$ 258,200.00	\$ 258,200.00	100.0%	\$ 233,598.00	-9.53%
52210	Communications	\$ 31,991.70	\$ 42,408.21	\$ 40,108.14	\$ 52,250.00	\$ 52,250.00	100.0%	\$ 51,750.00	-0.96%
52240	Uniforms	\$ 23,112.09	\$ 23,569.19	\$ 23,236.85	\$ 25,820.00	\$ 24,900.00	96.4%	\$ 25,150.00	-2.59%
52250	Office Supplies	\$ 5,160.24	\$ 5,309.78	\$ 3,576.10	\$ 5,550.00	\$ 5,350.00	96.4%	\$ 5,350.00	-3.60%
52260	Special Dept Supplies	\$ 384,297.97	\$ 387,586.89	\$ 396,951.61	\$ 407,984.00	\$ 405,750.00	99.5%	\$ 414,500.00	1.60%
52270	Safety Equip/Supplies	\$ 11,527.35	\$ 11,939.78	\$ 10,161.26	\$ 11,400.00	\$ 10,900.00	95.6%	\$ 10,750.00	-5.70%
52280	Maint Supp/Small Tools	\$ 30,504.65	\$ 33,782.93	\$ 21,482.24	\$ 37,214.00	\$ 34,000.00	91.4%	\$ 36,250.00	-2.59%
52290	Chemical Supplies	\$ 406,339.32	\$ 421,393.22	\$ 388,293.43	\$ 530,845.91	\$ 518,750.00	97.7%	\$ 529,900.00	-0.18%
52350	Prof/Contractual Svcs	\$ 242,145.68	\$ 245,670.45	\$ 216,760.24	\$ 337,671.53	\$ 332,650.00	98.5%	\$ 305,400.00	-9.56%
52410	Maint-Buildings & Grounds	\$ 16,700.84	\$ 6,584.98	\$ 7,745.14	\$ 20,000.00	\$ 20,000.00	100.0%	\$ 19,000.00	-5.00%
52420	Maintenance-Equipment	\$ 408,056.34	\$ 387,656.57	\$ 411,674.72	\$ 422,700.00	\$ 415,000.00	98.2%	\$ 395,000.00	-6.55%
52440	Pump Maintenance	\$ 23,104.28	\$ 42,718.44	\$ 33,951.84	\$ 40,000.00	\$ 40,000.00	100.0%	\$ -	-100.00%
52450	Equipment Rental	\$ 3,337.94	\$ 220.00	\$ 2,144.75	\$ 4,550.00	\$ 4,521.00	99.4%	\$ 3,000.00	-34.07%
52460	Motor Fuel & Lubricants	\$ 239,881.43	\$ 234,550.21	\$ 176,658.06	\$ 271,148.15	\$ 200,000.00	73.8%	\$ 262,000.00	-3.37%
52470	Outside Vehicle Maint	\$ 3,746.03	\$ 5,877.23	\$ 9,368.84	\$ 15,000.00	\$ 15,000.00	100.0%	\$ 15,000.00	0.00%
52510	Permits/Fees/Software Licenses	\$ 14,242.60	\$ 14,972.00	\$ 15,125.35	\$ 22,027.59	\$ 21,826.69	99.1%	\$ 20,700.00	-6.03%
52650	Utilities	\$ 796,333.55	\$ 844,867.11	\$ 922,846.10	\$ 1,099,750.00	\$ 1,000,000.00	90.9%	\$ 1,125,000.00	2.30%
52910	Non-Capital Equipment	\$ 11,876.23	\$ 3,803.89	\$ 36,934.46	\$ 13,897.32	\$ 13,397.32	96.4%	\$ 8,250.00	-40.64%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 2,957,494.12</b>	<b>\$ 2,994,184.52</b>	<b>\$ 2,971,792.28</b>	<b>\$ 3,615,017.50</b>	<b>\$ 3,410,288.01</b>	<b>94.3%</b>	<b>\$ 3,499,068.00</b>	<b>-3.21%</b>
<b>Interfund Transfers</b>									
53040	Fleet Replacement Charges	\$ 49,329.00	\$ 60,815.00	\$ 60,815.00	\$ 64,616.00	\$ 64,616.00	100.0%	\$ 64,616.00	0.00%
53050	Wwtp Replacement Charges	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 200,000.00	\$ 200,000.00	100.0%	\$ 200,000.00	0.00%
<b>Total Interfund Transfers</b>		<b>\$ 149,329.00</b>	<b>\$ 160,815.00</b>	<b>\$ 160,815.00</b>	<b>\$ 264,616.00</b>	<b>\$ 264,616.00</b>	<b>100.0%</b>	<b>\$ 264,616.00</b>	<b>0.00%</b>
<b>Capital Outlay</b>									
54010	Capital Equipment - New	\$ 19,935.24	\$ 8,191.12	\$ 26,740.05	\$ 8,500.00	\$ 8,500.00	100.0%	\$ 2,000.00	-76.47%
54020	Capital Equip-Software	\$ 4,957.20	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
54030	Capital Equip - Replacement	\$ 40,453.09	\$ 137,979.52	\$ -	\$ 42,500.00	\$ 41,500.00	97.6%	\$ 7,850.00	-81.53%
<b>Total Capital Outlay</b>		<b>\$ 65,345.53</b>	<b>\$ 146,170.64</b>	<b>\$ 26,740.05</b>	<b>\$ 51,000.00</b>	<b>\$ 50,000.00</b>	<b>98.0%</b>	<b>\$ 9,850.00</b>	<b>-80.69%</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 6,576,472.49</b>	<b>\$ 6,835,357.24</b>	<b>\$ 6,764,756.09</b>	<b>\$ 7,627,990.50</b>	<b>\$ 7,422,261.01</b>	<b>97.3%</b>	<b>\$ 7,364,686.00</b>	<b>-3.45%</b>
59200	LESS:								
	Chargebacks to General Fund for CIP	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
	Chargebacks to General Fund for SSD	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 6,576,472.49</b>	<b>\$ 6,835,357.24</b>	<b>\$ 6,764,756.09</b>	<b>\$ 7,627,990.50</b>	<b>\$ 7,422,261.01</b>	<b>97.3%</b>	<b>\$ 7,364,686.00</b>	<b>-3.45%</b>



## SS Maintenance

### Organizational Chart



## SS Maintenance (continued)

### Mission Statement

The mission of the System Services Collection System Maintenance Division is to maintain MSD's Collection System in a way to convey all wastewater to MSD's Water Reclamation Facility without any stoppages, discharges, or spills of wastewater. In short, our mission is to "Keep it in the Pipe" while maintaining the highest level of customer service both internally and externally, to be continuous "Stewards of the Environment", and provide exceptional service to the rate payers of the District.

### Key Responsibilities

Include preventive maintenance and inspection of over 1,000 miles of sanitary sewer lines and 31 pump stations; provide customer services and emergency response 24 hours/day, 365 days/year; maintain compliance with our Collection System Permit; work closely with MSD's System Services Construction Division and Water Reclamation Facility Maintenance Department in achieving departmental goals.

### Staffing History

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Department of System Services - Maintenance</b>			
<b>Management:</b>			
Director of SS Maintenance	1	1	1
<b>Total Management</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Office Support:</b>			
Dispatcher II	1	1	1
Office Assistant II	2	2	2
SSD Administrator	1	1	1
<b>Total Office Support</b>	<b>4</b>	<b>4</b>	<b>4</b>
<b>Pump Station Maintenance:</b>			
Crew Leader	1	1	1
Technicians	2	2	2
<b>Total Pump Station Maintenance</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Maintenance:</b>			
First Responder	3	2	3
Technical Services Worker I	1	2	2
Technical Services Worker II	4	4	4
Technical Services Worker III	2	2	4
Technical Services Operator I	1	1	1
Technical Services Operator II	3	3	2
Technical Services Operator III	7	7	7
Night Supervisor	0	0	1

## SS Maintenance (continued)

### Staffing History (continued)

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Maintenance: (continued)</b>			
Assistant Supervisor - SS Maintenance	2	2	0
Collection System Maintenance Supervisor	2	2	2
Maintenance Coordinator	0	0	1
<b>Total Maintenance</b>	<b>25</b>	<b>25</b>	<b>27</b>
<b>Total - SS Maintenance Department</b>	<b>33</b>	<b>33</b>	<b>35</b>

### Accomplishments for FY 2015-2016

1. Cleaned over 730,000 LF of pipeline with in-house crews.
2. CCTV'd over 400,000 LF of sanitary sewer lines.
3. Mechanically rodded over 80,000 lf of pipeline for root removal.
4. Achieved one-hour response time goal during working hours, nights, and weekends.
5. Performed over 166,000 LF of acoustic inspection on the Collection System.
6. Smoke tested over 73,000 LF of Collection System. Continuing to decrease I & I along with assisting Engineering in flow monitoring studies.
7. Performed routine maintenance of pump station wet wells and treatment plant.
8. Inspected over 700,000 LF of High Priority/Creek Crossings.
9. 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.
10. Cleaned all lines in a total of 8 basins throughout the District,
11. Reviewed and updated System Services Maintenance Division Standard Operating Procedures.
12. Assisted in grouting 6,000 LF of the 36" interceptor on the Biltmore Estate.
13. Constructed a more efficient bypass pump trailer for more efficient code red response.

### Budget Highlights/Changes for FY 2016-2017

1. Replacement of combination flusher truck
2. Replacement of aging CCTV Inspection cameras.

## SS Maintenance (continued)

### Goals & Objectives

★ **Goal:** Promote safety first (MSD Goals #1 - 4)

▢ *Objective:* Training

- Personal Protective Equipment
- Traffic Control
- Confined Space
- Vehicle/Equipment Operation

★ **Goal:** Reduce number of Sanitary Sewer Overflows (MSD Goals #1 - 4)

▢ *Objective:* Continue to identify areas with heavy Inflow and Infiltration

- Flow Monitoring Investigation
- Smoke testing Investigation
- Identify major/minor sources of I & I

▢ *Objective:* Continue implementation of Work Order Management System (CityWorks)

- Extend installation of CityWorks to next tier of employees
- Continue education on CityWorks to better utilize more of the program features

▢ *Objective:* Maintain an aggressive Preventive Maintenance Program

- Clean 600,000 LF of sanitary sewer lines
- Utilize SL-RAT to help strengthen impact of lines cleaned
- Increase hydraulic root removal by utilizing new technology cleaning nozzles (Blue 100)
- Complete high priority system inspection

▢ *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 CCTViing and re-scoring of all current CIP lines in Collection System into new PACP format

★ **Goal:** Provide excellent customer service internal/external (MSD 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:* Cross train to promote positive employee relationships and teamwork

▢ *Objective:* Maintain great relationship with outside entities and internal divisions

## SS Maintenance (continued)

### Performance Measures

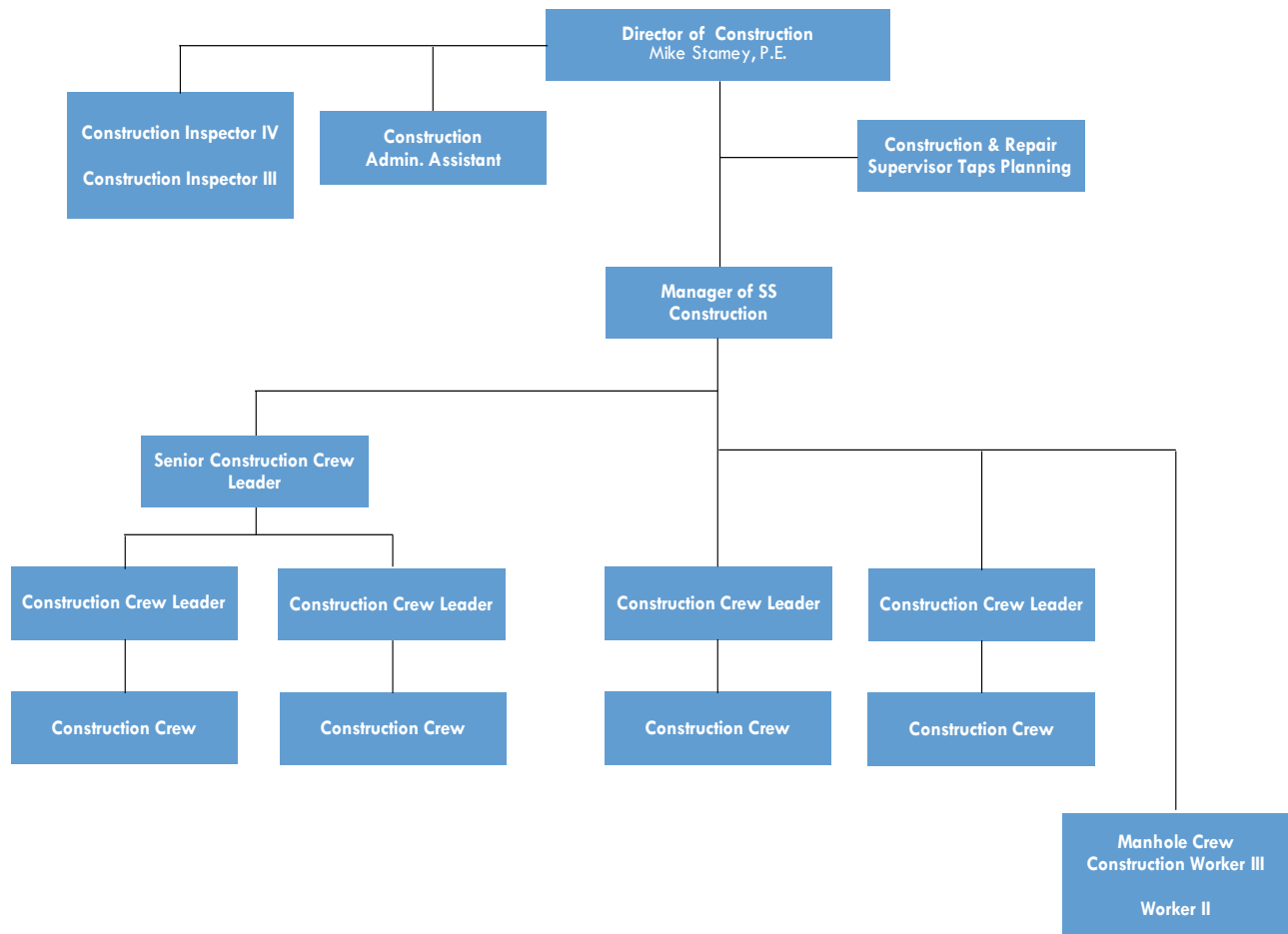
Task	13-14	14-15	15-16 <sup>est</sup>
1. Customer Service Response calls during normal working hours	1,337	1,242	1,225
2. Average Response Time	0.5	0.55	0.52
3. Customer Service Request calls (after hours & holidays)	956	870	710
4. Average Response Time (after hours & holidays)	0.67	0.70	0.63
5. Lines Washed (lineal feet)	699,543	729,451	730,000
6. Root Control chemical & rod (lineal feet)	71,533	65,403	80,000
7. TV Report (lineal feet)	377,022	329,935	325,650
8. Sanitary Sewer Overflow Totals	36	37	53
9. Smoke Testing	88,221	23,153	73,000
10. SL Rat Testing	142,346	190,433	166,000

## FY17 Budget – SS Maintenance

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 1,225,608.46	\$ 1,227,513.09	\$ 1,248,264.54	\$ 1,280,836.00	\$ 1,280,836.00	100.0%	\$ 1,543,631.00	20.52%
51150	Overtime	\$ 110,610.38	\$ 119,144.39	\$ 90,811.15	\$ 110,000.00	\$ 110,000.00	100.0%	\$ 125,000.00	13.64%
<b>Total Salaries &amp; Wages</b>		<b>\$ 1,336,218.84</b>	<b>\$ 1,346,657.48</b>	<b>\$ 1,339,075.69</b>	<b>\$ 1,390,836.00</b>	<b>\$ 1,390,836.00</b>	<b>100.0%</b>	<b>\$ 1,668,631.00</b>	<b>19.97%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 88,099.50	\$ 93,848.70	\$ 92,920.02	\$ 92,769.00	\$ 92,769.00	100.0%	\$ 122,478.00	32.02%
51250	Payroll Taxes	\$ 94,260.68	\$ 94,917.30	\$ 94,211.24	\$ 106,399.00	\$ 106,399.00	100.0%	\$ 127,650.00	19.97%
51300	Medical, Dental & Life	\$ 334,894.21	\$ 344,478.00	\$ 389,618.08	\$ 330,498.00	\$ 330,498.00	100.0%	\$ 425,572.00	28.77%
51325	Post Retirement Insurance	\$ 33,054.79	\$ 29,466.00	\$ 14,685.85	\$ 49,810.00	\$ 49,810.00	100.0%	\$ 60,203.00	20.87%
51350	Worker's Compensation	\$ 40,461.00	\$ 40,461.00	\$ 38,313.60	\$ 41,012.00	\$ 41,012.00	100.0%	\$ 60,872.00	48.42%
51360	State Unemployment Benefits	\$ -	\$ 8,675.48	\$ 4,564.40	\$ 6,160.00	\$ 6,160.00	100.0%	\$ 7,040.00	14.29%
51500	401-K/457 Plan	\$ 48,849.33	\$ 50,994.16	\$ 55,301.81	\$ 64,043.00	\$ 64,043.00	100.0%	\$ 77,183.00	20.52%
<b>Total Benefits</b>		<b>\$ 639,619.51</b>	<b>\$ 662,840.64</b>	<b>\$ 689,615.00</b>	<b>\$ 690,691.00</b>	<b>\$ 690,691.00</b>	<b>100.0%</b>	<b>\$ 880,998.00</b>	<b>27.55%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 1,975,838.35</b>	<b>\$ 2,009,498.12</b>	<b>\$ 2,028,690.69</b>	<b>\$ 2,081,527.00</b>	<b>\$ 2,081,527.00</b>	<b>100.0%</b>	<b>\$ 2,549,629.00</b>	<b>22.49%</b>
<b>Materials, Supplies &amp; Services</b>								\$ -	
52010	Advertising	\$ 477.56	\$ 2,527.08	\$ 4,816.65	\$ 4,000.00	\$ 4,000.00	100.0%	\$ 5,000.00	25.00%
52050	Dues & Subscriptions	\$ 4,523.51	\$ 3,315.70	\$ 2,867.43	\$ 5,000.00	\$ 5,000.00	100.0%	\$ 5,500.00	10.00%
52150	Travel, Mtgs & Training	\$ 23,005.22	\$ 20,162.97	\$ 17,947.43	\$ 26,000.00	\$ 26,000.00	100.0%	\$ 31,125.00	19.71%
52180	Liability Insurance	\$ 81,849.00	\$ 81,849.00	\$ 67,300.60	\$ 81,849.00	\$ 81,849.00	100.0%	\$ 74,050.00	-9.53%
52210	Communications	\$ 20,141.80	\$ 20,838.04	\$ 25,195.62	\$ 27,400.00	\$ 27,400.00	100.0%	\$ 32,400.00	18.25%
52240	Uniforms	\$ 15,845.25	\$ 18,228.80	\$ 15,748.61	\$ 22,000.00	\$ 22,000.00	100.0%	\$ 26,200.00	19.09%
52250	Office Supplies	\$ 6,980.62	\$ 6,635.86	\$ 4,891.12	\$ 6,500.00	\$ 6,500.00	100.0%	\$ 7,500.00	15.38%
52260	Special Dept Supplies	\$ -	\$ -	\$ 352.18	\$ 1,200.00	\$ 1,200.00	100.0%	\$ 1,500.00	25.00%
52270	Safety Equip/Supplies	\$ 14,763.35	\$ 19,690.16	\$ 17,659.03	\$ 21,000.00	\$ 21,000.00	100.0%	\$ 25,000.00	19.05%
52280	Maint Supp/Small Tools	\$ 36,994.92	\$ 33,726.81	\$ 30,494.34	\$ 35,000.00	\$ 30,000.00	85.7%	\$ 40,000.00	14.29%
52290	Chemical Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ 2,000.00	-
52300	Line Cleaning Supplies	\$ 61,054.79	\$ 42,744.05	\$ 53,362.68	\$ 53,000.00	\$ 53,000.00	100.0%	\$ 53,000.00	0.00%
52350	Prof/Contractual Svcs	\$ 28,046.72	\$ 24,782.42	\$ 33,153.49	\$ 50,500.00	\$ 50,500.00	100.0%	\$ 67,450.00	33.56%
52410	Maint-Buildings & Grounds	\$ 69.99	\$ -	\$ -	\$ -	\$ -	-	\$ 2,000.00	-
52420	Maintenance-Equipment	\$ 50,142.91	\$ 46,387.14	\$ 54,944.50	\$ 58,000.00	\$ 58,000.00	100.0%	\$ 60,000.00	3.45%
52430	Landscape Restoration	\$ 3,854.73	\$ 2,301.32	\$ 933.63	\$ 5,300.00	\$ 5,300.00	100.0%	\$ 5,300.00	0.00%
52440	Pump Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ 90,000.00	-
52450	Equipment Rental	\$ -	\$ -	\$ -	\$ 1,900.00	\$ 1,900.00	100.0%	\$ 2,500.00	31.58%
52510	Permits/Fees/Software Licenses	\$ 23,830.90	\$ 13,630.93	\$ 17,451.46	\$ 20,300.00	\$ 20,300.00	100.0%	\$ 20,300.00	0.00%
52910	Non-Capital Equipment	\$ 4,090.11	\$ 6,676.70	\$ 5,107.75	\$ 5,525.00	\$ 5,525.00	100.0%	\$ 7,950.00	43.89%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 375,671.38</b>	<b>\$ 343,496.98</b>	<b>\$ 352,226.52</b>	<b>\$ 424,474.00</b>	<b>\$ 419,474.00</b>	<b>98.8%</b>	<b>\$ 558,775.00</b>	<b>31.64%</b>
<b>Interfund Transfers</b>									
53040	Fleet Replacement Charges	\$ 176,348.00	\$ 167,064.00	\$ 167,064.00	\$ 177,505.00	\$ 177,505.00	100.0%	\$ 177,505.00	0.00%
<b>Total Interfund Transfers</b>		<b>\$ 176,348.00</b>	<b>\$ 167,064.00</b>	<b>\$ 167,064.00</b>	<b>\$ 177,505.00</b>	<b>\$ 177,505.00</b>	<b>100.0%</b>	<b>\$ 177,505.00</b>	<b>0.00%</b>
<b>Capital Outlay</b>									
54010	Capital Equipment - New	\$ 43,334.88	\$ 19,271.11	\$ 8,941.17	\$ 3,300.00	\$ 3,300.00	100.0%	\$ 6,100.00	84.85%
54030	Capital Equip - Replacement	\$ -	\$ 13,703.66	\$ 24,540.85	\$ 27,250.00	\$ 27,250.00	100.0%	\$ 11,850.00	-56.51%
<b>Total Capital Outlay</b>		<b>\$ 43,334.88</b>	<b>\$ 32,974.77</b>	<b>\$ 33,482.02</b>	<b>\$ 30,550.00</b>	<b>\$ 30,550.00</b>	<b>100.0%</b>	<b>\$ 17,950.00</b>	<b>-41.24%</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 2,571,192.61</b>	<b>\$ 2,553,033.87</b>	<b>\$ 2,581,463.23</b>	<b>\$ 2,714,056.00</b>	<b>\$ 2,709,056.00</b>	<b>99.8%</b>	<b>\$ 3,303,859.00</b>	<b>21.73%</b>
59200	LESS:								
	Chargebacks to General Fund for CIP	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
	Chargebacks to General Fund for SSD	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 2,571,192.61</b>	<b>\$ 2,553,033.87</b>	<b>\$ 2,581,463.23</b>	<b>\$ 2,714,056.00</b>	<b>\$ 2,709,056.00</b>	<b>99.8%</b>	<b>\$ 3,303,859.00</b>	<b>21.73%</b>

## 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 on the existing MSD Collection 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 existing MSD Collection 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 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Department of System Services - Construction</b>			
<b>Management:</b>			
Director of Construction	1	1	1
<b>Total Management</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Construction Administration:</b>			
Administrative Assistant – Construction	1	1	1
Construction Inspector II	1	1	0
Construction Inspector III	2	2	3
Construction Inspector IV	1	1	1
<b>Total Construction Administration</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Construction:</b>			
Construction Worker I	1	1	2
Construction Worker II	6	6	7
Construction Worker III	4	4	2
Construction Operator I	2	1	2
Construction Operator II	1	2	2
Construction Crew Leader	4	4	4
Senior Construction Crew Leader	0	0	1
Construction & Repair Supervisor	2	1	1
Heavy Equipment Excavator I	5	5	4
Heavy Equipment Excavator II	1	1	1
Manager of SS Construction	0	1	1
<b>Total Construction</b>	<b>26</b>	<b>26</b>	<b>27</b>
<b>Total – SS Construction Department</b>	<b>32</b>	<b>32</b>	<b>33</b>

## **SS Construction** (continued)

### **Accomplishments for FY 2015-2016**

1. Rehabilitated 20,000 LF of main sewer line with in-house construction crews.
2. Utilized Trenchless Technologies for over 3,700 LF of mainline rehabilitation and 100 LF of service line installation. Through these efforts approximately 2,500 LF of existing asphalt surfaces were maintained.
3. Cleared over 20,000 LF of sewer line Right-of-Way.
4. Completed over 1,100 work order requests during the year.
5. Coordinated (5) joint venture projects with the other public agencies (NCDOT, COA) to facilitate overall cost savings and/or other benefits for both agencies.
6. 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.
7. Utilized recycled asphalt and concrete materials for select backfill on current sewer rehabilitation projects.
8. SSD Construction continued participation in the Buncombe County Utility Coordinating Committee, which promotes safe digging and improved coordination between utility agencies. The activity included the MSD Construction Director completing term as chairperson role for the committee for the year of 2015.
9. Two construction employees participated as members of MSD's ISO team.
10. MSD's "Flow Motion" Operations Challenge Team won 2nd place overall in the statewide Operations Challenge Event which was held at the annual NC AWWA State Conference in Raleigh in November of 2015.
11. Assisted in District wide team effort to rehabilitate the Weaverville #1 Pump Station. SSD Construction activities included installation of new pump, force main replacement, installation of quick connect and replacement of valves.
12. Installed 1,056 LF of new 8-inch mainline sewer to serve the Erwin Hills Teacher Housing Project.
13. Partnered with Riverlink to perform needed sewer rehabilitation as part of their stream bank restoration program.
14. Participated on the City of Asheville joint task force for Infrastructure Committee. This committee plans and coordinates projects to facilitate cost savings for multiple utility departments.
15. The Construction Administration group provided inspection oversight for nine (9) Collection System CIP projects and six (6) Water Reclamation Facility related CIP projects.

## SS Construction (continued)

### Budget Highlights/Changes for FY 2016-2017

1. Purchase Street Sweeper Broom attachment for skid steer to facilitate high quality and more efficient cleanup efforts in work zone areas.
2. Purchase Vermeer G2 Locator to help dig up crews locate private and/or unmarked utility lines in digging area as well as assist with jobsite safety.
3. Purchase Husqvarna Walk Behind Saw to improve quality of cuts and ensure that proper paving can occur.

### Goals & Objectives

- ★ **Goal:** Operate collection system in compliance with all provisions of State Permit (MSD 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. (MSD 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:** Promote a "Safety First" work environment. (MSD 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:** Represent MSD in the Operations Challenge (Pipe Tapping) Competition at the North Carolina AWWA-WEA State Conference in the fall of 2014 (MSD Goal #3)
  - ▶ *Objective:* Achieve the best place possible while maintaining a spirit of competition and team cooperation
- ★ **Goal:** Explore various cost savings options for the division. (MSD 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

## SS Construction (continued)

### Goals & Objectives (continued)

- ★ **Goal:** Maintain a qualified and motivated work force. (MSD 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

### Performance Measures

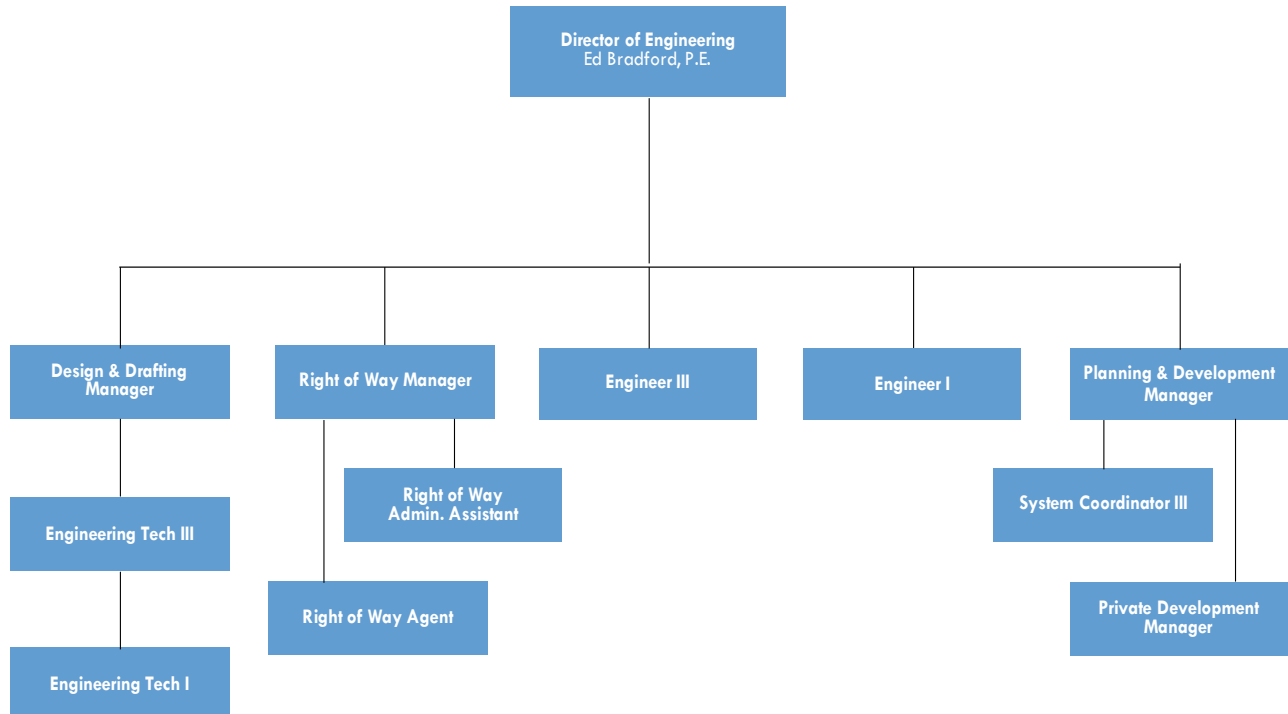
	Task	13-14	14-15	15-16 <sup>est</sup>
1.	Construction Repairs	588	543	500
2.	Taps Installed	220	239	200
3.	Manhole Repairs	354	376	300
4.	Right-of-Way Clearing (lineal feet)	58,811	23,199	20,000
5.	Other Trenchless Line Rehabilitation (lineal feet)	64	460	1500
6.	Dig & Replace Rehabilitation (lineal feet)	14,246	8,388	7,000
7.	IRS (lineal feet)	485	704	2,000
8.	Construction Rehabilitation (lineal feet)	1,493	3,660	4,600
9.	Pipebursting Main Line (lineal feet)	3,539	2,066	3,000
10.	Boring Main Line (lineal feet)	268	5,255	3,400
11.	Total Construction Rehabilitation Footage (lineal feet) (Items 6, 7, 8, 9, 10)	20,031	20,073	20,000
12.	Sewer Rehabilitation Inspected on CIP Projects (lineal feet)	28,280	28,452	18,000
13.	Sewer Extensions Inspected from Development Projects (linear feet)	17,817	28,442	22,000

## FY17 Budget – SS Construction

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 1,417,101.75	\$ 1,483,748.47	\$ 1,586,770.58	\$ 1,598,606.00	\$ 1,598,606.00	100.0%	\$ 1,614,234.00	0.98%
51150	Overtime	\$ 60,596.16	\$ 91,372.55	\$ 45,317.85	\$ 65,650.00	\$ 65,650.00	100.0%	\$ 69,000.00	5.10%
<b>Total Salaries &amp; Wages</b>		<b>\$ 1,477,697.91</b>	<b>\$ 1,575,121.02</b>	<b>\$ 1,632,088.43</b>	<b>\$ 1,664,256.00</b>	<b>\$ 1,664,256.00</b>	<b>100.0%</b>	<b>\$ 1,683,234.00</b>	<b>1.14%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 101,325.68	\$ 113,628.51	\$ 117,028.97	\$ 111,005.00	\$ 111,005.00	100.0%	\$ 123,549.00	11.30%
51250	Payroll Taxes	\$ 108,862.62	\$ 116,066.16	\$ 119,886.82	\$ 127,316.00	\$ 127,316.00	100.0%	\$ 128,767.00	1.14%
51300	Medical, Dental & Life	\$ 406,657.84	\$ 430,596.14	\$ 487,020.82	\$ 413,121.00	\$ 413,121.00	100.0%	\$ 451,366.00	9.26%
51325	Post Retirement Insurance	\$ 40,138.16	\$ 36,832.00	\$ 18,357.15	\$ 62,261.00	\$ 62,261.00	100.0%	\$ 63,852.00	2.56%
51350	Worker's Compensation	\$ 49,131.00	\$ 50,576.05	\$ 47,891.04	\$ 51,264.00	\$ 51,264.00	100.0%	\$ 64,561.00	25.94%
51360	State Unemployment Benefits	\$ 13,156.00	\$ 7,430.83	\$ 5,705.47	\$ 7,700.00	\$ 7,700.00	100.0%	\$ 7,700.00	0.00%
51500	401-K/457 Plan	\$ 52,915.94	\$ 56,487.91	\$ 68,713.94	\$ 79,931.00	\$ 79,931.00	100.0%	\$ 80,713.00	0.98%
<b>Total Benefits</b>		<b>\$ 772,187.24</b>	<b>\$ 811,617.60</b>	<b>\$ 864,604.21</b>	<b>\$ 852,598.00</b>	<b>\$ 852,598.00</b>	<b>100.0%</b>	<b>\$ 920,508.00</b>	<b>7.97%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 2,249,885.15</b>	<b>\$ 2,386,738.62</b>	<b>\$ 2,496,692.64</b>	<b>\$ 2,516,854.00</b>	<b>\$ 2,516,854.00</b>	<b>100.0%</b>	<b>\$ 2,603,742.00</b>	<b>3.45%</b>
<b>Materials, Supplies &amp; Services</b>									
52010	Advertising	\$ 413.50	\$ 500.00	\$ 574.85	\$ 500.00	\$ 500.00	100.0%	\$ 500.00	0.00%
52050	Dues & Subscriptions	\$ 2,360.00	\$ 2,846.25	\$ 4,003.50	\$ 4,150.00	\$ 4,150.00	100.0%	\$ 4,150.00	0.00%
52150	Travel, Mtgs & Training	\$ 21,783.37	\$ 31,717.20	\$ 26,161.68	\$ 37,340.00	\$ 37,340.00	100.0%	\$ 30,050.00	-19.52%
52180	Liability Insurance	\$ 97,275.00	\$ 97,275.00	\$ 79,984.67	\$ 97,275.00	\$ 97,275.00	100.0%	\$ 88,006.00	-9.53%
52210	Communications	\$ 14,837.32	\$ 15,200.64	\$ 16,332.61	\$ 20,675.00	\$ 20,675.00	100.0%	\$ 20,675.00	0.00%
52240	Uniforms	\$ 20,665.56	\$ 21,991.80	\$ 21,453.40	\$ 23,600.00	\$ 23,600.00	100.0%	\$ 23,600.00	0.00%
52250	Office Supplies	\$ 3,264.44	\$ 1,744.05	\$ 1,440.13	\$ 4,000.00	\$ 4,000.00	100.0%	\$ 4,000.00	0.00%
52260	Special Dept Supplies	\$ 530.37	\$ 620.90	\$ 1,081.46	\$ 1,144.00	\$ 1,000.00	87.4%	\$ 1,000.00	-12.59%
52270	Safety Equip/Supplies	\$ 22,212.09	\$ 20,632.52	\$ 21,230.82	\$ 23,200.00	\$ 23,200.00	100.0%	\$ 23,200.00	0.00%
52280	Maint Supp/Small Tools	\$ 52,998.34	\$ 51,659.07	\$ 57,342.94	\$ 50,250.00	\$ 50,000.00	99.5%	\$ 50,750.00	1.00%
52300	Line Cleaning Supplies	\$ 453.38	\$ 528.35	\$ 164.95	\$ 1,000.00	\$ 750.00	75.0%	\$ 750.00	-25.00%
52350	Prof/Contractual Svcs	\$ 5,181.07	\$ 2,297.00	\$ 8,486.01	\$ 9,500.00	\$ 9,500.00	100.0%	\$ 12,000.00	26.32%
52420	Maintenance-Equipment	\$ 1,589.05	\$ 1,298.11	\$ 1,726.93	\$ 2,200.00	\$ 2,200.00	100.0%	\$ 2,200.00	0.00%
52430	Landscape Restoration	\$ 9,873.88	\$ 12,557.12	\$ 8,246.69	\$ 11,700.00	\$ 11,700.00	100.0%	\$ 11,700.00	0.00%
52450	Equipment Rental	\$ 2,320.80	\$ 4,280.76	\$ 3,777.75	\$ 20,000.00	\$ 20,000.00	100.0%	\$ 20,000.00	0.00%
52510	Permits/Fees/Software Licenses	\$ 14,439.05	\$ 11,343.00	\$ 14,210.45	\$ 17,000.00	\$ 17,000.00	100.0%	\$ 17,000.00	0.00%
52910	Non-Capital Equipment	\$ 4,553.88	\$ 10,272.84	\$ 7,514.70	\$ 5,100.00	\$ 5,100.00	100.0%	\$ 6,575.00	28.92%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 274,751.10</b>	<b>\$ 286,764.61</b>	<b>\$ 273,733.54</b>	<b>\$ 328,634.00</b>	<b>\$ 327,990.00</b>	<b>99.8%</b>	<b>\$ 316,156.00</b>	<b>-3.80%</b>
<b>Interfund Transfers</b>									
52340	Debt Administration Expenses	\$ 338,507.16	\$ 220,782.82	\$ 191,223.71	\$ 198,648.00	\$ 198,000	99.7%	\$ 202,217.00	1.80%
53040	Fleet Replacement Charges	\$ 164,573.00	\$ 159,776.00	\$ 159,776.00	\$ 172,787.00	\$ 172,787.00	100.0%	\$ 172,787.00	0.00%
<b>Total Interfund Transfers</b>		<b>\$ 503,080.16</b>	<b>\$ 380,558.82</b>	<b>\$ 350,999.71</b>	<b>\$ 371,435.00</b>	<b>\$ 370,787.00</b>	<b>99.8%</b>	<b>\$ 375,004.00</b>	<b>0.96%</b>
<b>Capital Outlay</b>									
54010	Capital Equipment - New	\$ 18,711.94	\$ 7,362.00	\$ 12,102.00	\$ 13,000.00	\$ 13,000.00	100.0%	\$ 6,400.00	-50.77%
54030	Capital Equip - Replacement	\$ 22,573.74	\$ 14,990.01	\$ 12,286.19	\$ 8,400.00	\$ 8,400.00	100.0%	\$ 17,100.00	103.57%
<b>Total Capital Outlay</b>		<b>\$ 41,285.68</b>	<b>\$ 22,352.01</b>	<b>\$ 24,388.19</b>	<b>\$ 21,400.00</b>	<b>\$ 21,400.00</b>	<b>100.0%</b>	<b>\$ 23,500.00</b>	<b>9.81%</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 3,069,002.09</b>	<b>\$ 3,076,414.06</b>	<b>\$ 3,145,814.08</b>	<b>\$ 3,238,323.00</b>	<b>\$ 3,237,031.00</b>	<b>100.0%</b>	<b>\$ 3,318,402.00</b>	<b>2.47%</b>
59200	LESS:								
	Chargebacks to General Fund for CIP	\$ (742,059.13)	\$ (758,459.66)	\$ (748,359.85)	\$ (773,007.00)	\$ (771,965.00)	99.9%	\$ (748,639.00)	-3.15%
	Chargebacks to General Fund for SSD	\$ (1,294,092.88)	\$ (1,279,053.00)	\$ (1,309,983.00)	\$ (1,326,632.00)	\$ (1,326,632.00)	100.0%	\$ (1,539,411.00)	16.04%
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 1,032,850.08</b>	<b>\$ 1,038,901.40</b>	<b>\$ 1,087,471.23</b>	<b>\$ 1,138,684.00</b>	<b>\$ 1,138,434.00</b>	<b>100.0%</b>	<b>\$ 1,030,352.00</b>	<b>-9.51%</b>

## 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 provide quality control associated with expansion of the system. 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: ❶ Produce quality, timely, and cost-effective engineering designs, plans, and specifications; ❷ Acquire necessary rights-of-way; and ❸ 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 collection system and treatment facilities, evaluation of projected flow allocations, plan review, and quality control of developer-constructed projects; perform specialized related duties; and serve as a technical resource for the District.

### Staffing History

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b>Department of Engineering</b>			
<b>Management:</b>			
Director of Engineering	1	1	1
<b>Total Management</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Office Support:</b>			
Office Manager	1	1	0
<b>Total Office Support</b>	<b>1</b>	<b>1</b>	<b>0</b>
<b>Engineers:</b>			
Engineer I	2	2	3
Engineer II	1	1	0
Engineer III	1	0	1
Senior Engineer/Construction Manager	1	1	0
<b>Total Engineers</b>	<b>5</b>	<b>4</b>	<b>4</b>

## Engineering (continued)

### Staffing History (continued)

Division & Position	Approved Positions 14-15	Approved Positions 15-16	Budgeted Positions 16-17
<b><i>Design and Drafting:</i></b>			
Engineering Technician I	1	1	1
Engineering Technician II	1	1	1
Engineering Technician III	0	0	1
Design & Drafting Manager	1	1	1
<b><i>Total Design and Drafting</i></b>	<b>3</b>	<b>3</b>	<b>4</b>
<b><i>Right of Way:</i></b>			
Administrative Assistant – Right of Way	1	1	1
Right of Way Agent	1	1	1
Right of Way Manager	1	1	1
<b><i>Total Right of Way</i></b>	<b>3</b>	<b>3</b>	<b>3</b>
<b><i>Planning &amp; Development:</i></b>			
Systems Coordinator III	2	2	2
Private Development Project Manager	0	1	0
Private Development Coordinator/Plan Review	1	1	0
Planning & Development Manager	0	0	1
<b><i>Total Planning and Development</i></b>	<b>3</b>	<b>4</b>	<b>3</b>
<b><i>Total – Department of Engineering</i></b>	<b>16</b>	<b>16</b>	<b>15</b>

### Accomplishments for FY 2015-2016

1. 46,729 Linear Feet (LF) of collection system were rehabilitated during FY15. This included 28,452 LF rehabilitated through contract construction, 17,522 LF rehabilitated in-house by System Services, and 755 LF rehabilitated through development projects.
2. Managed over 128 projects and line items within the CIP. Projects are within the various stages of lifecycles - from preliminary design, to active construction, to complete/closeout.
3. Processed over 1,177 applications and reviewed 66 plans for new connections and extensions to the collection system. (\*)
4. Acquired Rights-of-Way across 92 properties. Settled one condemnation action, saving expense of trial. (\*)
5. Designed ten in-house projects for System Services. These are designed and constructed by in-house forces. (\*)



## Engineering (continued)

### Accomplishments for FY 2015-2016 (continued)

6. Completed the \$7.4M Incinerator System Emissions Upgrades at the treatment plant ahead of accelerated schedule, and met the EPA compliance deadline (March 21, 2016). A new mercury removal technology was implemented, which saved approx. \$5M over traditional technology.
7. Completed the design of the Plant Headworks Project, which is a primary recommendation of the updated Facility Plan. Construction will begin in Fall 2016.

### Goals & Objectives

- ★ **Goal:** Rehabilitate approximately 50,000 feet of the collection system, in close collaboration with System Services. (MSD Objective #1)
- ★ **Goal:** Verify adequate capacity of lines prior to authorizing construction of new lines or connection of any new facility, and ensure that all developer-constructed projects conform to MSD requirements (MSD Goal #1)
- ★ **Goal:** Begin the construction phase of the first Facility Plan project at the WRF – Plant Headworks.
- ★ **Goal:** Begin the design phase of the Plant High Rate Primary Treatment project.
- ★ **Goal:** Meet the time and budget predictions established in the CIP for FY17. (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 work.
- ★ **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 and minimize file space needs.

## Engineering (continued)

### Budget Highlights/Changes for FY2016-2017

1. Continue to develop and refine web-based project management/permitting system for Planning & Development.
2. Implement new paperless plan review system for Planning & Development.
3. Begin construction phase of Plant Headworks Project (construction cost estimated @ \$10.3M).

### Performance Measures

Task	13-14	14-15	15-16 (*)
1. Linear footage rehabilitated	51,110	46,729	50,036
2. CIP expenditures	\$12.7M	\$16.6M	\$19.8M
3. CIP projections vs. actual expenditures (**)	82%	76%	91%
4. Allocations	153	158	193
5. Sewer Tap Applications	1,594	1,382	1,177
6. Plans Reviewed	69	62	66
7. Value of accepted systems	\$1,345,187	\$3,361,616	\$2,425,000

(\*) Estimated as of May 12, 2016

(\*\*) CIP Projections annually include \$1.1M for Contingency plus Developer Reimbursements

## FY17 Budget – Engineering

No.	Name	Actual 2012-2013	Actual 2013-2014	Actual 2014-2015	Approved 2015-2016 Budget	Estimated Actual 6/30/2016	Percent Expended To Total Budget	Proposed 2016-2017 Budget	Inc (Dec) Over Prior Year
<b>Salaries &amp; Wages</b>									
51100	Salaries & Wages	\$ 1,063,589.31	\$ 898,234.50	\$ 907,408.19	\$ 985,190.00	\$ 985,190.00	100.0%	\$ 1,026,284.00	4.17%
51150	Overtime	\$ 261.00	\$ (355.54)	\$ 367.23	\$ 2,000.00	\$ 1,250.00	62.5%	\$ 1,350.00	-32.50%
<b>Total Salaries &amp; Wages</b>		<b>\$ 1,063,850.31</b>	<b>\$ 897,878.96</b>	<b>\$ 907,775.42</b>	<b>\$ 987,190.00</b>	<b>\$ 986,440.00</b>	<b>99.9%</b>	<b>\$ 1,027,634.00</b>	<b>4.10%</b>
<b>Benefits</b>									
51200	North Carolina Retirement	\$ 70,669.30	\$ 63,796.17	\$ 64,100.68	\$ 65,846.00	\$ 65,796.00	99.9%	\$ 75,428.00	14.55%
51250	Payroll Taxes	\$ 78,462.15	\$ 66,301.35	\$ 66,929.30	\$ 75,520.00	\$ 75,463.00	99.9%	\$ 78,614.00	4.10%
51300	Medical, Dental & Life	\$ 203,329.43	\$ 209,147.86	\$ 208,725.73	\$ 177,054.00	\$ 177,054.00	100.0%	\$ 193,441.00	9.26%
51325	Post Retirement Insurance	\$ 20,069.57	\$ 17,890.00	\$ 7,867.57	\$ 26,684.00	\$ 26,684.00	100.0%	\$ 27,365.00	2.55%
51350	Worker's Compensation	\$ 24,565.00	\$ 24,565.95	\$ 20,525.39	\$ 21,971.00	\$ 21,971.00	100.0%	\$ 27,669.00	25.93%
51360	State Unemployment Benefits	\$ -	\$ 3,283.39	\$ 2,445.20	\$ 3,300.00	\$ 3,300.00	100.0%	\$ 3,300.00	0.00%
51500	401-K/457 Plan	\$ 50,574.36	\$ 41,836.31	\$ 40,169.83	\$ 49,261.00	\$ 49,261.00	100.0%	\$ 51,316.00	4.17%
<b>Total Benefits</b>		<b>\$ 447,669.81</b>	<b>\$ 426,821.03</b>	<b>\$ 410,763.70</b>	<b>\$ 419,636.00</b>	<b>\$ 419,529.00</b>	<b>100.0%</b>	<b>\$ 457,133.00</b>	<b>8.94%</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>\$ 1,511,520.12</b>	<b>\$ 1,324,699.99</b>	<b>\$ 1,318,539.12</b>	<b>\$ 1,406,826.00</b>	<b>\$ 1,405,969.00</b>	<b>99.9%</b>	<b>\$ 1,484,767.00</b>	<b>5.54%</b>
<b>Materials, Supplies &amp; Services</b>									
52050	Dues & Subscriptions	\$ 5,025.44	\$ 4,422.31	\$ 4,193.56	\$ 5,500.00	\$ 4,690.00	85.3%	\$ 5,500.00	0.00%
52150	Travel, Mtgs & Training	\$ 15,244.31	\$ 16,492.12	\$ 20,965.60	\$ 17,800.00	\$ 15,581.55	87.5%	\$ 15,600.00	-12.36%
52180	Liability Insurance	\$ 38,400.00	\$ 38,400.00	\$ 31,574.52	\$ 38,400.00	\$ 38,400.00	100.0%	\$ 34,741.00	-9.53%
52200	Telephone/Telefax	\$ 2,522.06	\$ 2,725.75	\$ 1,953.23	\$ 196.80	\$ 196.80	100.0%	\$ 200.00	1.63%
52210	Communications	\$ 2,177.39	\$ 1,935.22	\$ 1,583.25	\$ 2,375.00	\$ 1,163.00	49.0%	\$ 2,225.00	-6.32%
52240	Uniforms	\$ 1,020.34	\$ 1,397.78	\$ 801.42	\$ 2,000.00	\$ 975.00	48.8%	\$ 1,750.00	-12.50%
52250	Office Supplies	\$ 4,852.71	\$ 4,318.28	\$ 3,590.33	\$ 6,000.00	\$ 2,985.19	49.8%	\$ 5,500.00	-8.33%
52260	Special Dept Supplies	\$ 2,751.93	\$ 7,863.08	\$ 5,660.33	\$ 3,550.00	\$ 2,238.67	63.1%	\$ 6,850.00	92.96%
52270	Safety Equip/Supplies	\$ 219.41	\$ 176.07	\$ 145.38	\$ 300.00	\$ 200.00	66.7%	\$ 300.00	0.00%
52330	Legal Fees	\$ 180.50	\$ 248.00	\$ -	\$ 3,500.00	\$ -	0.0%	\$ 2,500.00	-28.57%
52350	Prof/Contractual Svcs	\$ 44,062.50	\$ 23,258.13	\$ 29,891.58	\$ 58,000.00	\$ 40,000.00	69.0%	\$ 51,000.00	-12.07%
52410	Maint-Buildings & Grounds	\$ 2,005.15	\$ 453.00	\$ -	\$ -	\$ -	-	\$ -	-
52510	Permits/Fees/Software Licenses	\$ 220.60	\$ 220.60	\$ -	\$ -	\$ -	-	\$ -	-
52910	Non-Capital Equipment	\$ -	\$ 2,432.43	\$ 990.45	\$ 803.20	\$ -	0.0%	\$ 400.00	-50.20%
<b>Total Materials, Supplies &amp; Services</b>		<b>\$ 118,682.34</b>	<b>\$ 104,342.77</b>	<b>\$ 101,349.65</b>	<b>\$ 138,425.00</b>	<b>\$ 106,430.21</b>	<b>76.9%</b>	<b>\$ 126,566.00</b>	<b>-8.57%</b>
<b>Interfund Transfers</b>									
53040	Fleet Replacement Charges	\$ 2,813.00	\$ 2,847.00	\$ 2,847.00	\$ -	\$ -	-	\$ -	-
<b>Total Interfund Transfers</b>		<b>\$ 2,813.00</b>	<b>\$ 2,847.00</b>	<b>\$ 2,847.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>-</b>	<b>\$ -</b>	<b>-</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$ 1,633,015.46</b>	<b>\$ 1,431,889.76</b>	<b>\$ 1,422,735.77</b>	<b>\$ 1,545,251.00</b>	<b>\$ 1,512,399.21</b>	<b>97.9%</b>	<b>\$ 1,611,333.00</b>	<b>4.28%</b>
59200	LESS:								
	Chargebacks to General Fund for CIP	\$ (1,441,458.68)	\$ (1,294,515.65)	\$ (1,267,244.28)	\$ (1,385,814.00)	\$ (1,358,140.41)	98.0%	\$ (1,450,349.00)	4.66%
	Chargebacks to General Fund for SSD	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	-
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$ 191,556.78</b>	<b>\$ 137,374.11</b>	<b>\$ 155,491.49</b>	<b>\$ 159,437.00</b>	<b>\$ 154,258.80</b>	<b>96.8%</b>	<b>\$ 160,984.00</b>	<b>0.97%</b>

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# 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 below and on the following pages.

#### **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 FY17 includes an employer contribution increase of 10% to cover anticipated expenditures needs.

#### **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. 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. FY17 funding of \$270,000 represents a 1.7% of total operations. As of May 2016, the District has eleven (11) eligible participants in the post-employment insurance plan.

#### **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 FY17 includes a 26.8% increase to cover anticipated expenditure needs.

## Insurance Funds (continued)

### General Liability

The District's general liability insurance fund was established to ① allocate insurance costs to all departments, divisions and sectional budgets, ② provide funds for payment of no-fault sewer back-ups and ③ establish reserves to offset future unanticipated increases in sewer back-up liabilities in excess of budgeted amounts. The budget for FY17 includes a 9.5% decrease based on anticipated expenditure needs.

### FY17 SELF-FUNDED EMPLOYEE MEDICAL PROGRAM BUDGET

	Actual 2014-2015	Estimated Actual 2015-2016	Budget 2016-2017
<b>Beginning Balance</b>	<b>\$ 1,344,342</b>	<b>\$ 1,142,038</b>	<b>\$ 825,665</b>
<b>Income:</b>			
District Contributions	1,735,116	1,735,116	1,908,628
Employee Contributions	394,846	394,846	395,000
Transfer from Other Insurance Funds	310,381	225,000	700,000
Interest	1,157	1,157	2,500
<b>Total Income</b>	<b>2,441,500</b>	<b>2,356,119</b>	<b>3,006,128</b>
<b>Total Funds Available</b>	<b>3,785,842</b>	<b>3,498,157</b>	<b>3,831,790</b>
<b>Expenses:</b>			
Expected Claim Liability	2,231,754	2,260,442	2,315,983
Fixed Costs (see note below)	412,050	412,050	421,648
<b>Total Expenses</b>	<b>2,643,804</b>	<b>2,672,492</b>	<b>2,737,631</b>
<b>Ending Balance</b>	<b>\$ 1,142,038</b>	<b>\$ 825,665</b>	<b>\$ 1,094,162</b>



## Insurance Funds (continued)

### FY17 POST EMPLOYMENT INSURANCE BUDGET

	Actual 2014-2015	Estimated Actual 2015-2016	Budget 2016-2017
<b>Beginning Balance</b>	<b>\$ 95,089</b>	<b>\$ 138,352</b>	<b>\$ 166,352</b>
<b>Income</b>			
District Contributions	265,700	261,500	270,000
Employee Contributions	31,923	17,500	20,000
Interest Income	<u>11,340</u>	<u>10,500</u>	<u>8,000</u>
<b>Total Income</b>	<b>308,963</b>	<b>289,500</b>	<b>298,000</b>
<b>Total Funds Available</b>	<b>404,052</b>	<b>427,852</b>	<b>464,352</b>
<b>Expenses</b>			
Expenses	77,100	188,700	55,000
Transfer to Other Insurance Funds	<u>188,600</u>	<u>72,800</u>	<u>225,000</u>
<b>Total Expenses</b>	<b>254,800</b>	<b>261,500</b>	<b>280,000</b>
<b>Ending Balance</b>	<b>\$ <u>135,352</u></b>	<b>\$ <u>166,352</u></b>	<b>\$ <u>184,352</u></b>

### FY17 WORKER'S COMPENSATION FINANCIAL PLAN

	Actual 2014-2015	Estimated Actual 2015-2016	Budget 2016-2017
<b>Beginning Balance</b>	<b>\$ 398,131</b>	<b>\$ 362,015</b>	<b>\$ 303,204</b>
<b>Income</b>			
District Contributions	215,312	215,312	273,000
Interest Income	<u>1,091</u>	<u>1,000</u>	<u>1,500</u>
<b>Total Income</b>	<b>216,403</b>	<b>216,312</b>	<b>274,500</b>
<b>Total Funds Available</b>	<b>614,534</b>	<b>578,326</b>	<b>577,704</b>
<b>Expenses</b>			
Interfund Transfer	14,167	-	-
Deductibles for Individual Claims	2,665	5,000	10,000
Premiums to commercial carrier	<u>235,689</u>	<u>270,123</u>	<u>263,000</u>
<b>Total Expenses</b>	<b>252,520</b>	<b>275,123</b>	<b>273,000</b>
<b>Ending Balance</b>	<b>\$ <u>362,015</u></b>	<b>\$ <u>303,204</u></b>	<b>\$ <u>304,704</u></b>



## Insurance Funds (continued)

### FY17 GENERAL LIABILITY FINANCIAL PLAN

	Actual	Estimated	
	2014-2015	2015-2016	Budget
			2016-2017
<b>Beginning Balance</b>	<b>\$ 478,893</b>	<b>\$ 487,098</b>	<b>\$ 592,352</b>
<b>Income</b>			
District Contributions	605,434	605,434	547,746
Interest Income	<u>1,309</u>	<u>1,300</u>	<u>1,100</u>
<b>Total Income</b>	<b>606,743</b>	<b>606,734</b>	<b>548,846</b>
<b>Total Funds Available</b>	<b>1,085,636</b>	<b>1,093,832</b>	<b>1,141,198</b>
<b>Expenses</b>			
Interfund Transfer	107,613.99	-	-
Premiums to commercial carrier	394,762	374,646	435,218
No Fault Sewer Back-Up Claims	23,148	35,000	50,000
Claim Deductibles	64,265	82,000	82,000
Flood Insurance	<u>8,749</u>	<u>9,834</u>	<u>10,621</u>
<b>Total Expenses</b>	<b>598,538</b>	<b>501,480</b>	<b>577,839</b>
<b>Ending Balance</b>	<b><u>\$ 487,098</u></b>	<b><u>\$ 592,352</u></b>	<b><u>\$ 563,359</u></b>

# Replacement Funds



## Replacement Funds

### Overview

The replacement funds are funded through annual appropriations from the Operations and Maintenance Fund Budget. The District has established three replacement 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 funds are discussed below and on the following pages.

#### ◀ **Fleet Equipment Replacement**

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 projected balance in the fund at the end of FY16 is anticipated to approximate \$594,258. The FY17 contribution is \$425,000, with anticipated expenditures of \$668,000, including (2) 1-Ton Pickup, c5550, Small Flusher, BobCat SkidSteer, and Custom Trailer.

#### ◀ **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 FY17 contribution is \$200,000 with anticipated expenditures of \$262,150 including General Rehab–PLC Upgrades, Rebuild Southside Barscreens, RBC's Bearings, Thickener–Seepex Pump, Belt Filter Press Overhauls, and Scrubber Ash Pump Replacements.

#### ◀ **Pump Replacement**

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 FY17 transfer of \$100,000 from Wastewater Treatment Plant Replacement Fund with anticipated expenditures of \$45,000 including General Rehab and Lake Julian Pump Station Rehab.

#### ◀ **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 are budgeted. There will be no contributions to this fund this year as the balance is in excess of that required.

## Replacement Funds (continued)

### FY17 FLEET EQUIPMENT REPLACEMENT FUND BUDGET

	Actual 2014-2015	Projected 2015-2016	Budget 2016-2017
<b>Beginning Balance:</b>	\$ 334,534	\$ 537,009	\$ 594,258
Revenue:			
District Contributions	400,000	425,000	425,000
Sale of Surplus Property	49,250	44,949	80,160
Interest Income	1,651	2,300	8,914
<b>Total Revenue</b>	<b>450,901</b>	<b>472,249</b>	<b>514,074</b>
Expenditures:			
Various	248,426	415,000	
(2) 1-Ton Pickup	-	-	88,000
c5500	-	-	75,000
Small Flusher	-	-	400,000
BobCat SkidSteer	-	-	80,000
Custom Trailer	-	-	25,000
<b>Total Expenditure Replacements</b>	<b>248,426</b>	<b>415,000</b>	<b>668,000</b>
<b>Ending Balance:</b>	<b>\$ 537,009</b>	<b>\$ 594,258</b>	<b>\$ 440,332</b>

## Replacement Funds (continued)

### FY17 WASTEWATER TREATMENT PLANT REPLACEMENT FUND BUDGET

	Actual 2014-2015	Projected 2015-2016	Budget 2016-2017
<b>Beginning Balance:</b>	\$ 455,412	\$ 417,797	\$ 469,597
<b>Revenue:</b>			
District Contributions	100,000	200,000	200,000
Interest Income	<u>1,843</u>	<u>1,800</u>	<u>7,044</u>
<b>Total Revenue</b>	<b>101,843</b>	<b>201,800</b>	<b>207,044</b>
<b>Expenditures:</b>			
Various	139,458	150,000	
General Rehab – PLC Upgrades			30,150
Rebuild Southside Barscreens			12,000
RBCs Bearings			75,000
Thickner – Seepex Pump			15,000
Belt Filter Press Overhauls			15,000
Scrubber Ash Pump Replacements			15,000
Transfer Out	<u>-</u>	<u>-</u>	<u>100,000</u>
<b>Total Expenditure Replacements</b>	<b>139,458</b>	<b>150,000</b>	<b>262,150</b>
<b>Ending Balance:</b>	<b>\$ <u>417,797</u></b>	<b>\$ <u>469,597</u></b>	<b>\$ <u>414,491</u></b>

## Replacement Funds (continued)

### FY17 PUMP REPLACEMENT FUND BUDGET

	Actual 2014-2015	Projected 2015-2016	Budget 2016-2017
<b>Beginning Balance:</b>	\$ -	\$ -	\$ -
<b>Revenue:</b>			
District Contributions	-	-	-
Transfer In	-	-	100,000
Interest Income	-	-	-
<b>Total Revenue</b>	-	-	<b>100,000</b>
<b>Expenditures:</b>			
Various			
General Pump Station Rehab			35,000
Lake Julian Pump Station			20,000
Transfer Out	-	-	-
<b>Total Expenditure Replacements</b>	-	-	<b>55,000</b>
<b>Ending Balance:</b>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 45,000</u>

## Replacement Funds (continued)

### FY17 CAPITAL RESERVE FUND

	Actual 2014-2015	Projected 2015-2016	Budget 2016-2017
<b>Beginning Balance:</b>	\$ 937,730	\$ 948,386	\$ 955,886
<b>Revenue:</b>			
Interfund Transfer	-	-	-
Interest Income	10,656	7,500	9,800
<b>Total Revenue</b>	<b>10,656</b>	<b>7,500</b>	<b>9,800</b>
<b>Ending Balance:</b>	<b>\$ 948,386</b>	<b>\$ 955,886</b>	<b>\$ 965,686</b>

**NOTE:** Ending balance must be at least 6% of the annual O&M current expenses. FY2016-2017 O&M Budget (\$16,106,490 - \$625,000 transfer to reserves - \$87,298 capital equipment) x 6% = \$923,652

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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. MSD is mandated through its Collection System Permit to rehabilitate a minimum of 250,000 linear feet of collection system lines over a five-year period. 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 follow in the succeeding pages of this budget document. A separate document compiling individual pages for each project with detailed costs and location map as presented to the CIP Committee and may be obtained upon request to W. Scott Powell, Director of Finance at (828)225-8211 or [spowell@msdbc.org](mailto:spowell@msdbc.org).

In accordance with the State Collection System Permit, the District maintains a Ten Year CIP and rehabilitates a minimum of 50,000 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.

The District has a capital projects ordinance, which is periodically updated as necessary, to make available funds for all projects scheduled for construction in the upcoming budget year and certain other projects to be begun in the current year but completed in a subsequent year.

## Capital Improvement Program (continued)

### Current Year Highlights

The proposed capital budget for FY17 is \$22,042,087, 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 \$100,000 is proposed. There is one remaining annexation project - Craigmont Road in Black Mountain. This project will be formally budgeted by the District when the Town decides to design/construct it.

Total project costs over the ten-year window are estimated at \$211.5 million. Costs are updated each year during budget preparation in order to accurately reflect current bid pricing and market conditions. Included in future years' is an inflation factor of 3.02%, which utilizes the ENR Construction Cost Index as a basis. This factor is also updated each year.

Approximately 118 infrastructure projects are included in the CIP for FY17, ranging in length from 115 linear feet to over 22,000 linear feet. In-house forces, as well as, outside contractors will be used to rehabilitate the regulated amounts as prescribed by the District's Collection System Permit.

### ■ **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 have been completed, our focus has been redirected to rehabilitation of the State-mandated 250,000 feet of sewerline every five (5) years and other projects identified in the Master Plan.

Major projects for FY17 include the \$588,000 South French Broad Interceptor Grouting Project with approximately 7,008 linear feet, \$583,500 Arco Road with over 2,022 linear feet, \$1,377,000 Lining Contract No. 8 with over 11,000 linear, \$532,573 Sandhill at Russell/Davenport with over 2,341 linear feet, and \$400,726 Stratford Road at Oxford Court, with over 1,960 linear feet.

## Capital Improvement Program *(continued)*

### ■ **Wastewater Treatment Plant Capital Improvements**

There are two major projects at final completion at the plant - the EPA mandated Incinerator System Emissions Project, and the replacement/relocation of the adjustable frequency drives for the influent pumps. The planned replacement of a second influent pump is complete (the third and final pump replacement is scheduled for FY16-17).

The construction of the Incinerator System Emissions Upgrades project is at final completion. This \$7.4 million project was driven by a mandate from the EPA, and will reduce emissions from the incinerator – primarily mercury. A new mercury removal technology was utilized, which saved \$5 million over traditional technology. Significant rehabilitation of high-wear components was also included in the project.

The long-term improvements (replacement of the RBC Biological System) will be a major project. Now that the District is almost complete with refurbishment of the RBC process, the timing of this future project will be regulatory-driven.

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 \$11.5 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. Design is planned for FY16 and construction is scheduled to begin in FY17.
- **High Rate Primary Treatment Project:** This \$9.61 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 is planned for FY17 and construction is scheduled to begin in FY18.

## Capital Improvement Program (continued)

Long-term alternatives focused on the biological treatment aspect (currently RBC's). Specific alternatives will be evaluated if and when future regulatory requirements change over time. The two projects noted above allow for flexibility among the viable options for biological treatment.

### 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, 2016, the District will have \$95.3 million in outstanding revenue bond debt, with total debt service of \$8.0 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)

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.

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

## Capital Improvement Program *(continued)*

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.

### 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 Const. Management Expenses
- ▶ Reimbursement Projects

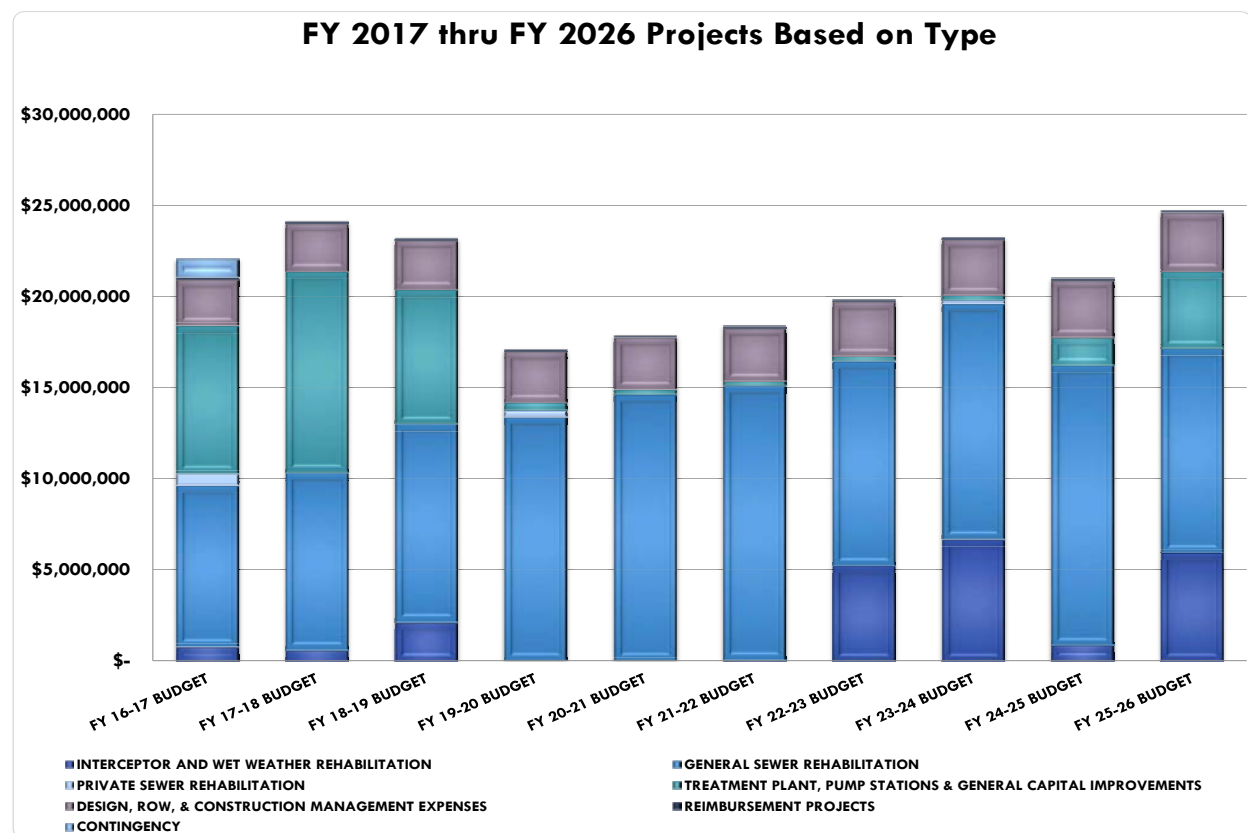
## Capital Improvement Program *(continued)*

In accordance with the State Collection System Permit, the District maintains a Ten Year CIP and rehabilitates an average of 50,000 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.





## Program Summary

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>INTERCEPTOR AND WET WEATHER REHABILITATION</b>									
<b>Christian Creek Int.</b>	Buncombe Co.	5,860	2,231,579	171,970	17,000	1,998,000	-	-	-
This project includes the replacement of approximately 5,860 LF of existing 8-inch and 18-inch sewer pipe. The portions to be replaced are located Southwest of US Hwy 70 at Rowland Road in Swannanoa, and to Porters Cove Rd. at I-40. The lines are undersized and have experienced multiple SSO's.									
<b>Dingle Creek Interceptor</b>	Asheville	7,871	2,780,592	1,000	-	-	-	-	2,708,526
This project is located along Dingle Creek between the Blue Ridge Parkway and the Ramble Subdivision. The existing 18-inch vitrified clay pipe main will be replaced with a new 18-inch ductile iron pipe main. The approximate length of this project is 7,871 LF.									
<b>Lower Swannanoa Int.</b>	Asheville	6,475	5,478,400	-	-	-	-	-	5,463,521
This project is to eliminate problems associated with the splitter box and the downstream twin 36-inch lines.									
<b>South French Broad Int. - Grouting</b>	Biltmore Estate	21,950	1,912,146	588,000	553,000	-	-	-	-
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 Interceptor flows into the South French Broad Interceptor. The project consists of grouting and lining joints along approx. 22,000 LF of existing 36-inch Reinforced Concrete Pipe. The line is a major source of inflow and infiltration. Construction will be phased over three years.									
<b>Beaverdam Creek WW (CDM #10)</b>	Buncombe Co.	5,500	1,413,000	-	-	-	-	-	1,413,000
This was identified as a potential rehabilitation project to improve wet weather flow conveyance, as specified in the Master Plan developed by CDM. It is located in the North French Broad Interceptor area and is comprised of 5,500 LF of 8-inch through 12-inch diameter pipe.									
<b>Biltmore WW (CDM #3)</b>	Biltmore	2,200	638,000	-	-	-	-	-	638,000
This was identified as a potential rehabilitation project to improve wet weather flow conveyance, as specified in the Master Plan developed by CDM. It is located in the Biltmore area near the Swannanoa Interceptor, and is comprised of 2,200 LF of 18-inch diameter pipe.									
<b>Four Mile Creek WW (CDM #1)</b>	Biltmore Forest	3,400	884,000	-	-	-	-	-	884,000
This was identified as a potential rehabilitation project to improve wet weather flow conveyance, as specified in the Master Plan developed by CDM. It is located in the Southeast French Broad Interceptor area, and is comprised of 3,400 LF of 12-inch diameter pipe.									
<b>Haw Creek WW (CDM #6)</b>	Asheville	3,800	988,000	-	-	-	-	-	988,000
This was identified as a potential rehabilitation project to improve wet weather flow conveyance, as specified in the Master Plan developed by CDM. It is located in the Haw Creek area and is comprised of 3,800 LF of 12-inch diameter pipe.									
<b>South Swannanoa WW (CDM #4)</b>	Asheville	8,040	2,939,600	-	-	-	-	-	2,939,600
This was identified as a potential rehabilitation project to improve wet weather flow conveyance, as specified in the Master Plan developed by CDM. It is located in the Biltmore area near Sweeten Creek, and is comprised of 8,040 LF of 18-inch through 42-inch diameter pipe.									
<b>SUBTOTAL</b>		<b>65,096</b>	<b>19,265,317</b>	<b>760,970</b>	<b>570,000</b>	<b>1,998,000</b>	<b>-</b>	<b>-</b>	<b>15,034,647</b>
<b>Inflation per ENR Const. Cost Index</b>	<b>3.02%</b>		<b>1.0000</b>	<b>1.0000</b>	<b>1.0302</b>	<b>1.0613</b>	<b>1.0934</b>	<b>1.1264</b>	<b>1.2454117</b>
<b>SUBTOTAL with inflation</b>		<b>65,096</b>	<b>19,265,317</b>	<b>760,970</b>	<b>587,214</b>	<b>2,120,501</b>	<b>-</b>	<b>-</b>	<b>18,724,325</b>

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION</b>									
<b>Adams Street</b>	Asheville	2,550	695,400	8,900	64,000	-	610,500	-	-
This project is located in downtown Asheville near South French Broad Avenue and is comprised of 2,550 LF of 8-inch ductile iron pipe. The existing line is aging 6-inch vitrified clay pipe, is in poor condition, and runs under several houses.									
<b>Arco Road</b>	E. Asheville	2,022	592,000	583,500	-	-	-	-	-
This project is located in the Haw Creek neighborhood of E. Asheville along Arco Road, adjacent to New Haw Creek Road. It consists of replacing approx. 1,871 LF of 6-inch vitrified clay pipe and 151 LF of 21-inch reinforced concrete pipe with 8-inch ductile iron pipe and 24-inch ductile iron pipe. The existing line is in very poor condition with offset joints, roots, and fractures.									
<b>Arlington Street</b>	Asheville	2,600	747,000	-	-	-	8,000	-	739,000
This project runs along Arlington Street in downtown Asheville. The project begins on Furman Avenue and ends at Town Mountain Road. There are numerous structural problems within the lines which contribute to I/I issues.									
<b>Asheville Country Club (SS)</b>	Asheville	0	100,350	26,500	-	-	-	-	-
This project is located in North Asheville and is comprised of 7,200 LF of 8-inch ductile iron pipe. The existing line is 8-inch vitrified clay pipe and PVC pipe in poor condition with repeated maintenance issues and SSO's.									
<b>Atkins Street</b>	Arden	1,833	518,430	-	2,250	28,000	-	482,700	-
This project is located in Arden just north of Lake Julian. Approximately 1,833 LF of existing 6-inch vitrified clay pipe will be replaced with new 8-inch ductile iron pipe. The existing sewer line is in poor condition due to roots, fractures, and sags in the line. The line is undersized and has flooded houses in the area.									
<b>Beale Road at Copney Lane</b>	Asheville	4,027	1,157,425	15,000	93,700	-	1,033,000	-	-
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.									
<b>Bear Creek Rd. at School Rd.</b>	W. Asheville	2,062	572,800	-	-	-	11,300	86,000	467,600
This project is located in W. Asheville and is comprised of 2,062 LF of 8-inch ductile iron pipe. The existing line is aging 8-inch vitrified clay pipe. The line has multiple fractures, sags, misaligned joints, and root intrusion.									
<b>Beaucatcher Rd @ Kenilworth Rd</b>	E. Asheville	1,370	396,700	13,000	1,000	-	-	382,700	-
This project is located in East Asheville and is comprised of 1370 LF of 8-inch ductile iron pipe. The existing line is aging 6" orangeburg pipe in poor shape with a large amount of root intrusion.									
<b>Bellevue Road</b>	South Asheville	860	223,000	3,000	5,000	23,000	192,000	-	-
This project is located in South Asheville along properties on Bellevue Road and is adjacent to Round Top 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.									
<b>Braddock Way - PRP 20002</b>	Asheville	3,848	1,435,790	-	-	-	4,500	1,000	1,411,937
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.									

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Broadway St. at Bordeaux Place</b>	Asheville	475	226,250	-	-	-	-	-	213,181
This project is on Broadway Ave. just north of I-240. The existing 18-inch sewer will be pipe burst and replaced with 18-inch high density polyethylene line. An aerial crossing, which is in poor condition and ties into the Broadway Avenue main, will also be replaced as part of this project.									
<b>Buchanan Ave.</b>	Asheville	1,400	403,500	-	-	-	7,000	500	396,000
This project is located in downtown Asheville near Biltmore Avenue and is comprised of 1,400 LF of 8-inch ductile iron pipe. The existing line is 6-inch clay with heavy root intrusion, fractures, and one section exposed along a steep grade.									
<b>Caledonia Road</b>	Asheville	2,491	755,000	10,000	-	6,000	108,000	-	631,000
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 approx. 2,491 LF of 8-inch and 10-inch VCP and Transite pipe with new DIP. The existing pipe has structural defects which have resulted in multiple SSO's.									
<b>Central Ave. @ I-240</b>	Asheville	990	282,100	-	-	-	5,000	1,600	275,500
This project is located in downtown Asheville near Woodfin Street and is comprised of 990 LF of 12-inch ductile iron pipe. The existing line is 6, 10, and 12-inch vitrified clay pipe with a history of SSO's.									
<b>Chatham Road</b>	Asheville	1,450	380,100	13,000	500	-	-	366,600	-
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.									
<b>Cherokee Road</b>	Asheville	1,960	605,200	4,230	75,000	-	506,000	-	-
This project will replace (or pipe burst) the existing sewer main from the end of the Macon Avenue @ Sunset Parkway project to an existing manhole east of Cambridge Road in North Asheville. The line is old vitrified clay pipe and is in very poor condition. Several segments are under houses, walls or other physical features which make repairs very difficult.									
<b>Chestnut Lodge Rd.</b>	Black Mtn.	4,150	1,002,600	39,000	74,000	854,600	-	-	-
This project is located in Black Mountain near Blue Ridge Road and is comprised of 4,150 LF of 8-inch ductile iron pipe. The existing line is 6-inch and 8-inch clay with root problems, fractures, and multiple SSO's.									
<b>Commerce Street</b>	Asheville	530	184,800	-	-	-	-	181,300	-
This project is located in downtown Asheville near Church Street and is comprised of 8-inch ductile iron pipe. The existing 6-inch line contains both vitrified clay and PVC sections, and has had excessive maintenance problems due to multiple pipe defects.									
<b>Craggy Street @ Old US 70</b>	Black Mountain	1,000	298,750	4,000	-	-	-	-	294,750
This project is located in Black Mountain on Craggy Street, approx. 400 ft. west of US 70 Highway/Old US 70 Highway intersection. The existing 6" PVC line has multiple bends without manhole access, making maintenance and inspection difficult. The line will be replaced with new 8" DIP.									
<b>Cumberland Ave.</b>	Asheville	4,587	1,293,450	-	-	-	-	-	1,275,200
This project is located in Montford and runs the entire length of Cumberland Avenue. Approximately 4,587 LF of existing 6-inch vitrified clay pipe will be replaced with 8-inch ductile iron pipe. This line is in very poor condition and has required multiple, frequent point repairs.									

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Dellwood Avenue</b>	Asheville	436	121,850	91,500	-	-	-	-	-
This project is for the relocation of an existing sewer main between Dellwood Avenue and Northwest Avenue in Swannanoa (Grovemont) area. The existing 6-inch vitrified clay pipe is in very poor condition and runs between closely spaced houses making access for maintenance and repairs very difficult.									
<b>East Chestnut Ave @ Five Points</b>	N. Asheville	5,225	1,606,600	-	27,000	-	81,800	54,000	1,443,800
This project is located in North Asheville and is comprised of 5,225 LF of 8-inch ductile iron pipe. The existing line is aging 6", 8", and 10" VCP in poor shape with multiple structural defects per segment.									
<b>Elk Mountain Place</b>	Woodfin	4,101	970,200	22,000	115,000	-	815,200	-	-
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.									
<b>Elk Park Drive - PRP 35001</b>	Woodfin	2,242	591,046	-	-	-	-	-	541,000
This project is located in Woodfin and is comprised of 2,242 LF of 8-inch ductile iron pipe. The existing line is 6-inch vitrified clay pipe and PVC with numerous sags and root problems, as well as a PVC creek crossing, which will be replaced during construction of the new line.									
<b>Elkwood Ave.</b>	Woodfin	4,577	1,263,450	2,250	18,000	1,232,200	-	-	-
This project is located in Woodfin, east of I-26 along Elkwood Avenue and Old Burnsville Hill Road. It consists of replacement of approximately 4,577 LF of 8-inch ductile iron pipe. The existing line has offset joints, fractures, root intrusion, multiple point repairs, and is the source of frequent problems.									
<b>Elkwood @ Norman Austin Dr.</b>	Woodfin	600	178,100	-	-	-	-	2,800	175,300
This project runs through properties along Elkwood Ave., starting at Norman Austin Drive. The existing pipe is 4-inch and 6-inch, is undersized and has misaligned joints. There is a manhole that is located under a property owner's porch. The proposed 8-inch ductile iron pipe will run mainly on Elkwood Avenue to move the system in the road for easier maintenance.									
<b>Fairfax Avenue @ I-240</b>	West Asheville	200	76,250	3,250	18,000	51,100	-	-	-
This project is located in north Asheville approximately 0.25 miles east of Charlotte Street. The project will run along roads and properties from Glendale Road. to Sunset Drive. The 6-inch clay lines are in poor condition which have caused manhole overflows and SSOs.									
<b>Fairmont Road</b>	N. Asheville	3,600	1,094,250	15,000	-	6,750	59,500	-	1,013,000
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.									
<b>Forestdale Drive</b>	S. Asheville	2,600	843,000	-	12,000	17,500	104,000	-	709,500
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.									
<b>Forest Hill Dr. @ Warwick Rd.</b>	Asheville	3,400	956,100	-	-	17,000	500	-	938,600
This project is in Asheville in the Kenilworth neighborhood and consists of 3,400 LF of 8-inch ductile iron pipe. The current pipe is undersized 6-inch clay in poor condition, with roots and fractures.									

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Four Inch Main - College Street</b>	Asheville	1,000	486,200	-	-	-	-	-	486,200
This project is located in downtown Asheville near Beaucatcher Tunnel and is comprised of 8-inch ductile iron pipe. The existing line is 4-inch Orangeburg and 6-inch vitrified clay pipe in poor condition, with several buildings over the existing line.									
<b>Four Inch Main - Dry Ridge Rd.</b>	Asheville	908	291,600	-	-	-	253,500	-	-
This project is a 4-inch main and extends from Dry Ridge Road to Lucky Lane and Windsor Road in Asheville. This project is in the area north of Merrimon Avenue and east of Stratford Road. The existing line is a 4-inch Orangeburg pipe which is in poor condition.									
<b>Hazel Mill Rd @ Richland St.</b>	Asheville	3,300	945,300	-	18,000	-	9,400	54,000	863,900
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.									
<b>Hendersonville Rd @ Blake Drive</b>	South Asheville	1,090	323,200	6,000	39,000	278,200	-	-	-
This project is located in South Asheville on Blake Drive off of Hendersonville Road. The project will replace 1,090 LF of 6-inch and 8-inch VCP. The existing lines are in bad condition and have too many point repairs.									
<b>Hendersonville Rd. @ Peachtree Rd.</b>	S. Asheville	1,100	220,200	-	-	-	213,000	-	-
This project will replace an existing 6-inch vitrified clay line in Hendersonville Road (US 25 South) between Peachtree Road and the Racquet Club Village Condo development. The line condition is very poor.									
<b>Hendersonville Rd. @ Rosscraggon Ph. 2</b>	Arden	4,163	1,294,450	91,285	1,038,000	9,500	-	-	-
This project begins at US 25 just south of the railway spur line that goes into the Duke Energy plant and will include lines on Old Furnace Road. and Azalea Road. The existing lines are in very poor condition with high infiltration due to cracks, broken pipes, and bad joints.									
<b>Herron Avenue</b>	W. Asheville	2,060	595,500	-	-	-	10,300	2,200	583,000
This project is located in West Asheville near the intersection of Sand Hill Road. and Haywood Road. and is comprised of 2,060 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.									
<b>Hill Street</b>	Asheville	1,600	452,600	9,000	1,000	-	-	442,600	-
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 defects.									
<b>Horizon Hill Rd. (Hy-Vu Drive)</b>	Asheville	713	234,410	224,000	-	-	-	-	-
This project is located in Asheville near Merrimon Avenue. It consists of 713 LF of 8-inch ductile iron pipe. The current 8-inch Orangeburg and vitrified clay line has had repeated overflows due to root intrusion and pipe collapse.									
<b>Howland Rd. @ Sunset Trail</b>	Asheville	1,033	376,600	-	4,500	51,000	-	313,600	-
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.									

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Johnston Blvd. @ Providence Rd.</b> 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.	W. Asheville	2,360	620,700	-	9,000	53,000	-	554,000	-
<b>Jonestown Road</b> This project is located in Woodfin between Elk Mountain Road. and Riverside Drive., specifically along portions of Jonestown Road. The project consists of replacing approximately 3,578 LF of existing 6-inch VCP with 8-inch DIP. The line has numerous structural defects and has a history of root intrusion and SSOs.	Woodfin	3,578	971,950	73,500	875,000	-	-	-	-
<b>Kenilworth @ Springdale Rd.</b> 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.	Asheville	2,135	597,350	-	8,250	41,000	-	541,300	-
<b>Knauth Rd</b> This project is located in East Asheville and is comprised of 400 LF of 8-inch ductile iron pipe. The existing line is aging 8-inch VCP in poor condition.	E. Asheville	400	127,500	-	-	2,000	2,200	12,000	111,300
<b>Lakeshore Dr. @ Merrimon Ave.</b> 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.	N. Asheville	838	340,450	-	3,000	-	6,750	109,000	221,700
<b>Lakeview @ Glen Falls Rd.</b> This project is just south of Beaver Lake on Lakeview Road, Glen Falls Road, and through properties on Glen Falls Road. The existing 6-inch clay pipe will be replaced with 8-inch ductile iron pipe. System Services has experienced numerous problems with this line.	N. Asheville	4,200	1,355,500	-	-	-	17,000	15,500	1,323,000
<b>Lakewood Drive @ Dudley</b> This project is located on Lakewood Drive in the Kenilworth neighborhood of Asheville. It consists of replacing approx. 280 LF of existing 8-inch VCP with new 8-inch DIP. The existing line runs adjacent to a house foundation and is difficult to maintain. This line has a history of root intrusion.	Asheville	280	97,200	-	-	-	1,200	-	96,000
<b>Laurel Road - Ph. 2</b> This project is located in Royal Pines in southern Buncombe County. Approximately 1,496 LF of 8 inch ductile iron pipe will replace existing vitrified clay and Orangeburg pipe along Laurel Road and Laurel Court. The existing lines are in poor condition.	Arden	1,496	379,307	-	-	-	-	-	358,000
<b>Lincoln Ave.</b> This project is located in the Oakley neighborhood in southeast Asheville, just north of I-40. It consists of replacing approximately 1,415 LF of existing 6-inch vitrified clay pipe with 8-inch ductile iron pipe. The existing line is in very poor structural condition.	Asheville	1,415	397,870	-	-	-	-	-	395,000
<b>Lining Contract No. 8</b> This is a trenchless technology project that includes lining substandard sewer lines with either CIPP or Fold and Form pipe. Existing manholes will be repaired or replaced as part of this work.	Various	11,000	1,377,000	1,377,000	-	-	-	-	-

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Lionel Place</b> This project runs between two properties from Lionel Place to New Leicester Highway. There are multiple bends in the line that make maintenance difficult.	Leicester	308	95,700	-	-	-	-	-	95,700
<b>Long Shoals Rd. @ Allen Ave.</b> This project is located at the west end of Allen Avenue, close to the intersection of Hendersonville Road. and Long Shoals Road. in Arden. It is comprised of approximately 2,263 LF of 8-inch ductile iron pipe. There are structural problems at various locations, and the line is in poor condition overall.	Arden	2,263	522,525	6,000	38,000	467,500	-	-	-
<b>Louisiana Avenue</b> This project is located in West Asheville along Louisiana Avenue. The project will replace 2,150 LF of 6-inch VCP. The existing lines are undersized, in bad condition, and have too many point repairs.	West Asheville	2,150	640,000	-	-	-	-	-	640,000
<b>Louisiana Ave. @ Brucemont Circle</b> This project is for the replacement of an existing line from Louisiana Avenue to Brucemont Circle. The present line goes under at least two houses and will be relocated to an existing alleyway. System Services has had maintenance issues with blockages due to broken joints and pipes.	Asheville	2,400	543,185	8,800	10,120	509,500	-	-	-
<b>Lower Glendale Ave.</b> This project is located in S.E. Asheville near the Oakley neighborhood. It consists of replacing approximately 2,716 LF of existing 10-inch and 12-inch vitrified clay pipe along Glendale Avenue. The existing line is subject to inflow and infiltration, is in poor condition, and undersized.	E. Asheville	2,716	870,200	-	-	-	-	6,000	855,500
<b>Lower Melody Lane</b> This project is a continuation of Upper Melody Lane. The system runs through the back of properties on Melody Lane and along the right of way of Norfolk Southern Railroad. The existing 6-inch Orangeburg pipe will be replaced with 8-inch ductile iron pipe. The existing Orangeburg pipe is deteriorating and has extensive root problems.	E. Asheville	1,180	352,900	-	-	-	-	8,000	338,000
<b>Lynn Cove Road</b> 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.	Beaverdam	5,589	1,547,000	25,000	-	15,000	91,000	-	1,416,000
<b>Manetta Rd. @ Johnson Dr.</b> 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.	N. Asheville	6,500	1,885,700	-	-	-	33,000	7,000	1,845,700
<b>Meadow Road @ Train Yard</b> This project is located in Asheville on Meadow Road between the Biltmore Estate and AB Tech College. It consists of replacing 1,800LF of existing 6" VCP with new 8" DIP. The existing line is in poor condition, is undersized, and runs underneath various structures.	Asheville	1,800	553,000	9,000	-	1,500	41,000	501,500	-
<b>Meadowbrook Drive (SS)</b> This project includes complete replacement of existing 8-inch vitrified clay pipe with new 8-inch ductile iron pipe. The vitrified clay lines are in poor condition with cracks and bad joints and also run under two houses, making the line difficult to maintain.	Black Mountain	0	46,850	33,800	-	-	-	-	-

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Merrimon Ave. at Clearview Terrace</b>	Asheville	500	324,990	-	-	-	-	-	318,946
This project is in two sections along Merrimon Avenue, in the area of Clearview Terrace and Farrwood Avenue. The existing line is an old 4-inch main and is in very poor condition. A roadway bore is proposed under Merrimon Avenue for the lower section of this project.									
<b>Merrimon Ave. @ Coleman Ave.</b>	N. Asheville	2,800	820,000	-	-	-	-	-	820,000
This project is on Merrimon Avenue, Coleman Avenue, and Austin Avenue. Existing clay pipe is old and has numerous defects. The 6-inch clay pipe on Coleman and Austin, and the 8-inch clay pipe on Merrimon will all be replaced with 8-inch ductile iron pipe.									
<b>Middle Beaverdam Crk. @ US 19-23</b>	Woodfin	2,930	1,293,650	-	7,070	-	3,250	34,000	1,241,900
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 Avenue 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.									
<b>Mitchell Avenue</b>	W. Asheville	2,760	836,200	-	-	-	14,000	4,000	818,200
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.									
<b>Mountainbrook Rd. @ Chunn's Cove Rd.</b>	Asheville	2,800	592,615	-	49,000	-	526,000	-	-
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 and will move those lines to public street rights of way. This project will also eliminate one high aerial creek crossing where existing support piers are failing due to erosion.									
<b>Mountainview Road</b>	E. Asheville	2,120	623,900	45,500	564,200	-	-	-	-
This project is located in East Asheville between Tunnel Road, and New Haw Creek Road. The project consists of replacing approx. 2,120 LF of existing 4, 6 and 8-inch vitrified clay pipe with 8-inch ductile iron pipe. The existing line has multiple fractures and small holes, and portions of the line are undersized.									
<b>New Haw Creek Rd. @ Dogwood Grove</b>	E. Asheville	1,900	555,900	7,100	36,000	-	-	503,300	-
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.									
<b>New Haw Creek Rd. @ Trinity Chapel Rd.</b>	E. Asheville	838	252,076	227,800	-	-	-	-	-
This project is located in the Haw Creek neighborhood of East Asheville along New Haw Creek Road. It consists of replacing approx. 838 LF of existing 6-inch and 8-inch vitrified clay pipe and 21-inch reinforced concrete pipe with new 8-inch ductile iron pipe and 24-inch ductile iron pipe. This line segment has had multiple point repairs, backups, and overflows.									
<b>New Stock Road</b>	Woodfin	9,020	2,356,500	36,000	6,500	30,000	-	2,284,000	-
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.									
<b>North Lexington @ I-240</b>	Asheville	450	163,700	-	2,000	-	-	159,400	-
This project is located in downtown Asheville near the I-240 on ramp from Broadway Street and is comprised of 450 LF of 8-inch ductile iron pipe. The existing line is 4-inch vitrified clay pipe with a history of stoppages and overflows.									



## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>North Market Street</b> This project is located in downtown Asheville and consists of 1,050 LF of 8-inch ductile iron pipe. The existing 6-inch clay line is undersized, has multiple structural issues, and has caused flooded structures.	Asheville	1,050	352,000	1,500	68,000	-	-	277,200	-
<b>Oakland Dr @ Church Street</b> 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.	Black Mountain	575	171,000	-	-	2,500	2,500	29,000	137,000
<b>Oakwood Street</b> This project is located in West Asheville on Oakwood St., approximately 0.6 mile east of the Patton Ave./Haywood Rd. intersection. Approximately 976 LF of existing 6-inch VCP and Orangeburg pipe will be replaced with 8-inch DIP. The existing line has structural problems and is undersized for the neighborhood it serves.	W. Asheville	976	305,750	-	-	-	-	3,500	302,250
<b>Old Haw Creek Rd. @ Greenbriar Rd.</b> This project is located in the Haw Creek neighborhood of E. Asheville along Old Haw Creek Rd. and Greenbriar Rd. It consists of replacing approximately 3,755 LF of existing 6-inch vitrified clay pipe with 8-inch ductile iron pipe. The existing line is in poor condition and has been subject to frequent overflows.	E. Asheville	3,755	1,058,000	10,500	98,000	931,500	-	-	-
<b>Old West Chapel Rd.</b> This project is located near the intersection of Sweeten Creek Road, and I-40. The I-40 crossing will be performed by bore and jack construction. The existing 8-inch clay pipe will be replaced with 8-inch ductile iron pipe. There have been multiple sanitary sewer overflows on this line. This project has been phased for two years, FY 17-18 and FY 18-19. In FY17-18, this phase will consist of lining 10,090 of existing 8-inch and 10-inch pipes. In FY18-19, this phase will consist of replacing 4,680 LF by pipe bursting and dig & replace.	Asheville	14,800	2,196,000	14,000	1,379,000	767,000	-	-	-
<b>Point Repair Contract No. 1</b> This construction contract will cover point repairs performed by an outside contractor for Fiscal Year 2016-17. Point repairs covered under this contract are generated through work orders from the System Services Division.	Various	0	200,000	200,000	-	-	-	-	-
<b>Riverside Dr @ Norton Dr</b> This project is located in North Asheville and is comprised of 700 LF of 8-inch ductile iron pipe. The existing line is a problematic 4" sewer line composed of PVC and VCP with many defects.	N. Asheville	700	220,600	-	-	-	-	4,000	216,600
<b>Riverside Dr. @ Silverline Plastic</b> This project is located in Woodfin and is comprised of 400 LF of 8-inch ductile iron pipe. The existing line is 4-inch, 6-inch, and 8-inch vitrified clay pipe, runs under a building, and is in poor condition.	Woodfin	400	120,920	-	-	-	5,000	-	114,000
<b>Riverview Drive</b> 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.	Asheville	2,302	649,480	-	-	-	-	-	641,600
<b>Royal Pines Drive - PRP 47009</b> 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.	Arden	2,888	874,500	-	-	23,500	-	-	835,400

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Sand Hill Rd @ Baker Place</b> This project is located in West Asheville and is comprised of 550 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.	W. Asheville	550	165,500	-	-	-	4,000	-	161,500
<b>Sand Hill Rd. @ Russell/Davenport</b> This project is located in West Asheville and is comprised of 2,341 LF of 8-inch ductile iron pipe. The existing line is 8-inch vitrified clay pipe in poor condition with a history of overflows at various sites.	W. Asheville	2,341	686,775	532,573	-	-	-	-	-
<b>School Rd. @ Cranford Rd.</b> This project is located in West Asheville between Patton Avenue and Sand Hill Road and is comprised of 361 LF of 8-inch ductile iron pipe. The existing line is 6-inch PVC pipe that is full of roots, bends, and structural defects. Backups in this line have resulted in a flooded house.	W. Asheville	361	109,000	-	108,500	-	-	-	-
<b>Sheppard Drive</b> This project is located at 45 Sheppard Drive in West Asheville, close to the intersection of Old County Home Road and New Leicester Highway. The project includes replacing approximately 325 LF of existing 6-inch VCP with 8-inch DIP. The existing line has structural defects and has experienced numerous backups due to root intrusion.	W. Asheville	325	89,310	4,000	83,650	-	-	-	-
<b>Smokey Park Hwy. @ I-40</b> This project is located in Enka near the I-40 on/off ramps, approximately 0.10 mile from Smokey Park Highway. The line crosses under Norfolk Southern railroad. There is a substantial hole along the bottom of the line that has created problems.	Enka	115	41,750	-	-	-	-	-	41,750
<b>Springside Rd. @ Overlook Rd.</b> This project is located in South Asheville near Overlook Road. and is comprised of 4,500 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.	S. Asheville	4,500	1,299,200	2,000	100,200	-	1,176,000	-	-
<b>Starnes Avenue</b> 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.	Asheville	2,871	847,100	-	-	11,500	3,000	34,000	798,600
<b>Stratford Road</b> This project is located in N. Asheville along Stratford Road. The project is a continuation of Stratford @ Oxford Court. The lines run through properties alongside a stream. The existing 6-inch vitrified clay pipe is in poor structural condition which has allowed heavy infiltration.	N. Asheville	1,770	495,500	-	-	8,000	-	10,000	477,500
<b>Stratford Rd. @ Oxford Court</b> This project will replace an existing 6-inch main which serves houses along Oxford Court, near the Merrimon Avenue @ Stratford project. Three SSO's have occurred at manholes on this line.	Asheville	1,960	461,310	400,726	-	-	-	-	-
<b>Sulphur Springs Rd. @ Covington St.</b> 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.	W. Asheville	1,350	381,000	5,500	8,000	63,000	-	304,500	-

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Sutton Avenue</b> This project is on Sutton Ave. and extends up Ridgeway Avenue, Richardson Boulevard, and Broadway Street. The existing 6-inch and 8-inch clay pipe will be replaced with 8-inch ductile iron pipe. System Services crews report that the pipes are in poor condition, and have caused flooded structures and sanitary sewer overflows.	Black Mtn.	3,100	931,000	-	5,000	-	911,000	-	-
<b>Sweeten Creek @ Buck Shoals</b> This project is located in Royal Pines on Buck Shoals Rd. between Hendersonville Road. (US 25) and Sweeten Creek Road. (US 25A). Approx. 1,330 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.	S. Asheville	1,330	406,170	1,500	56,000	-	344,000	-	-
<b>Sweeten Creek Rd. @ Busbee View</b> This project is for the rehabilitation of an existing line which begins at Sweeten Creek Road and extends to Ona Berry Lane (off Busbee Lane). A portion of this line goes under a concrete loading dock and in some places the pipe cannot be located without extensive work on private property. There have been several service calls for repairs on this line.	Asheville	1,048	307,200	276,363	-	-	-	-	-
<b>Sweeten Creek @ Mills Gap</b> This project is located in South Asheville near Mills Gap Road. and is comprised of 2,325 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.	Asheville	2,325	703,800	-	15,500	80,000	608,300	-	-
<b>Sweeten Creek Rd. @ Weston Rd.</b> This project is located in South Asheville near Weston Road. and is comprised of 1,775 LF of 8-inch ductile iron pipe. The existing line is 6-inch vitrified clay pipe and 4-inch PVC pipe in poor condition, with a history of SSO's.	S. Asheville	1,775	520,200	-	9,000	-	1,500	37,000	472,700
<b>Upper Grassy Br. Rd. @ Maxwell Rd.</b> This project is located in East Asheville and is comprised of 1,000 LF of 8-inch ductile iron pipe. The existing sewer line is 6-inch clay with root and odor problems.	E. Asheville	1,000	287,710	-	-	2,000	18,000	-	262,500
<b>US 70 @ Jordan Road</b> This project is located in Swannanoa along US 70. The project begins at McBrayer Ave, 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.	Swannanoa	4,550	1,443,000	-	20,000	-	127,000	32,500	1,263,500
<b>Venable Pump Station Elimination</b> This project is along NC191 (Brevard Road) at the Ingles Market and Asheville Outlets Mall properties in southwest Asheville. This project will eliminate the existing Venable Pump Station and allow the flow from that pump station to flow into existing sewer lines on the Mall property which have recently become public MSD lines. This project will replace approximately 364 LF of existing 8-inch main and add approximately 313 LF of new 8-inch main.	Asheville	364	361,200	152,500	-	-	-	-	-
<b>Walnut Street @ Rankin Ave.</b> This project is located in downtown Asheville and consists of 2,350 LF of 8-inch ductile iron pipe. The current 6-inch clay line is undersized and deteriorated, with many structural problems.	Asheville	2,350	766,400	-	-	1,000	-	753,900	-
<b>Waynesville Ave. @ Brownwood Ave.</b> 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.	W. Asheville	4,100	1,258,500	-	20,500	500	63,500	124,000	1,050,000

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>									
<b>Wentworth Ave.</b>	Asheville	1,500	425,700	-	7,500	-	500	-	417,700
This project is located in Asheville near the Oakley neighborhood and is comprised of 1,500 LF of 8-inch ductile iron pipe. The existing line is 6-inch PVC and 8-inch vitrified clay pipe that has many offset joints, protruding taps, and pipe defects.									
<b>West Crabapple Lane</b>	W. Asheville	1,720	503,000	8,000	37,000	455,500	-	-	-
This project is on West Crabapple Lane which is a private road. The existing 8-inch clay pipe is in bad 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.									
<b>Weston Road @ Tampa Blvd.</b>	Skyland	400	114,150	-	-	-	-	-	114,150
This project is located in Skyland, approx. 1/2 mile northeast of the US 25/US 25A intersection. It consists of replacing 400LF of existing 6-inch VCP with 8-inch DIP. The existing pipe has bends and protruding taps in the line, is undersized, and is a source of I&I.									
<b>White Oak Road</b>	Arden	960	295,250	-	-	-	-	-	295,250
This project is located in Arden along White Oak Road, adjacent Hendersonville Road. The project will replace 960 LF of 6-inch Orangeburg and VCP. The existing lines are in bad condition and have too many point repairs.									
<b>Wildwood Park</b>	Weaverville	430	124,250	2,150	-	-	-	-	122,100
This project is located in Weaverville at the corner of N Main St. and Wildwood Park. It consists of replacing 430LF of 8-inch VCP with 8-inch DIP. The existing pipe has multiple fractures, root problems, and runs underneath multiple structures making maintenance difficult.									
<b>Wood Ave. @ Parker Rd.</b>	Asheville	1,050	357,100	-	-	-	5,500	49,000	302,600
This project is located in Asheville between Fairview Road and Tunnel Road and is comprised of 1,050 LF of 8-inch ductile iron pipe. The existing line is 8-inch vitrified clay pipe that has access issues due to being built over. Backups on this line have resulted in a flooded house.									
<b>SSD Rehab. &amp; Replacement</b>	Various	200,000	41,644,040	4,164,404	4,164,404	4,164,404	4,164,404	4,164,404	20,822,020
This line item is for the replacement of capital assets using in-house construction crews and materials. This includes new taps, small repairs, lining, as well as larger rehabilitation projects. Also included is paving when required for these repairs and rehabilitation projects. The total estimated project cost shown is the total within the ten year window.									
<b>Surveys for Design</b>	Various	N/A	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.									
<b>Future Projects - General Rehab.</b>	Various	5,000	1,125,000	-	-	-	-	-	1,125,000
Rehabilitation projects are added throughout each fiscal year based upon sanitary sewer overflows, structural condition, maintenance frequency, etc. This line item is a placeholder to budget for future (unidentified) projects within the ten year window.									
<b>SUBTOTAL</b>		<b>439,470</b>	<b>108,731,334</b>	<b>8,859,631</b>	<b>9,444,344</b>	<b>10,254,754</b>	<b>12,252,104</b>	<b>12,983,604</b>	<b>53,577,134</b>
<b>Inflation per ENR Const. Cost Index</b>	<b>3.02%</b>		<b>1.0000</b>	<b>1.0000</b>	<b>1.0302</b>	<b>1.0613</b>	<b>1.0934</b>	<b>1.1264</b>	<b>1.22849174</b>
<b>SUBTOTAL with inflation</b>		<b>439,470</b>	<b>108,731,334</b>	<b>8,859,631</b>	<b>9,729,563</b>	<b>10,883,494</b>	<b>13,396,005</b>	<b>14,624,514</b>	<b>65,819,067</b>

## Program Summary (continued)

PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>PRIVATE SEWER REHABILITATION</b>									
<b>Douglas Place PSR</b>	Asheville	588	166,312.0	-	-	-	1,000.0	-	156,600
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.									
<b>Freno Drive PSR (Lower)</b>	Asheville	2,593	656,532.0	639,000.0	-	-	-	-	-
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.									
<b>Old County Home Rd PSR</b>	W. Asheville	1,400	373,932.0	7,000.0	10,600.0	-	352,600.0	-	-
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.									
<b>SUBTOTAL</b>		<b>4,581</b>	<b>1,196,776</b>	<b>646,000</b>	<b>10,600</b>	<b>-</b>	<b>353,600</b>	<b>-</b>	<b>156,600</b>
<b>Inflation per ENR Const. Cost Index</b>	<b>3.02%</b>		<b>1.0000</b>	<b>1.0000</b>	<b>1.0302</b>	<b>1.0613</b>	<b>1.0934</b>	<b>1.1264</b>	<b>1.231548</b>
<b>SUBTOTAL with inflation</b>		<b>4,581</b>	<b>1,196,776</b>	<b>646,000</b>	<b>10,920</b>	<b>-</b>	<b>386,613</b>	<b>-</b>	<b>192,860</b>
<b>TREATMENT PLANT, PUMP STATIONS &amp; GENERAL CAPITAL IMPROVEMENTS</b>									
<b>Biological Treatment</b>	MSD-Treatment Plant	0	4,000,000	-	-	-	-	-	4,000,000
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.									
<b>Building and Facility Rehabilitation</b>	MSD-Treatment Plant	0	865,000	175,000	90,000	89,000	80,000	91,000	340,000
This item is for the replacement of larger capital items such as roofing systems, HVAC, and subcontracts on buildings and structures within the MSD campus and treatment plant facility. Total estimated project cost shown is the total within the ten year window.									
<b>Carrier Bridge P.S. Bypass &amp; Improvements</b>	MSD-Treatment Plant	0	2,281,688	250,000	91,400	1,709,000	137,500	-	-
This is part of the South French Broad Carrier Bridge PER project. A permanent bypass line will be installed at the Carrier Bridge Pump Station as an emergency backup to the existing 24-inch force main. Once installed, the new bypass line will allow for the pump station to be bypassed in the event of an emergency, or for major maintenance at the pump station. This project also includes increasing pump capacity for future growth within the service area.									
<b>Flow Monitoring</b>	MSD-Treatment Plant	0	282,535	30,000	-	-	-	-	-
This project is for expenses related to the continued operation, maintenance, and improvements of the District's flow monitoring program.									
<b>Influent Pump Station Rehabilitation</b>	MSD-Treatment Plant	0	1,639,000	150,000	-	-	-	-	-
This project is to rehabilitate the influent pump station at the plant. The existing motor controls have deteriorated over the years and must be replaced. New controls will be installed and the space will be air conditioned. One influent pump was replaced in FY13-14, and another in FY15-16. The remaining pump has been re-built multiple times and is approximately 25 years old.									
<b>Mountain View P.S. Standby Generator</b>	MSD-Treatment Plant	0	204,210	159,000	-	-	-	-	-
This project is to add a permanent back-up generator to the District's Mountain View Pump Station. Gas and electrical lines will be extended down Pinehurst Circle to a new site on the Buncombe County Board of Education parcel. This project will allow for emergency operation and routine maintenance of this pump station.									

## Program Summary (continued)

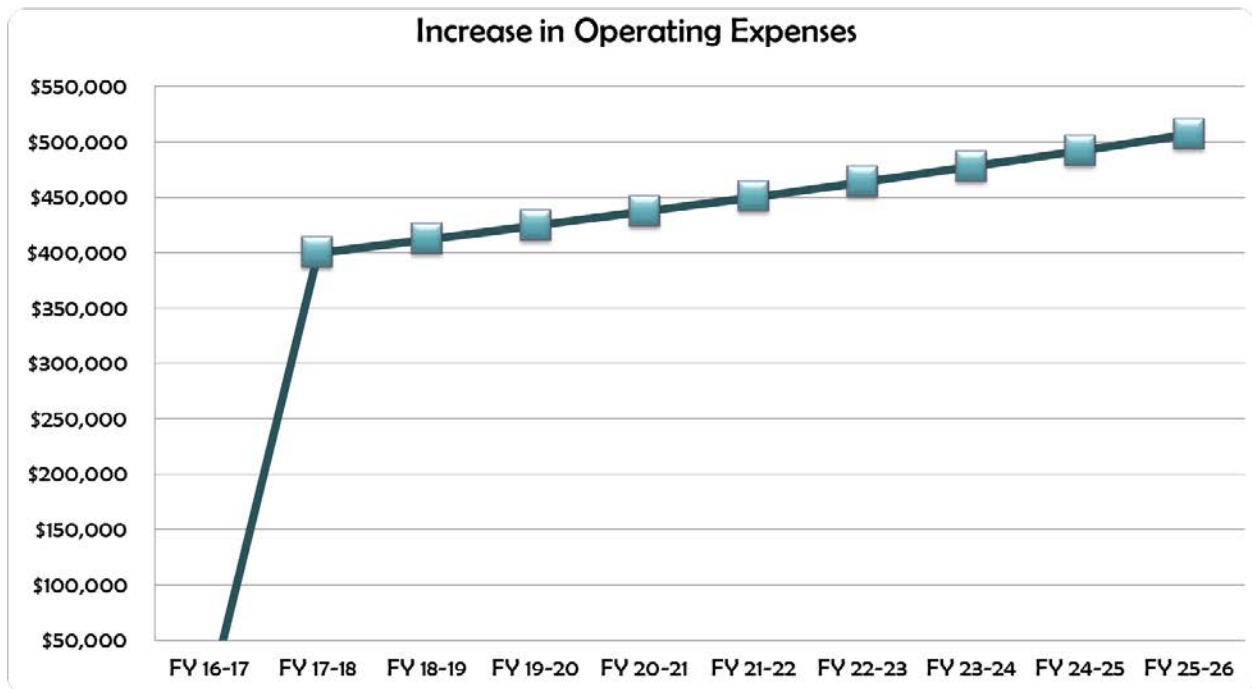
PROJECT NAME	LOCATION OF PROJECT	PROJECT FOOTAGE	TOTAL ESTIMATED COST	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>TREATMENT PLANT, PUMP STATIONS &amp; GENERAL CAPITAL IMPROVEMENTS (continued)</b>									
<b>Plant Headworks Improvements</b>	MSD-Treatment Plant	0	11,538,575	5,457,000	5,385,000	-	-	-	-
This project is a recommendation from the Facilities Plan Update, a WRF master planning document completed by HDR in April 2015. This project consists of a new influent screening facility, new grit removal system, fine screening facility, and surge/equalization basins and pumping station at the French Broad River WRF. The upgrades will improve downstream water quality and shave peak flows into the WRF.									
<b>Plant High Rate Primary Treatment</b>	MSD-Treatment Plant	0	10,962,000	960,000	5,006,000	4,996,000	-	-	-
This project is a recommendation from the Facilities Plan Update, a WRF master planning document completed by HDR in April 2015. High rate primary treatment will improve water quality ahead of the RBC's thereby extending their useful life and improving treatment efficiency.									
<b>RBC Replacement</b>	MSD-Treatment Plant	0	1,536,800	330,000	-	-	-	-	-
This project is for the replacement of the existing Rotating Biological Contactors (RBC's). The existing RBC's were installed in the 1980's, and as time has progressed, units have required replacement. Twenty RBC's were replaced in FY14-15; ten will be replaced in FY15-16; and ten will be replaced in FY16-17.									
<b>South French Broad Carrier Bridge PER</b>	Buncombe County	0	400,000	400,000	-	-	-	-	-
This will be a flow modeling evaluation of several large sewer interceptors in the South French Broad, Lower Swannanoa, and Carrier Bridge areas. The study will identify undersized lines based on current and future flow, and will include phased recommendations for improvements.									
<b>General Capital Equipment</b>	Varies	0	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.									
<b>Mull Building Improvements</b>	Mull Building	0	68,000	68,000	-	-	-	-	-
This project is to improve the efficiency and customer service of the MSD plan review process. It will provide for a paperless plan review system, and is expected to speed review time and allow for easier communication among parties to the MSD development process. It will also provide for new carpet, furniture, and a monitor in the MSD Board Room, which is in need of replacement.									
<b>SUBTOTAL</b>		<b>13,743</b>	<b>35,277,808</b>	<b>8,129,000</b>	<b>10,722,400</b>	<b>6,944,000</b>	<b>367,500</b>	<b>241,000</b>	<b>5,090,000</b>
<b>Inflation per ENR Const. Cost Index</b>	<b>3.02%</b>		<b>1.0000</b>	<b>1.0000</b>	<b>1.0302</b>	<b>1.0613</b>	<b>1.0934</b>	<b>1.1264</b>	<b>1.2835911</b>
<b>SUBTOTAL with inflation</b>		<b>13,743</b>	<b>35,277,808</b>	<b>8,129,000</b>	<b>11,046,216</b>	<b>7,369,751</b>	<b>401,811</b>	<b>271,458</b>	<b>6,533,479</b>
<b>DESIGN, ROW, &amp; CONSTRUCTION MANAGEMENT EXPENSES</b>									
<b>Design, ROW, &amp; Const. Mgmt. Exp.</b>	MSD/ENG	0	28,998,216	2,546,486	2,658,847	2,727,386	2,797,917	2,863,784	15,403,795
This line item is for expenses related to the District's Capital Improvement Program (CIP). Included are salaries for the CIP Division, capital equipment, and bond debt expenses related to the financing of the CIP program.									
<b>SUBTOTAL</b>		<b>0</b>	<b>28,998,216</b>	<b>2,546,486</b>	<b>2,658,847</b>	<b>2,727,386</b>	<b>2,797,917</b>	<b>2,863,784</b>	<b>15,403,795</b>
<b>BUDGET SUMMARY</b>									
<b>SUBTOTAL with Inflation</b>		<b>522,890</b>	<b>193,469,451</b>	<b>20,942,087</b>	<b>24,032,761</b>	<b>23,101,132</b>	<b>16,982,347</b>	<b>17,759,757</b>	<b>106,673,526</b>
<b>CONTINGENCY</b>				<b>1,000,000</b>					
<b>REIMBURSEMENT PROJECTS</b>	Various	0	1,000,000	100,000	100,000	100,000	100,000	100,000	500,000
<b>TOTAL</b>		<b>522,890</b>	<b>194,469,451</b>	<b>22,042,087</b>	<b>24,132,761</b>	<b>23,201,132</b>	<b>17,082,347</b>	<b>17,859,757</b>	<b>107,173,526</b>

## 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 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>INTERCEPTOR AND WET WEATHER REHABILITATION</b>						
<b>Christian Creek Interceptor:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Dingle Creek Interceptor:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lower Swannanoa Interceptor:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>South French Broad Interceptor - Grouting:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Beaverdam Creek WW (CDM #10):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Biltmore WW (CDM #3):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Four Mile Creek WW (CDM #1):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Haw Creek WW (CDM #6):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>South Swannanoa WW (CDM #4):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>INTERCEPTOR AND WET WEATHER REHABILITATION</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>GENERAL SEWER REHABILITATION</b>						
<b>Adams Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Arco Road:</b> 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 21-22 thru					
	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Arlington Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Asheville Country Club (SS):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Atkins Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Beale Road @ Copney Lane:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Bear Creek Road @ School Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Beaucatcher Rd @ Kenilworth Rd:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Bellevue Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Braddock Way - PRP 20002</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Broadway Street @ Bordeau Place</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Buchanan Avenue</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Caledonia Road</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Central Avenue @ I-240</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Chatham Road</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

## Operational Impact Summary (continued)

PROJECT NAME	FY 21-22 thru					
	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Cherokee Road</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Chestnut Lodge Road</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Commerce Street</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Craggy Street @ Old US 70:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Cumberland Avenue</b> - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Dellwood Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>East Chestnut Ave @ Five Points:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Elk Mountain Place:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Elk Park Drive - PRP 35001:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Elkwood Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Elkwood @ Norman Austin Drive:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Fairfax Avenue @ I-240:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Fairmont Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Forestdale Drive:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

## Operational Impact Summary (continued)

PROJECT NAME	FY 21-22 thru					
	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Forest Hill Drive @ Warwick Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Four Inch Main - College Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Four Inch Main - Dry Ridge Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Hazel Mill Road @ Richland Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Hendersonville Rd @ Blake Drive:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Hendersonville Road @ Peachtree Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Hendersonville Road @ Rosscraggon Phase 2:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Herron Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Hill Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Horizon Hill Road (Hy-Vu Drive):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Howland Road @ Sunset Trail:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

## Operational Impact Summary (continued)

PROJECT NAME	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Johnston Boulevard @ Providence Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Jonestown Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Kenilworth @ Springdale Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Knauth Rd:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lakeshore Drive @ Merrimon Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lakeview @ Glen Falls Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lakewood Drive @ Dudley:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Laurel Road - Phase 2:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lincoln Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lining Contract No. 8:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lionel Place:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Long Shoals Road @ Allen Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Louisiana Avenue:</b> 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 21-22 thru					
	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Louisiana Avenue @ Brucemont Circle:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Lower Glendale Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lower Melody Lane:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lynn Cove Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Manetta Road @ Johnson Drive:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Meadow Road @ Train Yard:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Meadowbrook Drive (SS):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Merrimon Avenue @ Clearview Terrace:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Merrimon Avenue @ Coleman Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Middle Beaverdam Creek @ US 19-23:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Mitchell Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Mountainbrook Road @ Chunns Cove Road:</b> 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 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Mountainview Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>New Haw Creek Road @ Dogwood Gr.:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>New Haw Creek Road @ Trinity Chapel Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>New Stock Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>North Lexington @ I-240:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>North Market Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Oakland Dr @ Church Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Oakwood Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Old Haw Creek Road @ Greenbriar Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Old West Chapel Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Point Repair Contract No. 1:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Riverside Dr @ Norton Dr:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Riverside Drive @ Silverline Plastic:</b> 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 21-22 thru					
	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Riverview Drive:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Royal Pines Drive - PRP 47009:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Sand Hill Rd @ Baker Place:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Sand Hill Road @ Russell/Davenport:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>School Road @ Cranford Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Sheppard Drive:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Smokey Park Highway @ I-40:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Springside Road @ Overlook Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Starnes Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Stratford Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Stratford Road @ Oxford Court:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Sulphur Springs Road @ Covington Street:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

## Operational Impact Summary (continued)

PROJECT NAME	FY 21-22 thru					
	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Sutton Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Sweeten Creek @ Buck Shoals:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Sweeten Creek Road @ Busbee View:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Sweeten Creek @ Mills Gap:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Sweeten Creek Road @ Weston Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Upper Grassy Branch Road @ Maxwell Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>US 70 @ Jordan Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Venable Pump Station Elimination:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Walnut Street @ Rankin Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Waynesville Avenue @ Brownwood Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Wentworth Avenue:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>West Crabapple Lane:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-



## Operational Impact Summary (continued)

PROJECT NAME	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>GENERAL SEWER REHABILITATION (continued)</b>						
<b>Weston Road @ Tampa Blvd.:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>White Oak Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Wildwood Park:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Wood Avenue @ Parker Road:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>SSD Rehabilitation &amp; Replacement:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Surveys for Design:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Future Projects - General Rehabilitation:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>GENERAL SEWER REHABILITATION</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>PRIVATE SEWER REHABILITATION</b>						
<b>Douglas Place PSR:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Freno Drive PSR (Lower):</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Old County Home Rd PSR:</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>PRIVATE SEWER REHABILITATION</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

## Operational Impact Summary (continued)

PROJECT NAME	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>TREATMENT PLANT, PUMP STATIONS &amp; GENERAL CAPITAL IMPROVEMENTS</b>						
<b>Biological Treatment:</b> Impact to Operating Budget will be de minimis.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Building and Facility Rehabilitation:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>Carrier Bridge Pump Station Bypass &amp; Improvements:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>Flow Monitoring:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>Influent Pump Station Rehabilitation:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>Mountain View P.S. Standby Generator:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>Plant Headworks Improvements:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>Plant High Rate Primary Treatment:</b> Currently being studies. Impact to operating budget includes additional materials, energy, and disposal costs.	-	400,000	412,000	424,360	437,091	2,390,192
<b>RBC Replacement:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>South French Broad Carrier Bridge PER:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>General Capital Equipment:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>Mull Building Improvements:</b> Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
<b>TREATMENT PLANT, PUMP STATIONS &amp; GENERAL CAPITAL IMPROVEMENTS</b>	\$ -	\$ 400,000	\$ 412,000	\$ 424,360	\$ 437,091	\$ 2,390,192
<b>DESIGN, ROW, &amp; CONSTRUCTION MANAGEMENT EXPENSES</b>						
<b>Design, ROW, &amp; Const. Mgmt. Exp.:</b> No Impact to Operating Budget.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>DESIGN, ROW, &amp; CONSTRUCTION MANAGEMENT EXPENSES</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

## Operational Impact Summary (continued)

PROJECT CATEGORY	FY 16-17 BUDGET	FY 17-18 BUDGET	FY 18-19 BUDGET	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 thru FY 25-26 BUDGET
<b>OPERATIONAL IMPACT SUMMARY</b>						
Interceptor & Wet Weather Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General Sewer Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Private Sewer Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treatment Plant, Pump Station and General Capital Improvements	\$ -	\$ 400,000	\$ 412,000	\$ 424,360	\$ 437,091	\$ 2,390,192
Design, ROW, & Construction Management Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ -</b>	<b>\$ 400,000</b>	<b>\$ 412,000</b>	<b>\$ 424,360</b>	<b>\$ 437,091</b>	<b>\$ 2,390,192</b>

# 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
Aa1	AA+	AA+

In December 2015, the District received a ratings upgrade from Aa2 to Aa1 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.

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.

## Debt Financing (continued)

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 \$28 million in debt is anticipated to be issued in FY2019 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 FY14, the District issued \$26.2 million fixed rate revenue bonds. The District has expended the entire amount of proceeds from the aforementioned debt issuance. The District will accumulate funding from operations to finance a portion of the capital budget until the next debt issuance, anticipated to be in FY19.

As of June 30, 2016, the District will have \$95.3 million par value of outstanding revenue bond debt. During FY17, over \$5.3 million in principal will be repaid. The District anticipates issuing an additional \$28 million in revenue bonds in FY19. 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, 2016 and anticipated principal repayment during FY17 are on the following two (2) pages.



## Debt Financing (continued)

### Outstanding Debt as of June 30, 2016

	Original Issue Amount	Balance 6/30/2016	Additions	Retirements	Balance 6/30/2017
<b>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</b>					
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	\$468,000	\$ -	\$ 64,000	\$404,000
<b>Total Bonds, Enka Candler Series</b>	\$1,500,000	\$468,000	\$ -	\$ 64,000	\$404,000
<b>Revenue Bonds, Series 2008A issued to refund Series 2005 Revenue Bonds</b>					
Interest at variable rates in the weekly mode, payable monthly, due serially until 2031.	\$33,635,000	\$30,630,000	\$ -	\$825,000	\$29,805,000
<b>Total Bond, Series 2008A</b>	\$33,635,000	\$30,630,000	\$ -	\$825,000	\$29,805,000
<b>2009 North Carolina Water Pollution Control Revolving Fund used to construct certain sewerage projects</b>					
\$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	\$235,540	\$ -	\$16,825	\$218,715
<b>Total State Revolving Fund</b>	\$336,490	\$235,540	\$ -	\$16,825	\$218,715
<b>Revenue Bonds, Series 2009A issued to construct certain sewerage projects</b>					
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	\$5,295,000	\$ -	\$495,000	\$4,800,000
5.00% term bonds issued October 7, 2009, at 109.001%, due July 1, 2029; interest payable semi-annually.	\$4,065,000	\$4,065,000	\$ -	\$ -	\$4,065,000
5.00% term bonds issued October 7, 2009, at 107.240%, due July 1, 2034; interest payable semi-annually.	\$5,220,000	\$5,220,000	\$ -	\$ -	\$5,220,000
<b>Total Bond, Series 2009A</b>	\$17,205,000	\$14,580,000	\$ -	\$495,000	\$14,085,000

## Debt Financing (continued)

### Outstanding Debt as of June 30, 2016

	Original Issue Amount	Balance 6/30/2016	Additions	Retirements	Balance 6/30/2017
<b>Revenue Bonds, Series 2009B used to refund portions of Series 1999</b>					
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	\$1,845,000	\$ -	\$ -	\$1,845,000
<b>Total Bond, Series 2009B</b>	\$13,360,000	\$1,845,000	\$ -	\$ -	\$1,845,000
<b>Revenue Bonds, Series 2013 used to refund Series 2003 and Series 2008B</b>					
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	\$21,895,000	\$ -	\$3,210,000	\$18,685,000
<b>Total Bond, Series 2013</b>	\$30,230,000	\$21,895,000	\$ -	\$3,210,000	\$18,685,000
<b>Revenue Bonds, Series 2014 issued to construct certain sewerage projects</b>					
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	\$20,975,000	\$ -	\$665,000	\$20,310,000
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
<b>Total Bond, Series 2014</b>	\$26,195,000	\$25,660,000	\$ -	\$665,000	\$24,995,000
<b>Total Bonds—All Series</b>	\$96,266,490	\$95,313,540	\$ -	\$5,275,825	\$ 90,037,715



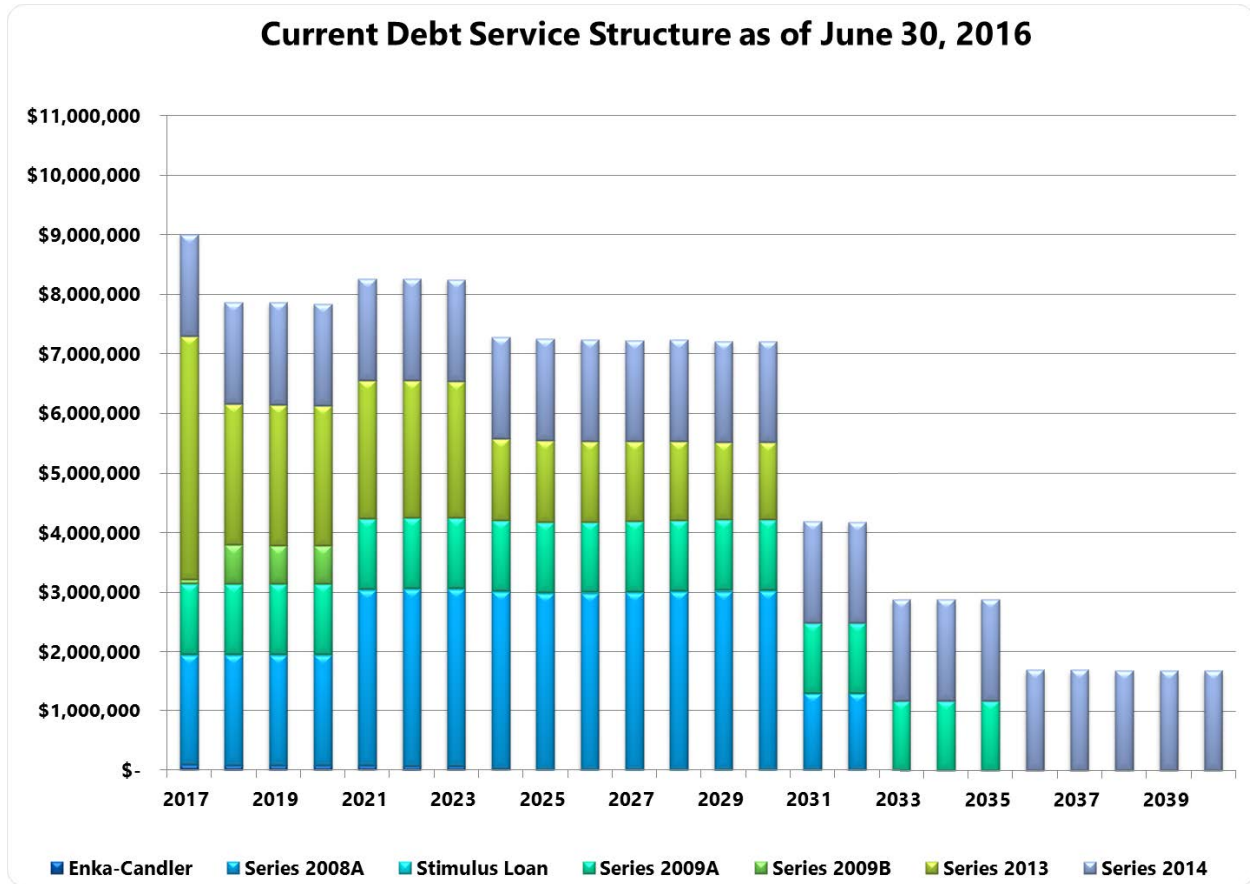
## Aggregate Debt Service

Year Ending June 30	Enka-Candler Bonds	Series 2008A Refunding	Series 2009A	Series 2009B Refunding
2017	87,400	1,857,849	1,180,900	73,800
2018	84,200	1,858,620	1,180,700	656,900
2019	81,000	1,859,120	1,179,700	652,700
2020	77,800	1,863,272	1,182,800	647,700
2021	74,600	2,967,245	1,180,000	-
2022	71,400	2,979,356	1,183,150	-
2023	68,200	2,979,445	1,180,200	-
2024	21,000	2,986,599	1,180,875	-
2025	-	2,986,194	1,181,750	-
2026	-	2,987,324	1,180,875	-
2027	-	3,000,803	1,178,250	-
2028	-	3,010,738	1,178,750	-
2029	-	3,017,451	1,182,125	-
2030	-	3,025,226	1,178,375	-
2031	-	1,304,929	1,182,375	-
2032	-	1,306,777	1,179,000	-
2033	-	-	1,178,250	-
2034	-	-	1,179,875	-
2035	-	-	1,178,750	-
2036	-	-	-	-
2037	-	-	-	-
2038	-	-	-	-
2039	-	-	-	-
2040	-	-	-	-
	565,600	39,990,947	22,426,700	2,031,100

## Aggregate Debt Service (continued)

Year Ending June 30	North Carolina Water Pollution Control Revolving Fund	Series 2013 Refunding	Series 2014	Aggregate Debt Service
2017	16,825	4,079,194	1,710,850	9,006,817
2018	16,825	2,368,094	1,707,175	7,872,513
2019	16,825	2,363,094	1,709,175	7,861,613
2020	16,825	2,350,794	1,705,075	7,844,265
2021	16,825	2,322,594	1,701,025	8,262,289
2022	16,825	2,302,844	1,709,625	8,263,199
2023	16,825	2,298,219	1,705,775	8,248,663
2024	16,825	1,377,719	1,706,675	7,289,693
2025	16,825	1,363,469	1,708,025	7,256,262
2026	16,825	1,352,944	1,703,275	7,241,242
2027	16,825	1,341,444	1,695,775	7,233,096
2028	16,825	1,323,644	1,706,625	7,236,581
2029	16,825	1,304,644	1,695,475	7,216,520
2030	16,825	1,294,922	1,697,675	7,213,022
2031	-	-	1,698,175	4,185,479
2032	-	-	1,696,875	4,182,652
2033	-	-	1,698,675	2,876,925
2034	-	-	1,693,575	2,873,450
2035	-	-	1,698,138	2,876,888
2036	-	-	1,697,325	1,697,325
2037	-	-	1,692,850	1,692,850
2038	-	-	1,682,125	1,682,125
2039	-	-	1,681,000	1,681,000
2040	-	-	1,681,000	1,681,000
	<b>235,543</b>	<b>27,443,616</b>	<b>40,781,963</b>	<b>133,475,469</b>

## Aggregate Debt Service (continued)



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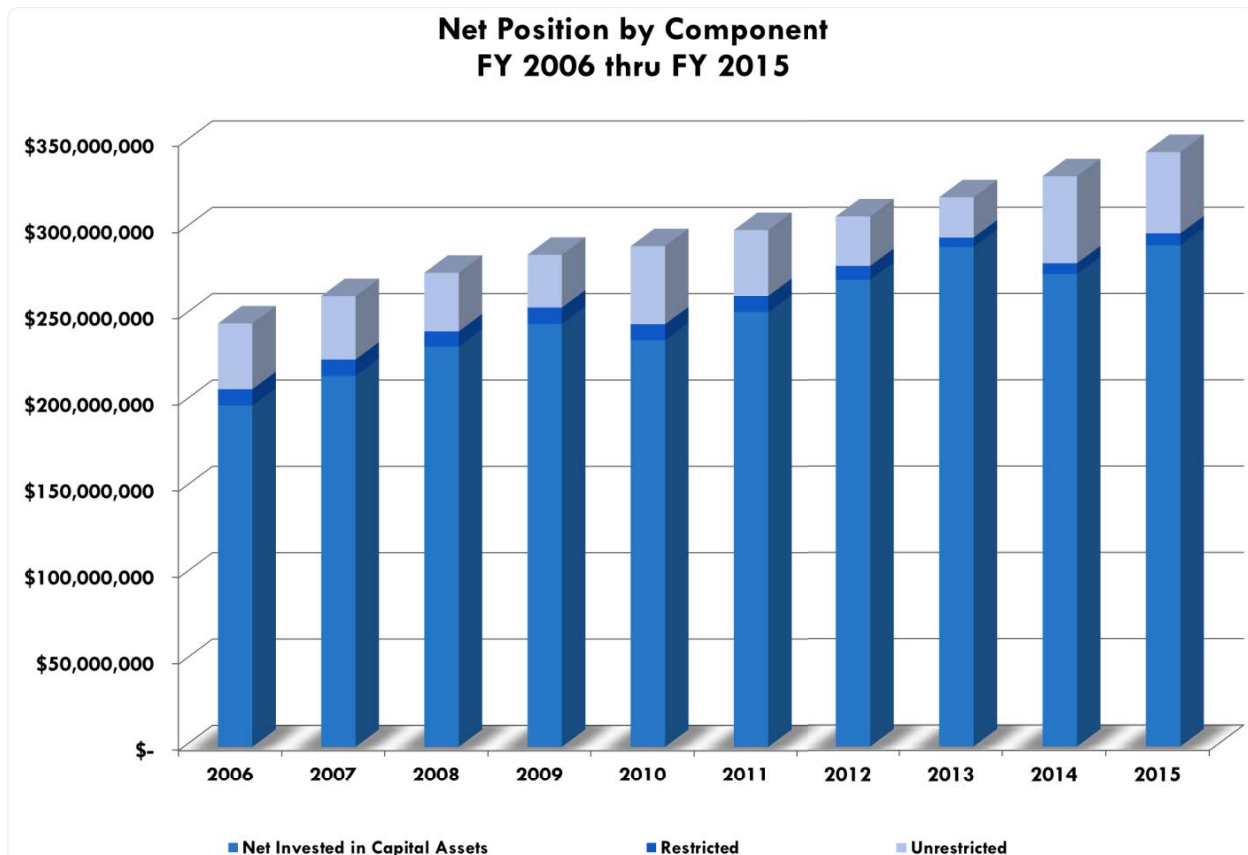
# Statistical Information



## Net Position by Component

FY2006 to FY2015

Fiscal Year Ended June 30	Net Invested in Capital Assets	Restricted	Unrestricted	Total Net Position
2006	\$ 197,656,088	\$ 9,446,269	\$ 38,041,095	\$ 245,143,452
2007	214,808,683	9,447,494	36,699,672	260,955,849
2008	231,678,011	8,886,108	33,968,233	274,532,352
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

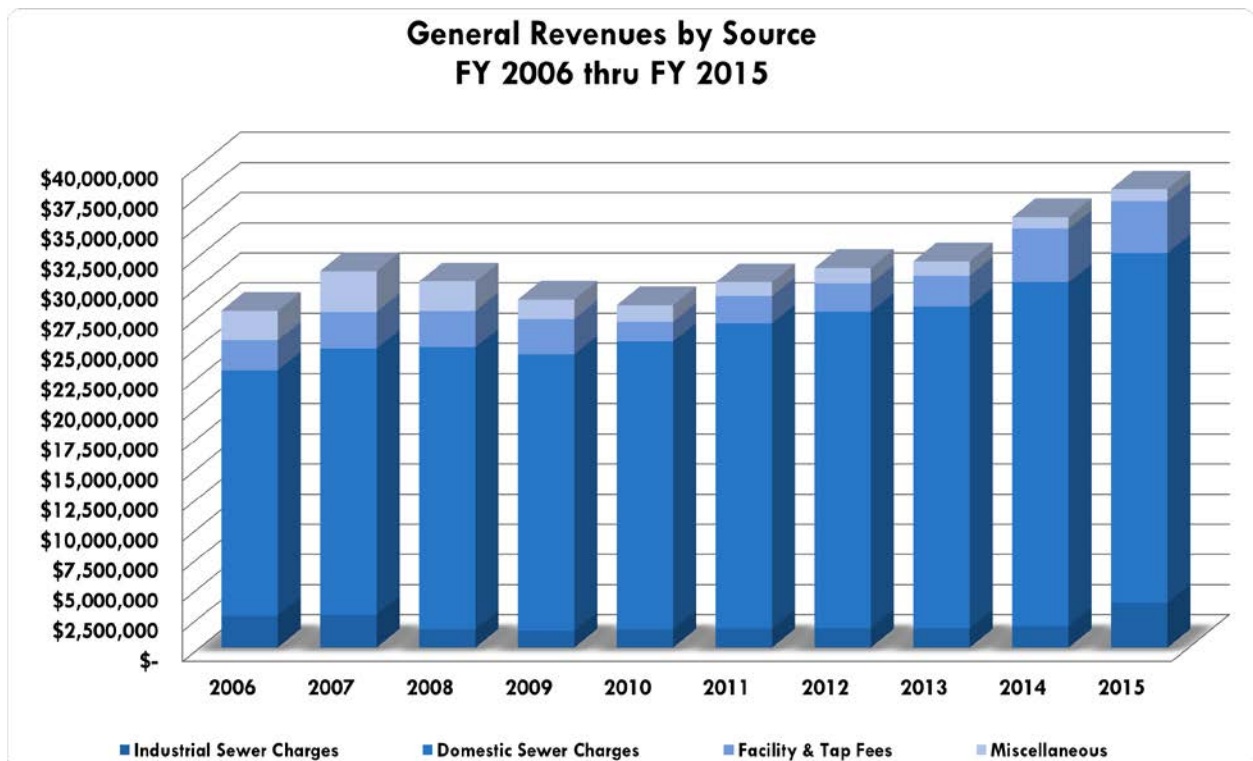


## General Revenues by Source

FY2006 to FY2015

Fiscal Year Ended June 30	Industrial Sewer Charges	Domestic Sewer Charges	Facility & Tap Fees	Miscellaneous	Total
2006	2,617,298	20,363,671	2,481,850	2,447,394	27,910,213
2007	2,693,328	22,077,774	3,054,950	3,384,897	31,210,949
2008	1,510,669	23,385,025	3,005,184	2,444,885	30,345,763
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

**Note:** Does not include Capital Contributions

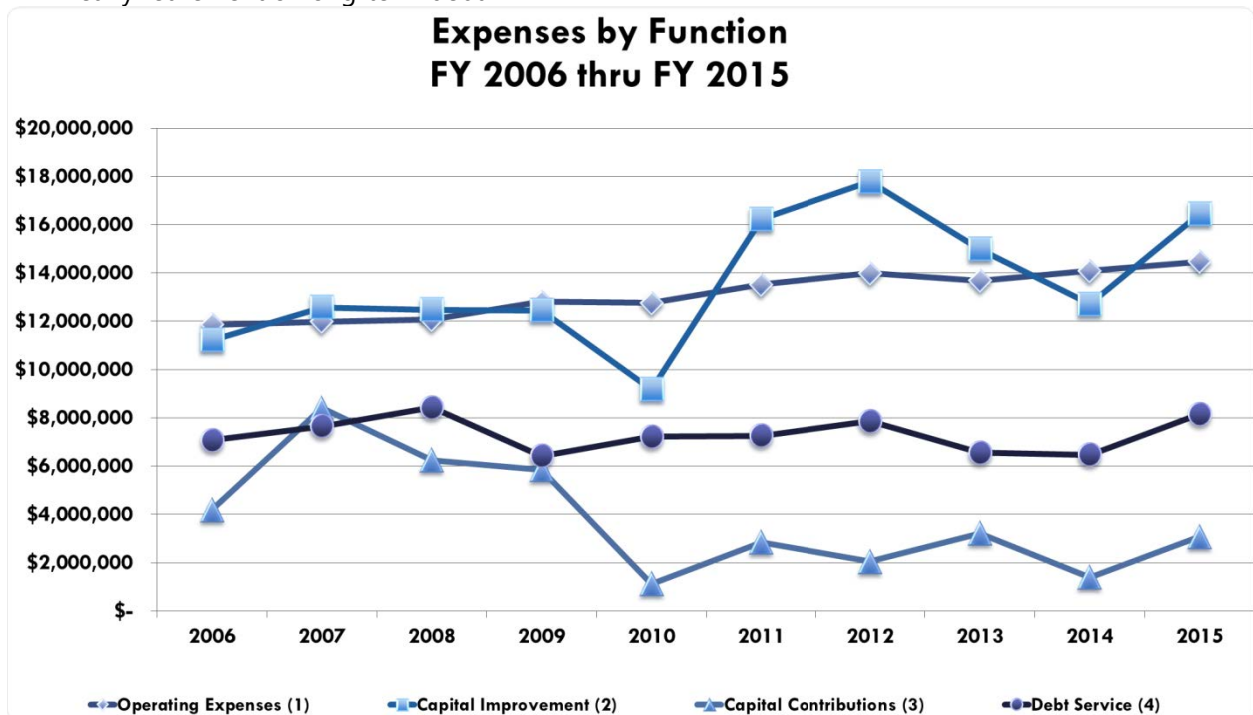


**Expenses by Function** (Non-GAAP)**FY2006 to FY2015**

Fiscal Year Ended June 30	Operating Expenses <sup>(1)</sup>	Capital Improvement <sup>(2)</sup>	Capital Contributions <sup>(3)</sup>	Debt Service <sup>(4)</sup>	Total
2006	11,853,663	11,213,052	4,184,135	7,071,308	34,322,158
2007	11,977,241	12,574,902	8,404,343	7,650,737	40,607,223
2008	12,070,195	12,471,794	6,244,304	8,419,405	39,205,698
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

**Note:**

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





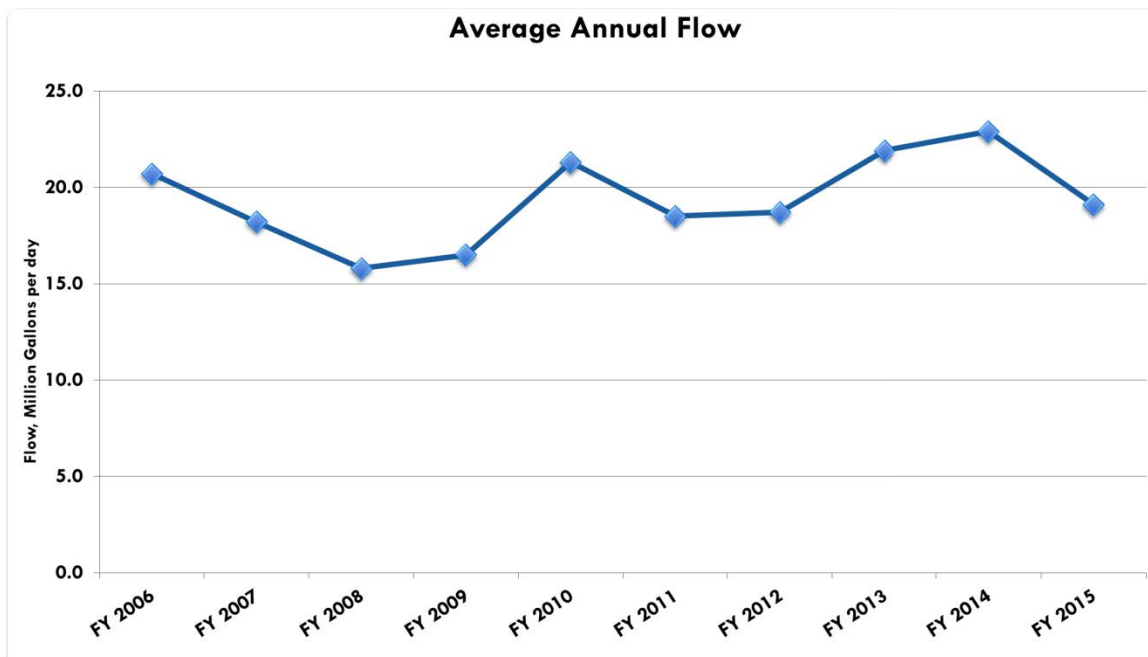
## Wastewater Flow Table

FY2006 to FY2015

Fiscal Year Ended June 30	ADF (A) (mgd)	Total Operating Expenses (B)
2006	20.7	11,853,663
2007	18.2	11,977,241
2008	15.8	12,070,195
2009	16.5	12,808,349
2010	21.3	12,754,727
2011	18.5	13,522,468
2012	18.1	13,982,269
2013	21.9	13,674,518
2014	22.9	14,081,697
2015	19.1	14,468,184

**A.** ADF=Average Daily Flow

**B.** Includes Collection System Operations and Administrative Expenses in addition to Wastewater Treatment Expenses but excludes depreciation



## 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	68,555	1,434	7,499	884	2,474	3,169	206,330
2010	74,140	1,522	7,646	774	2,894	3,395	233,932

## Demographic &amp; Economic Statistics

FY2006 to FY2015

	Population Estimates <sup>1</sup>	Per Capita Income <sup>2</sup>	Median Age <sup>1</sup>	Civilian Labor Force <sup>3</sup>		
				Employed	Unemployed	Unemployment Rate
2006	226,524	33,252	40.4	114,609	4,733	4.0%
2007	230,766	34,586	40.5	117,069	4,476	3.7%
2008	233,772	34,846	40.7	117,933	5,664	4.6%
2009	236,349	33,762	40.8	111,852	10,675	8.7%
2010	238,857	33,973	40.7	114,170	10,716	8.6%
2011	243,641	35,106	40.9	115,557	10,299	8.2%
2012	245,319	37,363	41.2	118,283	9,590	7.5%
2013	248,757	37,443	41.4	121,178	8,171	6.3%
2014	251,271	Unavailable	41.6	121,639	5,999	4.7%
2015	254,339	Unavailable	41.8	124,592	6,162	4.7%

**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.

**Sources:** <sup>1</sup> North Carolina Office of State Budget and Management  
<sup>2</sup> U.S. Department of Commerce, Bureau of Economic Analysis  
<sup>3</sup> North Carolina Department of Commerce, Division of Employment Security

## Principal Commercial Users

FY2006 to FY2015

Commercial User	Type of Business	2006			2015		
		Total Charges	Rank	Percentage of Total Charges	Total Charges	Rank	Percentage of Total Charges
Charah	Ash Management Company	\$ -	-	0.00%	\$ 1,385,720	1	4.58%
Milkco, Inc.	Dairy Products & Juices	423,150	3	1.91	554,939	2	1.83
Mission Health System	Health & Emergency Services	160,582	5	0.72	306,754	3	1.01
Ridgecrest Baptist Conference Center	Christian Conference Center	290,146	4	1.31	200,680	4	0.66
Sierra Nevada	Micro-Brewery Manufacturer	-	-	-	179,131	5	0.59
Givens Estates	Retirement Community	-	-	-	150,912	6	0.50
BONAR - (formerly Colbond)	Chemical Manufacturer	110,286	7	0.50	133,469	7	0.44
Jacob Holm Industries America	Textile Manufacturing	-	-	-	127,915	8	0.42
VA Medical Center - Asheville Department of Veterans Affairs	Veterans Hospital	97,547	8	0.44	126,174	9	0.42
Blue Ridge Metals	Wire Processing/Cold Formed Facility	-	-	-	93,027	10	0.31
BASF	Textile Manufacturing	535,967	2	2.42	-	-	-
Anvil Kintwear - (formerly Asheville Dyeing & Finishing)	Textile Manufacturing	752,858	1	3.40	-	-	-
Spring Global - (formerly Owen Manufacturing Company, Inc.)	Textile Manufacturing	139,404	6	0.63	-	-	-
Day International	Textile Machine Parts	78,835	9	0.36	-	-	-
The Biltmore Company	Tourist Attraction/Winery/Resort Services	76,527	10	0.35	-	-	-
<b>TOTAL</b>		<b>\$ 2,665,302</b>		<b>12.02%</b>	<b>\$ 3,258,721</b>		<b>10.76%</b>

## Principal Employers

FY2006 to FY2015

Employer	FY 2006			FY 2015		
	Employees*	Rank	% of Total County Employment	Employees	Rank	% of Total County Employment
Mission Health System & Hospitals	3,000-10,000	1	5.65%	6,994	1	5.75%
Buncombe County Public Schools	3,000-10,000	2	5.65%	4,000	2	3.29%
The Biltmore Company	1,000-3,000	7	1.74%	1,770	3	1.46%
VA Medical Center - Asheville	1,000-3,000	6	1.74%	1,593	4	1.31%
Buncombe County Government	1,000-3,000	4	1.74%	1,369	5	1.13%
Ingles Markets, Inc.	1,000-3,000	3	1.74%	1,137	6	0.93%
Omni Grove Park Inn	750-1,000	9	0.76%	1,100	7	0.90%
Asheville-Buncombe Technical Community College	750-1,000	10	0.76%	1,019	8	0.84%
City of Asheville	1,000-3,000	5	1.74%	1,000	9	0.82%
Eaton Corporation - Electrical Division	-	-	-	750	10	0.62%
Community Care Partners	1,000-3,000	8	1.74%	-	-	-
<b>Total for Principal Employers</b>	<b>13,500-40,000</b>		<b>23.26%</b>	<b>20,732</b>		<b>17.04%</b>

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

**Source:** Asheville Area Chamber of Commerce, Economic Development Department  
North Carolina Employment Security Commission

# Appendix



## Classification of Accounts

**51100-Salaries & Wages**—This includes salaries & wages for 148 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 7.25% of gross salaries and wages to the North Carolina Local Government Employees' Retirement System. The employees contribute an additional 6.00% through payroll deduction, but the employee portion is not budgeted, as it is not an expense of the District.

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

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

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

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

**51360-State Unemployment Benefits**—Beginning FY14, the District is being 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) will calculate 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.

**51450-Automobile Allowance**—The District has authorized certain management personnel to receive an automobile allowance for the use of their personal vehicle in conducting District business.



## Classification of Accounts (continued)

**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, operators 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.

**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.



## Classification of Accounts (continued)

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

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

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

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

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

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

**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 and landscaping supplies, and elevator inspections.

## Classification of Accounts (continued)

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

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

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

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

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

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

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

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

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

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

## Classification of Accounts (continued)

**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.

**52720-Health Fair**—This includes costs for physical examinations and lab work, facility rental, refreshments, and supplies for annual employees' health fair.

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

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

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

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

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

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

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

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

## Classification of Accounts (continued)

**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.

## Job Classification by Grade Order (effective July 1, 2016)

Grade	Annual Salary Range - July 1, 2016			Title
	Minimum	Mid-Point	Maximum	
5	\$ 26,157	\$ 33,710	\$ 41,263	Construction Worker I
				Technical Services Worker I
8	28,168	36,302	44,436	Public Relations Representative
9	28,871	37,209	45,547	Construction Crew Worker II
				Technical Services Worker II
11	30,789	39,321	47,853	Construction Worker III
				Technical Services Worker III
12	33,804	41,427	49,050	Construction Operator I
				Dispatcher II
				Heavy Equipment Excavator I
				Office Assistant II
				Technical Services Operator I
14	35,514	43,524	51,534	Construction Administrative Assistant
				Construction Operator II
				Right of Way Administrative Assistant
				Technical Services Operator II
15	36,403	44,612	52,822	Accounting Technician I
				Heavy Equipment Excavator II
				Purchasing Agent I
16	37,314	45,727	54,140	Accounting Technician II
				Electrician II
				Mechanic II
				System Coordinator III
				Technical Services Operator III
17	38,246	46,870	55,493	Purchasing Agent II
18	39,203	48,043	56,882	Executive Secretary/GM & Board
19	40,183	49,243	58,304	Engineering Technician I
				Senior Electrician
				Senior Mechanic
				Technical Services Data Manager
20	41,187	50,475	59,763	Environmental, Health & Safety Technician
				Fleet Mechanic III

**Job Classification by Grade Order** (effective July 1, 2016) (continued)

Grade	Annual Salary Range - July 1, 2016			Title
	Minimum	Mid-Point	Maximum	
20	41,187	50,475	59,763	WWTP Office Manager
				WWTP Operator
21	42,216	51,737	61,258	First Responder
				Industrial Waste Chemist
22	43,271	53,030	62,789	Construction Crew Leader
				Electrical IV/Specialist
				Engineering Technician II
				IT Technician I
				Lead Operator
				Mechanical Specialist
23	44,357	54,359	64,361	Budget Analyst I
24	45,463	55,716	65,969	Construction Inspector III
				GIS Technician II
				Purchasing Supervisor
25	46,600	57,110	67,619	Construction & Repair Supervisor
				Electrical Maintenance Crew Leader
				IT Systems Administrator II
				Mechanical Maintenance Crew Leader
				Night Supervisor
				Payroll/Benefits Manager
				Pump Station Maintenance Crew Leader
				Senior Crew Leader
				SSD Administrator
26	47,767	58,539	69,311	SS Maintenance Supervisor
				Construction Inspector IV
27	48,961	60,001	71,041	Maintenance Coordinator
28	50,183	61,501	72,819	HR Programs Manager
				Industrial Pretreatment Coordinator
				Right of Way Agent
29	51,437	63,038	74,638	Database Analyst
				Environmental, Health & Safety Manager
				GIS Analyst
				SCADA/PLC Technician

2017 Budget Document

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# Glossary



## Glossary of Terms

**Accrual Basis of Accounting**—Method of accounting where revenues are recognized as soon as they are earned and expenses as soon as the liability is incurred. Used most frequently 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.

**Allocate**—To divide a lump-sum appropriation into parts, which are designated for expenditure by specific organization units and/or specific purposes, activities, or objects.

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

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

**Appropriation**—The authority to spend and obligate a specified amount from a designated fund account for a specific project, purpose, or program.

**Asset**—An asset is any property with a cash value, such as real estate, equipment, savings, and investments.

**Audit**—A methodical examination of utilization of resources. It concludes in a written report of its findings. An audit is a test of management's accounting system to determine the extent to which internal accounting controls are both available and being used.

**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 utilizes 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 Aa2 by Moody's and AA+ by Standard and 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 Amendment**—Legal means by which an adopted expenditure authorization or limit is increased and could be authorized with a publication, a hearing or a re-certification of the budget.

**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 and final budgets to the District Board of Directors.

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

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

## Glossary of Terms (continued)

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

**Capital Expenditure**—An amount paid out that creates a benefit in more than one year, usually costs that are incurred in the acquisition or improvement of real or personal property.

Capital expenditure includes both the cost of the asset itself as well as expenditures necessary to put it in place. Capital expenditure for equipment, for example, means the net invoice price of the equipment including the cost of any modifications, attachments and accessories or auxiliary apparatus necessary to make it usable for the purposes for which it is acquired. Ancillary charges such as taxes, duty, and protective in transit insurance, freight, and installation are also included in the total purchase price.

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

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

**Cash Basis of Accounting**—Under cash basis, all transactions is recognized when cash is received or expended. 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.

**Contingency**—A budgetary reserve amount established for emergencies or unforeseen expenditures not otherwise known at the time the budget is adopted.

## Glossary of Terms (continued)

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

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

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

**Department**—A management unit. The District's Departments include Office of the General Manager, Human Resources, Finance, Information Technology, Engineering, SS Maintenance, and SS Construction. The Departments report directly to the General Manager. The District's structure at the Department level is presented in the organizational charts.

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

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

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

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

**Efficiency**—A ratio between input (resources) and output (production). High efficiency generally means increased or maximum output in relation to input (cost or hours); or it can mean maintained output at a reduced cost or time period.

**Effectiveness**—The extent to which the outcome of an action or set of actions produces the desired results or impact.



## Glossary of Terms (continued)

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

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

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

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

**Expenses**—Outflows or other using up of assets or incurrences of liabilities (or a combination of both) from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity's ongoing major or central operations.

**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, 2016, began on July 1, 2016, and will continue until June 30, 2017.

**Fixed Assets**—Assets of long-term character, intended to continue to be held or used, such as land, buildings, machinery, and other equipment.

## Glossary of Terms (continued)

**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.

**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.

## Glossary of Terms (continued)

**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 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.

**Mission**—The mission statement is a brief summary of why a Program exists and what it is trying to achieve. It tells what the Department does, who they do it for, and why. The statement is specific enough to describe the Program's purpose but general enough to last into the future.

**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.



## Glossary of Terms (continued)

**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.

**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, materials, 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.

**Performance Indicators**—Specific, observable, and measurable characteristics or changes that show the progress a program or service is making toward achieving a specified goal.

**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.

## Glossary of Terms (continued)

**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.

**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 a MSD line for wastewater treatment and discharge by MSD. The State requires reporting for all satellite systems with a flow over 200,000 gallons per day. MSD has one reportable satellite system.

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

## Glossary of Terms (continued)

**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.

**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.