Adopted Budget for Fiscal Year 2017-2018

James R. Flechtner, PE
Executive Director

John B. McLean, CPA
Chief Financial Officer

235 Government Center Drive
Wilmington, NC 28403

On the Cover:

Top left: CFPUA portable water station, available for public events. Bottom left: CFPUA work in the laboratory. Right: Sewer line cleaning.

CAPE FEAR PUBLIC UTILITY AUTHORITY
ADOPTED BUDGET

FISCAL YEAR 2017 - 2018

Board Members

James R. Flechtner, PE, Executive Director
John McLean, CPA, Chief Financial Officer

235 Government Center Drive
Wilmington, NC 28403
www.cfpua.org

Mike Brown
Chair

Jennifer Adams
Vice Chair

Larry Sneeden
Secretary

William A. Norris
Treasurer

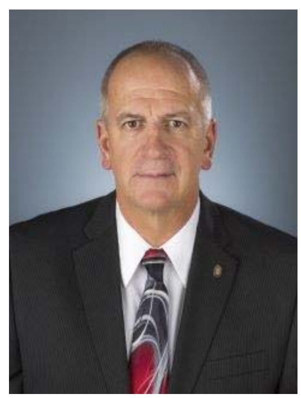
Cape Fear Public Utility Authority Board Members

Pat Kusek
Commissioner

Kevin O'Grady
Councilman

Charles Davis, Jr.
Member

Charles Rivenbark
Councilman



Wesley P. Corder
Member

Cindee Wolf
Member

Skip Watkins
Commissioner

Other Principal Officials

James R. Flechtner, PE
Executive Director

John B. McLean, CPA
Chief Financial Officer

GOVERNMENT FINANCE OFFICERS ASSOCIATION

Distinguished Budget Presentation Award

PRESENTED TO

Cape Fear Public Utility Authority

North Carolina

For the Fiscal Year Beginning

July 1, 2016

Jeffrey R. Esser

Executive Director

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BUDGET GUIDE

This document contains Cape Fear Public Utility Authority's Fiscal Year 2017-2018 Budget, which is the financial plan that will guide the Authority's operations over the year.

The budget document is divided into the following sections:

Introduction – This section begins with the Executive Director's Budget Message which explains the major goals and challenges, major changes in financial policies, important features of the activities incorporated into the budget, and the reasons for changes in appropriation levels. Next, information is presented to help stakeholders understand some of the environmental, organizational, and policy factors that drive the development of the Authority's budget including the Strategic Plan, organizational profile and structure, financial structure, a description of the Authority's budget process, budget calendar, and key financial policies.

Operating Budget – The Operating Budget section provides a detailed picture of the Authority's FY 2017-2018 annual operating budget including information on total budgeted expenditures, revenues, and net position.

Departmental Summaries – This section presents information for each of the Authority's departments including departmental descriptions, comparative budgetary schedules, significant accomplishments achieved in the current budget year, and goals for the upcoming budget year.

Capital Budget – This section details the Authority's FY 2017-2018 capital budget and the approach to funding the capital program. Detailed project descriptions are included for each of the projects appropriated as part of the FY 2017-2018 Capital Improvements Program, including an infrastructure risk assessment before and after project completion to demonstrate the value of each project from a risk mitigation perspective.

Long-term Financial Management – Because the Authority's operating and capital activities are budgeted separately using differing perspectives (single fiscal year versus project life), it can be difficult for stakeholders to determine Authority-wide financial operations from budgetary information alone. Projecting financial results and monitoring key financial metrics over multiple years allows the Authority to take proactive measures to ensure the continuance of high-quality water and wastewater services. This section provides a big picture, entity-wide, multi-year view of the Authority's finances including operating and capital expenditures, debt, liquidity, and rate affordability.

Supplemental & Statistical Information – This section provides stakeholders with statistical and background information that may serve as context to supplement the budgetary and financial information contained in this document.

BUDGET MESSAGE

June 14, 2017

Members of the Authority Board
Cape Fear Public Utility Authority
235 Government Center Drive
Wilmington, NC 28403

Dear Members of the Authority Board:

I am pleased to present the Authority's Fiscal Year 2017-2018 budget as adopted June 14, 2017. This budget was prepared in accordance with the Local Government Budget and Fiscal Control Act, and is designed to provide services meeting or exceeding all applicable state regulations and rate covenants. This budget contains the necessary projects and operational funding to ensure that we continue providing the highest quality water and wastewater services to our customers at the lowest practical cost.

As we enter our tenth year of serving nearly 200,000 people in the City of Wilmington and New Hanover County, we continue to successfully operate under our guiding principles of Stewardship, Sustainability, and Service. These tenets provide a strong base upon which we have built award-winning services. At the same time, they drive the Authority to continually increase the value of the services we offer.

Given the complex issues facing water and sewer providers, I am confident this budget continues the Authority in the right direction. It addresses a broad spectrum of important topics such as public health, environmental stewardship, customer service, staff development, risk management and emergency preparedness to name a few. With the Authority's human and financial resources focused in the right areas, we will remain ready to meet the needs of our community.

We are pleased to report that deliberate investment in infrastructure and operations is consistently paying dividends, improving our resiliency and enhancing our services while reducing risk. The primary components of this budget include projects identified in the ten-year Capital Improvements Program (CIP), forecasted water and wastewater demands, projected operating costs required to sustain service levels, and debt obligations. With continued input from you and key stakeholders, our budgets will accurately assess and meet community needs, both now and into the future.

Implementing key financial policies that will guide future decisions to ensure that the Authority continues its strong financial position over the long-term has recently been a primary focus. The Board adopted policies regarding liquidity and cash reserves and debt management. These newly adopted policies provide for a periodic, risk-based determination of the appropriate amount of cash reserves. During this analysis, the Authority determined that fund balance is available to be used to fund the Authority's capital program. In addition, the Board adopted a policy that provides general criteria that indicate which projects are optimal candidates for debt funding. These policies also provide for an explicit debt limit expressed in terms of the debt-to-capitalization ratio. The debt limit was based on the Authority's desired level of debt service coverage and its expectation of borrowing costs over the long-term. These policies have major implications on the operating and capital budgets and how capital costs are funded.

The policy debt limit implies that the normal, recurring level of annual capital expenditures will be funded through current year water and wastewater rate revenue collections. Increases to water and wastewater rates will be necessary to achieve this funding level. The Authority's long-term financial plans include gradual rate increases over a six-year timeframe to transition to where normal, recurring capital expenditures are fully funded through rates. During this transition period, available fund balance identified pursuant to the Authority's liquidity and cash reserve policy will be used to supplement rate revenues as a capital funding source. The rates incorporated in the FY17-18 budget include an increase for both water and wastewater service that equates to an additional $2.58 per bi-monthly bill for the average residential water and wastewater customer.

OPERATING BUDGET

The total adopted Fiscal Year 2017-2018 operating budget is approximately $79.5 million. As a foundation for the FY 17-18 budget process, key goals and assumptions are identified and highlighted below:

- Fiscal Year 2017-2018 budgeted operating expenditures (excluding salaries and benefits, contingency, and debt service appropriations) are based on known costs or projections of likely costs derived from historical data adjusted for current expectations.

- Budgeted salaries include three new positions, several reclassifications, the implementation of Phase II of the most recent classification and compensation study, 1% cost-of-living adjustment, and 3% merit increases.

- Benefits were budgeted with a composite 4% and 10% increase to health and dental premiums, respectively, effective January 1, 2018 and an increase in the Local Government Employee Retirement System employer contribution rate from 7.25% to 7.5% of covered payroll.

- The contingency appropriation is based on the usage of contingency appropriations in prior years. In developing the contingency appropriation, consideration was also given to the other elements of the Authority's risk management program including cash reserves, asset management/rehabilitation efforts incorporated in the Authority's Capital Improvement Program, and insurance coverages.

- Transfers to the capital projects funds are approximately $14.9 million, an increase of $4.3 million from the FY 16-17 adopted budget. The increase in budgeted transfers is a deliberate decision made to transition to where normal, recurring annual capital expenditures are fully funded though rates pursuant to the Authority's debt management policy.

- Debt service (principal, interest, fees & issuance costs) is estimated at $24.3 million. Scheduled principal and interest payments on existing debt are substantially unchanged from the prior year. However, issuance costs aren't budgeted for FY 17-18 due to recently adopted financial policies limiting the amount of debt issuance, which has resulted in a decrease in budgeted debt service from the prior year of approximately $657,000.

CAPITAL BUDGET

The total of the 10-Year Capital Improvements Program (CIP) is $395.8 million. New projects appropriated in FY 17-18 total $45.5 million with most of the budgeted expenditures programmed to rehabilitate or replace existing infrastructure as part of asset management and addressing aging infrastructure.

The 10-Year CIP plan is reevaluated each year and provides opportunities to revisit the priorities and progress of these criteria. All projects were evaluated by preparing initial business cases. This process reviewed the best information available to identify project alternatives, pros and cons for each alternative, and planning level cost comparisons.

The initial business cases assess current risk and the risk reduction achieved by various project alternatives, in terms of:

- Consequence of failure
- Likelihood of failure

All projects were also evaluated on one or more of the following criteria:

- Compliance with regulatory requirements.
- Efficiency leading to future operating or capital savings.
- Capacity increases necessary for current of future flows.
- Growth in the number of customers served.

Capital expenditures during FY 17-18 are projected to be approximately $42.1 million. These expenditures are projected to be funded as follows:

- $2.2 million in funding from Connect NC grants
- $0.3 million in Clean Water State Revolving Loan Funds
- $14.9 million in transfers from the operating fund; and
- $24.7 million of available fund balance

AWARDS

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to the Authority for its annual budget for the fiscal year beginning July 1, 2016. The Authority has received this prestigious award for five years. In order to receive this award, a governmental unit must publish a budget document that meets criteria as a policy document, as an operations guide, as a financial plan and as a communications device. We believe our FY 17-18 budget continues to conform to program requirements, and we are submitting it to GFOA to determine eligibility for another award.

This budget represents the combined efforts, experience, and expertise of the Authority Board, its Committees, and staff. This important work allows Cape Fear Public Utility Authority to meet the short and long-term needs of the customers we serve. A clear and transparent track record of responsibly employing our funding to the betterment of our customers and community has been established, and I am confident we will continue on this path in FY 17-18.

Respectfully submitted,

James R. Flechtner, P.E.
Executive Director

CAPE FEAR PUBLIC UTILITY AUTHORITY PROFILE

The Authority

Cape Fear Public Utility Authority was created in 2007 pursuant to Chapter 162A of the North Carolina General Statutes, by the governing bodies of New Hanover County (County) and the City of Wilmington (City), for the purpose of providing water and wastewater services to residents of the County. The Authority is authorized to, among other things, 1) set rates, fees and charges, 2) issue revenue bonds to pay the cost of maintaining the water and wastewater systems, and 3) maintain and operate the water and wastewater systems within its service area. The Authority Board consists of eleven members who hold office for staggered terms. Five members are appointed by the County, five members are appointed by the City, and the eleventh member is jointly appointed by the County and the City. The five appointed members from each governing body include two current members from those respective governing bodies. All members must be residents of the County.

Profile of the Service Area

The Authority's service area covers the incorporated area of the City and most of the unincorporated areas of the County. The service area does not include the towns of Carolina Beach, Kure Beach and Wrightsville Beach. However, wastewater flows from the Town of Wrightsville Beach and a portion of Pender County are treated by the Authority.

The County was formed in 1729 as New Hanover Precinct of Bath County, from Craven Precinct. It was named for the House of Hanover, which was then ruling Great Britain. In 1734, parts of New Hanover Precinct became Bladen Precinct and Onslow Precinct. With the abolition of Bath County in 1739, all its constituent precincts became counties. When New Hanover County was originally established, it encompassed the current counties of Bladen, Onslow, Duplin, Brunswick and Pender. From 1734 through 1764, New Hanover County's land was divided to create Bladen, Onslow, Duplin and Brunswick counties. The last division occurred in 1875 to form Pender County. The County has retained the same boundaries since 1875. According to the U.S. Census Bureau, the county has a total area of 328 square miles (849 km^2), of which, 199 square miles is land and 129 square miles is water. Of all 100 counties in North Carolina, only Chowan County is smaller.[1]

The City of Wilmington is a coastal town situated in southeastern North Carolina. Known as the Port City, Wilmington is bordered by the Cape Fear River to the west and the Atlantic Ocean to the east. Wilmington was named in honor of Spencer Compton, the Earl of Wilmington, who was Prime Minister under George II. Incorporated in 1739, Wilmington became a city in 1866. In 1840 it was the largest town in the state and remained so through the early 1900s, thanks to the thriving ports along the Cape Fear River and the arrival of the Wilmington & Raleigh Railroad (renamed the Wilmington & Weldon Railroad in 1854). When the railroad was completed in 1840, it was the largest continuous railroad track in the world.

The Port City is home to the WWII Battleship USS North Carolina (BB-55), the site of the commissioning of the Virginia Class USS North Carolina (777) submarine in May 2008, and the site of the missile-guided destroyer USS Gravely in November 2010.

[1] *From Wikipedia*

Relevant Landmarks

Thalian Hall

New Hanover County Courthouse

W. Allen Cobb Judicial Annex

Bellamy Mansion

Wilmington International Airport

Serving southeast North Carolina, the Wilmington International Airport (ILM) provides flight options through Delta Airlines and American Airlines/US Airways. ILM offers many non-stop flights to popular destinations within the United States including Atlanta, Charlotte, New York City, Philadelphia and Washington DC. Serving over 3/4 million passengers per year, ILM prides itself on its convenient flight options, ease of use, and extremely friendly staff.

The University of North Carolina Wilmington

The University of North Carolina Wilmington, the state's coastal university, is dedicated to the integration of teaching and mentoring with research and service. Their commitment to student engagement, creative inquiry, critical thinking, thoughtful expression and responsible citizenship is expressed in their baccalaureate and master's programs, as well as doctoral programs in areas of expertise that serve state needs. Their culture reflects their values of diversity and globalization, ethics and integrity, and excellence and innovation. UNCW has a vision to be recognized for excellence in everything they do, a global mindset and community engagement. Their values include excellence, diversity, student-centered focus, community engagement, integrity and innovation.

UNCW has an annual budget of $285 million. Their current enrollment totals 13,261 undergraduate students and 1,708 graduate students. UNCW's faculty and staff includes 612 full-time faculty, 273 part-time faculty and 1,250 staff members.

Cape Fear Community College

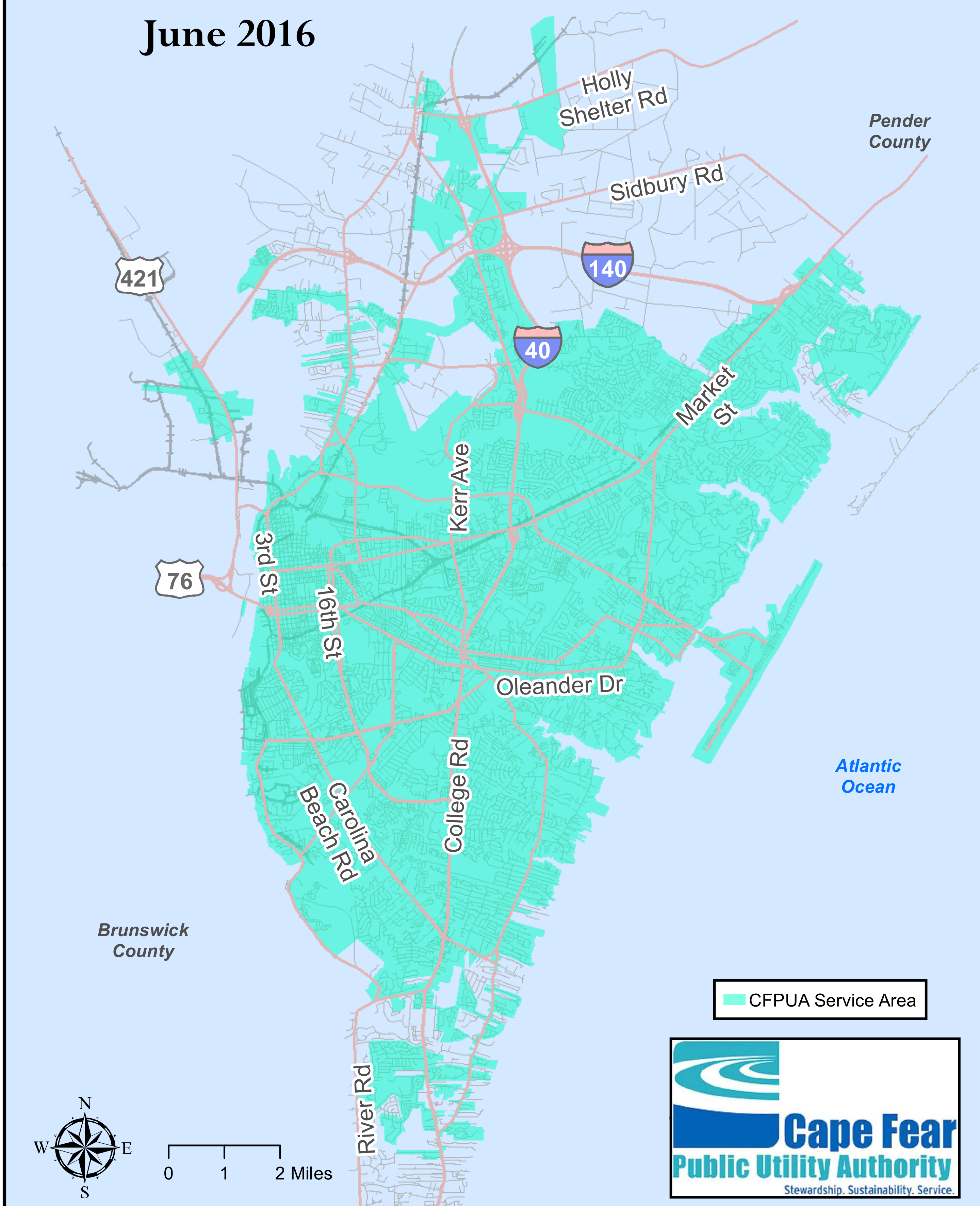
With over 28,000 students enrolling in classes every year, Cape Fear Community College is the sixth largest community college in the state and is a major economic development partner in southeastern North Carolina. Students can train for a new career in one of CFCC's technical programs or earn a two-year college transfer degree to continue their education at a four-year institution. CFCC also offers a wide variety of adult education and continuing education classes for lifelong learning. Additionally, CFCC offers customized employee training opportunities for businesses and industries planning to expand or relocate to the greater Wilmington area. CFCC’s main campus is located in historic downtown Wilmington and a North Campus in northern New Hanover County.

New Hanover Regional Medical Center

New Hanover Regional Medical Center is a not-for-profit health care system serving southeastern North Carolina and northeastern South Carolina. A teaching hospital, regional referral center, and Level 2 Trauma Center, NHRMC is dedicated to providing a wide range of health care services.

New Hanover Regional Medical Center

CFPUA Service Area
June 2016



CAPE FEAR PUBLIC UTILITY AUTHORITY
STRATEGIC PLAN
JULY 2014

MISSION STATEMENT

The Cape Fear Public Utility Authority's mission is to provide high quality water and sewer service in an environmentally responsible manner that protects public health, while maintaining the lowest practicable cost.

STRATEGIC VISION

Cape Fear Public Utility Authority is committed to excellence. The Authority effectively and efficiently manages operations, infrastructure, and investments to protect, restore, and enhance the natural environment; responsibly uses water and other natural resources; promotes economic vitality; supports public safety and health; and engenders overall community improvement and involvement on significant issues. The Authority continuously improves and not only meets but also strives to exceed all regulatory requirements.

GUIDING PRINCIPLES

The Authority is committed to the principles of ***Stewardship***, ***Sustainability*** and ***Service***. These principles serve as a guide for ethical decisions, provide a gauge for measuring success, and define our responsibility to the community. They guide our organization in the following way:

Stewardship

- Of the region's natural resources
- Of the financial resources and assets our customers entrust to us

Sustainability

- Of the region through dependable water and wastewater utilities that support public health and economic prosperity
- Of the Authority's ability to meet the community's current and future water and wastewater needs and expectations

Service

- To our customers by providing reliable, cost-effective water and wastewater utilities
- To our community as a thoughtful and participatory corporate citizen

Adopted by the Cape Fear Public Utility Authority Board July 9, 2014

GOALS & STRATEGIES

GOAL 1: The Authority will hold paramount our responsibility to protect the environment, ensure public health and safety, and respond effectively to the needs of our customers.

Strategy 1.A – Optimize the protection and use of water and other natural resources, and recycle where cost effective. Utilize the Environmental Management System to ensure and monitor regulatory compliance. Maintain and enhance the natural environment.

Strategy 1.B – Provide a safe work environment for our staff, contractors, and customers.

Strategy 1.C – Understand, anticipate, and respond to our customers and our community's needs in a professional, prompt, and efficient manner.

Strategy 1.D – Identify partnerships, develop alliances, and encourage public participation with both public and private community stakeholders.

GOAL 2: The Authority will maintain a stable financial position that balances rates, the environment, and the organization's long-term capital and operating needs.

Strategy 2.A– Establish and maintain a responsible balance among the fee schedule, long-term debt, asset values, Capital Improvement Program needs, operating expenses, and revenues.

Strategy 2.B– Operate as a fiscally sound entity that identifies and implements cost-efficiencies, as well as exceeds benchmarks, targets, and measures comparable to similar utilities and consistent with industry standards.

Strategy 2.C – Build, operate, and maintain high quality and cost-effective collection, treatment, and distribution systems and maximize the life expectancy of physical assets.

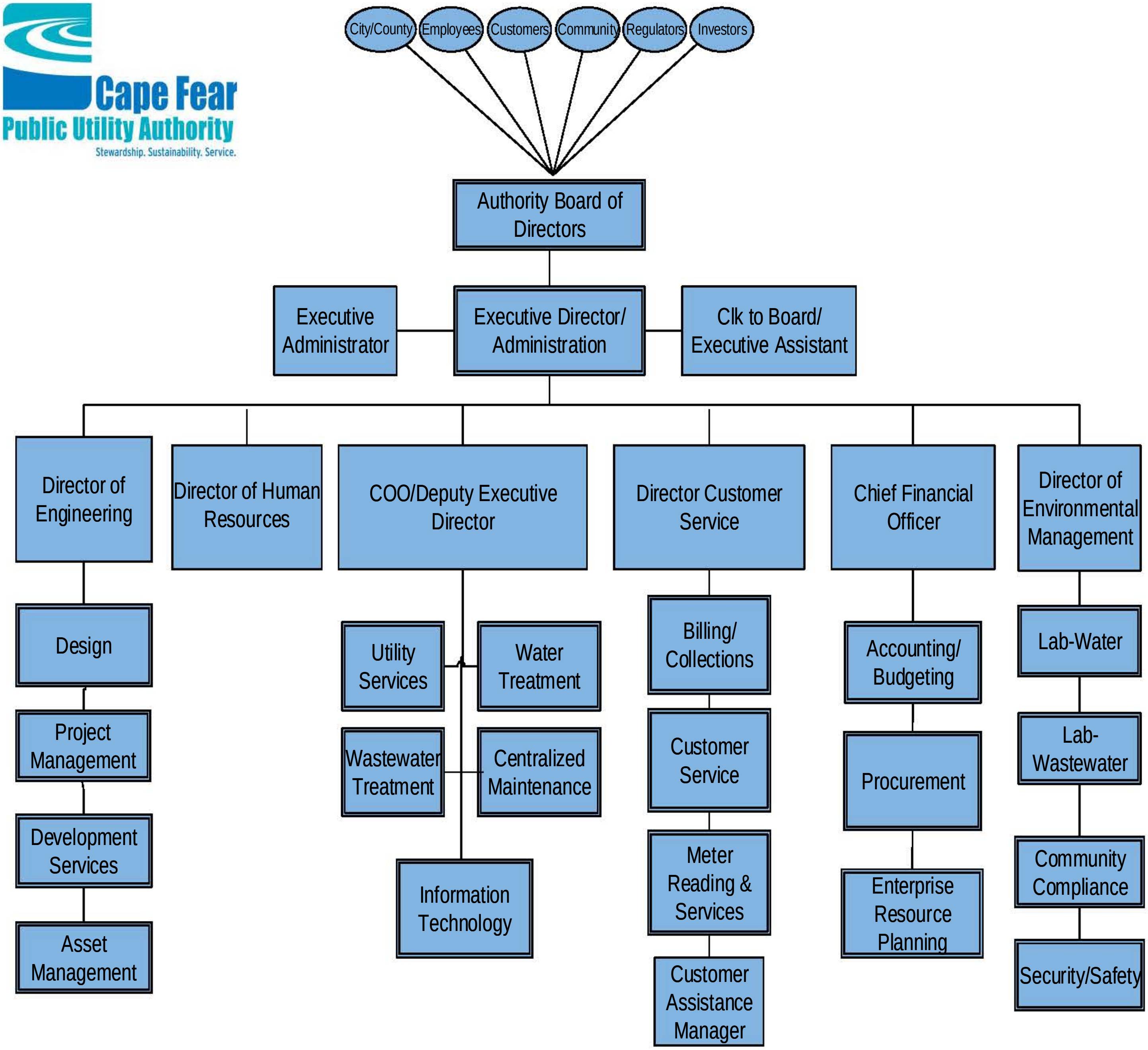
GOAL 3: The Authority will build, maintain and operate the enterprise, and all of its human and physical assets, in a manner that provides both new and existing customers with consistently high quality services.

Strategy 3.A – Establish criteria to prioritize the systematic extension of wastewater collection systems to areas with failing septic systems and water distribution systems to areas with poor quality well water in an equitable manner to maximize public health and economic development.

Strategy 3.B – Establish a creative and forward thinking organizational culture that rewards integrity and innovation, and brings about efficiencies.

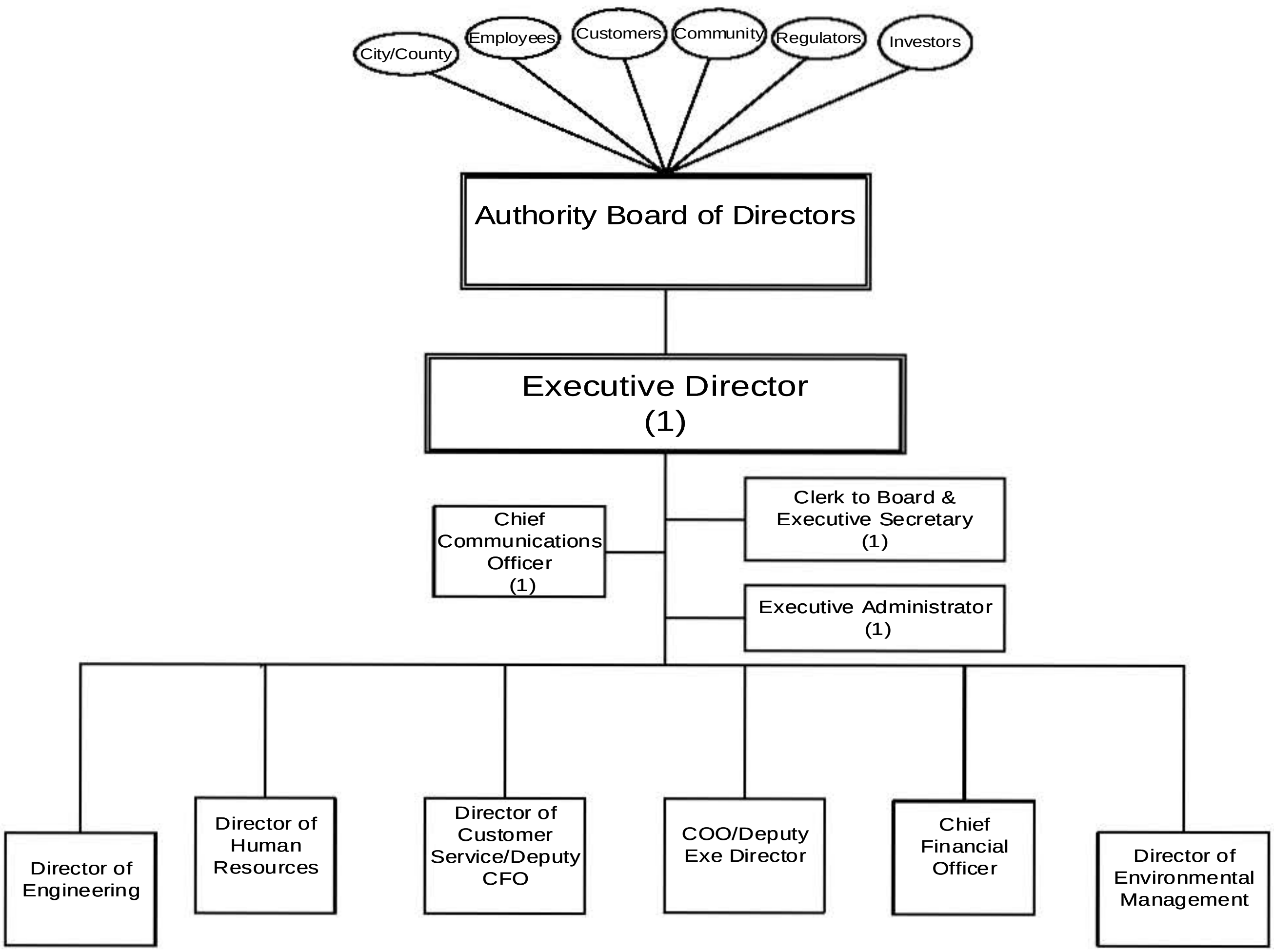
Strategy 3.C – Acquire and implement technologies and tools that allow for improved inter-departmental communication, enterprise-wide sharing of information, and operational efficiencies.

Strategy 3.D – Recruit and retain a well-qualified and motivated workforce. Provide opportunities for individual growth, and with that, organizational improvement.

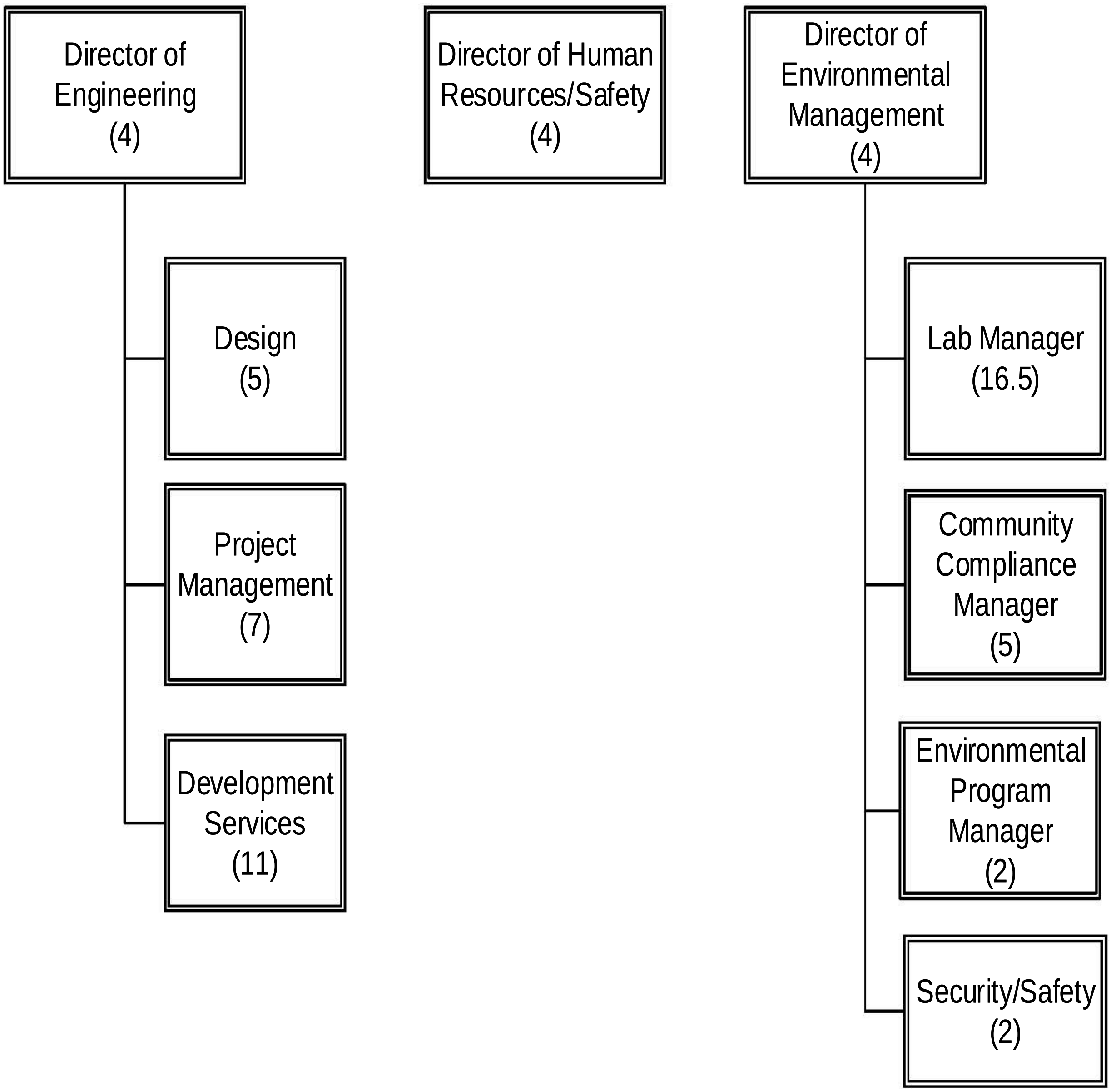


City/County
Employees
Customers
Community
Regulators
Investors
Authority Board of Directors
Executive Administrator
Executive Director/ Administration
Clk to Board/ Executive Assistant
Director of Engineering
Director of Human Resources
COO/Deputy Executive Director
Director Customer Service
Chief Financial Officer
Director of Environmental Management
Design
Project Management
Development Services
Asset Management
Utility Services
Water Treatment
Wastewater Treatment
Centralized Maintenance
Information Technology
Billing/ Collections
Customer Service
Meter Reading & Services
Customer Assistance Manager
Accounting/ Budgeting
Procurement
Enterprise Resource Planning
Lab-Water
Lab-Wastewater
Community Compliance
Security/Safety

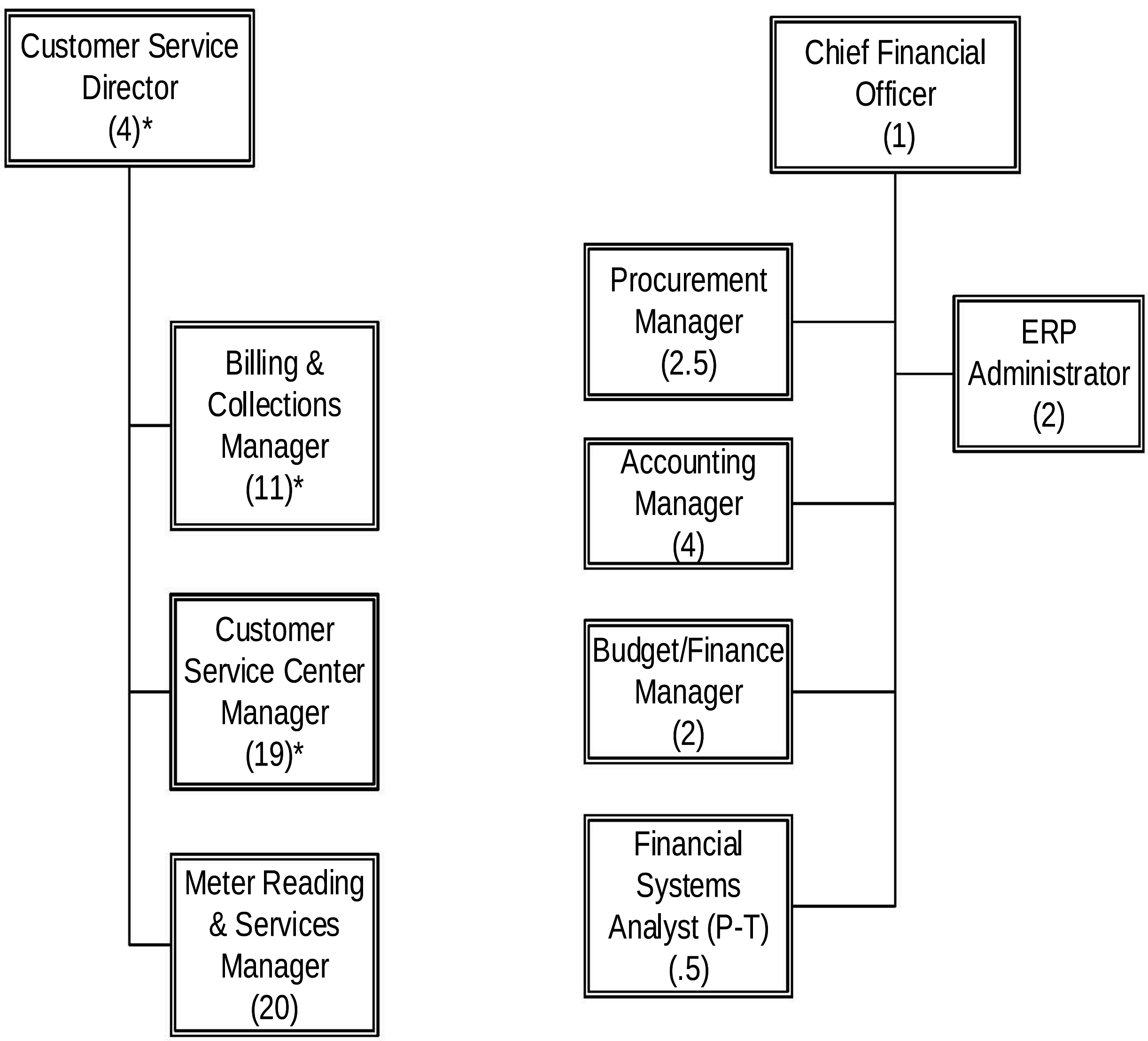
ADMINISTRATION
DIRECT REPORTS



ENGINEERING, HUMAN RESOURCES/
SAFETY, ENVIRONMENTAL
MANAGEMENT
DIRECT REPORTS

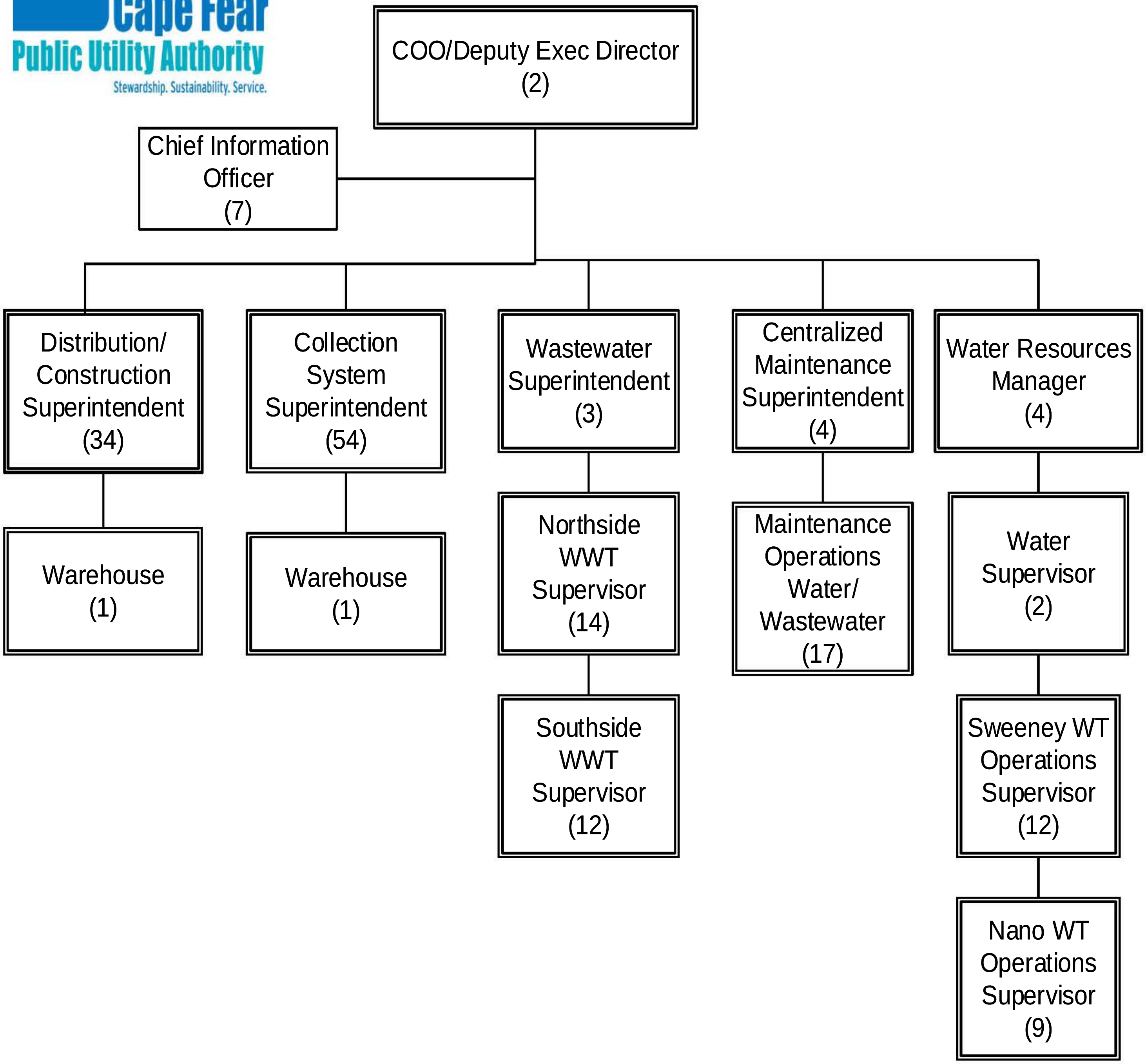


FINANCE, ERP,
CUSTOMER SERVICE
DIRECT REPORTS



*Includes 3 Back Fill positions for ERP

OPERATIONS
DIRECT REPORTS



FINANCIAL STRUCTURE

Fund Description and Fund Structure

The Authority uses fund accounting to account for its financial resources and report the results of its operations. In fund accounting, accounts are organized on the basis of funds, each of which is considered an independent fiscal entity with a separate set of self-balancing accounts consisting of assets, liabilities, fund balance, revenues and expenditures. The establishment of discrete funds helps to ensure that public monies are only spent for approved purposes as established by budget ordinances and other actions of the Board, laws and regulations, contracts and other agreements.

For budgetary accounting and reporting, the Authority uses two funds: the Operating Fund and the Capital Projects Fund. Though not required, two funds are maintained mainly because of differences in how budgets are adopted and controlled for each. The annual budget is adopted as required by NC General Statute 159-8 for the Operating Fund. The annual budget ordinance establishes appropriations and estimated revenues for a single fiscal year. Expenditures in the Operating Fund include salaries and benefits for the Authority's employees, system maintenance, and other administrative costs. Revenues include charges for water and wastewater service, system development charges, investment earnings, and other miscellaneous revenues.

On the other hand, budgets related to the activity accounted for in the Capital Projects Fund are established by the adoption of capital project ordinances in accordance with NC General Statute 159-13.2. Capital project ordinances provide for budgeted expenditures and funding sources for those expenditures over the life of the capital projects, rather than for a single fiscal year. The Capital Projects Fund accounts for the system-wide, wastewater and water capital projects that are appropriated in the capital budget. Funding sources include transfers from the Operating Fund, proceeds from the issuance of debt obligations, and grant revenues.

For financial reporting in accordance with generally accepted accounting principles, the Authority is considered a special-purpose government engaged exclusively in business-type activities. This means that the Authority reports both its operating and capital activities together in the basic financial statements on the full-accrual basis of accounting similar to a private business.

Basis of Accounting

The Authority uses the modified accrual basis of accounting for budgetary purposes as required by NC General Statute 159-26(c). The modified accrual basis of accounting takes a short-term perspective and is intended to provide information to help the public determine whether a government was able to meet its financial obligations in the current year with available financial resources. For financial reporting in accordance with generally accepted accounting principles, the Authority uses the accrual basis of accounting. The accrual basis of accounting takes a longer-term perspective and doesn't just account for a government's current year obligations and financial resources, but accounts for all economic resources and liabilities. For example, capital costs for water and wastewater infrastructure under the accrual basis of accounting are capitalized as assets and expensed over the estimated useful life because these costs represent economic resources that have a future service capacity. However, under the modified accrual basis of accounting, these costs are not capitalized as assets since newly constructed infrastructure isn't a financial resource that's available to fund short-term liabilities. Rather, these costs are expensed when paid.

BUDGET PROCESS

This section outlines the process and procedures that guide the preparation and management of the Authority's annual budget. The Authority follows guidelines established in the Board approved Standard Operating Procedures on Finance and Accounting Policies, Section 5.0, Budget Policy (SOP-FIN1000.442).

Preparation of the annual budget begins approximately eight months prior to the start of each fiscal year with the development of the budget calendar. The budget calendar provides the projected dates and items that must be completed to meet the mandatory budget adoption as required by NC General Statute 159-8. The calendar is updated and revised as the budget process moves forward and is a primary communication tool of the budget process. The Finance Department holds a Budget Kick-off Meeting in order to communicate with departments the instructions for each annual budget process, to help ensure the budget is prepared in a manner consistent with Authority policies and review items that may be new to each budget year. The departments are provided with budget instructions, forms and training material vital to the current budget year.

A budget calendar is included in the NC General Statute 159-8 which prescribes the last day on which certain steps of the budget procedures are to be performed. The following schedule lists the tasks to be performed and the date by which each is required to be completed. The Authority's FY 17-18 budget calendar is presented on the following page.

Before April 30	Each department head shall transmit to the budget officer the budget requests and revenue estimates for their department for the budget year.
No Later Than June 1	The budget together with the budget message shall be submitted to the governing board. The public hearing on the budget should be scheduled at this time.
No Later Than July 1	The governing board shall adopt a budget ordinance.

Other highlights of the Authority's Finance and Accounting Policies Budget Policy include:

- The Authority operates under an annual budget with a fiscal year period of July 1 through June 30.
- The Authority operates under an annual balanced budget ordinance in which the sum of estimated net revenues and appropriated fund balances are equal to the authorized expenditures.
- The budget shall include only estimated revenues reasonably expected to be realized in the budget year.
- Legally available fund balance (Appropriated Fund Balance) can be used in balancing the annual budget when sufficient funds are available.
- Except as restricted by law, the Authority Board may amend the budget ordinance, according to the Budget Amendment and Transfer Policy of the Authority, at any time after the ordinance's

adoption, so long as the ordinance continues to satisfy the requirements of North Carolina General Statutes 159-8 and 159-13.

The following procedures are used to amend the budget as provided in the approved Budget Amendment and Transfer Policy (SOP-FIN1100.442):

- Transfers of budget authority among expenditure line items within the same department require Department Head, or designee, approval.

- Transfers of budget authority among appropriation lines in the Budget Ordinances require approval of the Executive Director and must be reported to the Board at the meeting subsequent to such transfer. These transfers must be recorded in the meeting minutes.

- Changes to the appropriation levels provided for in the Budget Ordinances may only be made by the Board.

BUDGET CALENDAR

Day/Date/Time	Event	Group
Thursday, August 25, 2016 - Monday October 3, 2016	Multi Departmental CIP Team Develops Draft Four-Year CIP and identifies Ten-Year needs	Multi Departmental CIP Team
Monday October 3, 2016 - Thusday, December 1, 2016	Prepare Draft Ten-year CIP	Engineering
Thursday, December 1, 2016 - Tuesday, January 17, 2017	Multi Departmental CIP Team Reviews Draft Ten-Year CIP	Multi Departmental CIP Team
Wednesday, January 4, 2017 2:00 pm IT Conference Room	Regular Finance Committee Meeting - Budget Calendar	Finance Committee
Wednesday, January 11, 2017 9:00 am NHC-Harrell Room	Regular Board Meeting - Budget Calendar	Authority Board
Thursday, January 19, 2017 1:00 - 2:00 pm IT Conference Room	Budget Kickoff Meeting	CFPUA Staff
Thursday, January 19, 2017 2:00 - 3:00 pm IT Conference Room	Budget Training Sessions as Needed - Budget Forms Available to Departments	CFPUA Staff
Thursday, January 26, 2017	FY18 CIP Draft Budget to LRPC	Engineering/LRPC
Wednesday, February 1, 2017 9:00 am IT Conference Room	Regular Finance Committee Meeting	Finance Committee
Wednesday, February 8, 2017 Following Regular Board Meeting	FY18 CIP Board Work Session	Engineering/Authority Board
Friday, February 10, 2017	Employee Group and Business Insurance Estimates Due	Human Resources
Friday, February 17, 2017	New Position Requests due to HR	CFPUA Staff
Monday, February 20, 2017	Departmental Budgets Submitted to Finance by 5:00 pm Fee Schedule Review Submitted to Finance by 5:00 pm	CFPUA Staff CFPUA Staff
Tuesday, February 28, 2017	Performance Evaluations Due to HR	Human Resources
Thursday, March 2, 2017	Departmental Budget Reviews	ED/Finance

BUDGET CALENDAR

Wednesday, March 2, 2016	Regular Finance Committee Meeting	Finance Committee
9:00 am IT Conference Room		
Wednesday, March 9, 2016	Regular Board Meeting	Authority Board
9:00 am NHC-Harrell Room		
Thursday, March 23, 2017	FY18 CIP Approval by LRPC	Engineering/LRPC
Wednesday, April 5, 2017 9:00 am IT Conference Room	Regular Finance Committee Meeting - Preliminary Rate Review - Preliminary Budget Review	Finance Committee
Wednesday, April 12, 2017 9:00 am NHC-Harrell Room	Regular Board Meeting - Preliminary Rate Review - Preliminary Budget Review - FY18 CIP Recommended for Approval	Authority Board
Wednesday, April 19, 2017 9:00 am IT Conference Room	Bi-monthly Finance Committee Meeting (OPTIONAL) - Preliminary Rate Review Continued - Preliminary Budget Review Continued	Finance Committee
Friday, April 21, 2017	Recommended Budget Completed	CFPUA Staff
Wednesday, May 3, 2017 9:00 am IT Conference Room	Regular Finance Committee Meeting - Recommended Budget Submitted	Finance Committee
Wednesday, May 10, 2017 9:00 am NHC-Harrell Room	Regular Board Meeting - Recommended Budget Submitted	Authority Board
Wednesday, May 17, 2017 9:00 am IT Conference Room	Budget Workshop/Public Hearing (including rates)	Authority Board/Public Hearing
Wednesday, June 7, 2017 9:00 am IT Conference Room	Regular Finance Committee Meeting - Budget Adoption Submitted (including rates)	Finance Committee
Wednesday, June 14, 2017 9:00 am NHC-Harrell Room	Regular Board Meeting - Budget Adoption Submitted (including rates)	Authority Board

FINANCIAL POLICIES

The Authority's mission is to provide high quality water and wastewater services to its customers. The Authority is empowered to set rates, fees and charges without oversight, supervision, or direction from any other state or local entity or agency; therefore the Authority's operations, capital improvement program and debt payments are funded almost entirely through rates, fees and other charges for these water and wastewater services. The financial policies and statements of the Authority have been prepared in conformity with accounting principles generally accepted in the United States of America as applied to governmental units. The Governmental Accounting Standards Board ("GASB") is the accepted standard-setting body for establishing accounting and financial reporting principles. The more significant of the Authority's financial policies are described below. The Authority is in compliance with all financial policies.

Adopted Budget

The Adopted Budget and Budget Ordinance for the Authority is the basis for the financial plan for the fiscal year. The budget is prepared and presented in conformity with the North Carolina Local Government Budget and Fiscal Control Act under NC General Statute 159-8. The Authority operates under an annual balanced budget ordinance in which the sum of estimated net revenues and appropriated fund balances are equal to the authorized expenditures. Refer to the Budget Process for detailed information on the adopted budget.

Revenues

- The Authority sets rates and charges in accordance with North Carolina General Statute 162A-9 and annually sets rates and charges at levels sufficient to pay the cost of maintaining, repairing and operating the system; pay principal and interest on all bond issues of the Authority; and meet the rate covenant requirements with the Authority's Master Bond Indenture.

- The CFO develops a five-year revenue forecast for water and wastewater operations that is based on conservative estimates of growth in customers and usage.

Investments

- The Authority is empowered to invest in types of securities in accordance with North Carolina General Statute 159-30 (c).

- The CFO shall prepare a quarterly investment report for the Authority's Finance Committee to include the composition by investment type, amount invested and weighted average portfolio maturity and yield.

- The State Treasurer of North Carolina enforces strict standards of financial stability for each depository that collateralizes public deposits under the pooling method. The State Treasurer enforces standards of minimum capitalization for all pooling method financial institutions. The Authority relies on the State Treasurer to monitor those financial institutions. The Authority analyzes the financial soundness of any other financial institution used by the Authority. The Authority complies with the provisions of G.S. 159-31 when designating official depositories and verifying that deposits are properly collateralized.

- The Authority shall utilize a third party custodial agent for book entry transactions, all of which shall be held in the Authority's name. The custodial agent shall be a trust department authorized to do trust work in North Carolina who has an account with the Federal Reserve. Certificated securities shall be in the custody of the CFO.

- The investment portfolio shall be properly diversified in order to minimize risks brought on by economic and market changes. To achieve this diversification:

  - ❖ No more than 25% of the Authority's total investment portfolio shall be invested in a single security type.
  - ❖ The Authority will not invest in securities maturing more than five years from date of purchase and the weighted average maturity of the portfolio shall never exceed one year.

Procurement

- The Authority can engage in contracts for construction, repair work, purchase of apparatus, materials, equipment or professional services in accordance with North Carolina General Statute 143-129 and the Authority's Purchasing Policy.

Capital Assets and Capitalized Interest

- Capital assets are defined by the Authority as assets with an initial, individual cost of more than $5,000 and estimated useful life in excess of one year.

- The Authority capitalizes interest on tax exempt debt issued to finance major construction activities under the Capital Improvements Program.

Capital Improvements Program

- The Authority prepares and adopts a ten-year Capital Improvements Program which is updated annually.

- The purpose of the Capital Improvements Program is to ensure that the Authority invests in its infrastructure in a logical and strategic manner and to serve as a central source of information on all planned construction for residents, agencies and other interest groups.

Debt Management

- The Authority issues debt under the guidance of the Local Government Commission, a division of the State of North Carolina. Debt is issued in accordance with North Carolina General Statutes 162A.

- The Authority integrates its debt issuance with its Capital Improvements Program spending.

- The Authority generally limits debt issuance to only those projects that are high-dollar, emergency-related, or growth oriented.

- Debt may not be issued if such issuance would cause the ratio of outstanding debt to the value of capital assets to exceed 45%.

- The Authority complies with all covenants and requirements of its Master Bond Indenture.

  - ❖ Maintain a reserve amount sufficient to pay the current expenses for two months of the fiscal year as shown in the annual budget.
  - ❖ Rate covenants: 1) Maintain debt service coverage ratio of 1.2 on the Authority's parity indebtedness, 2) Maintain debt service coverage ratio of 1.0 on the Authority's total indebtedness.
  - ❖ In order to issue additional bonds, the Authority must maintain debt service coverage ratio of 1.2 on the Authority's total indebtedness for 12 consecutive months of 18 months preceding the issuance of new bonded debt.

Risk Management

- The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The Authority has chosen to self-insure risk of loss related workers' compensation claims. The Authority carries commercial coverage for all other risks of loss including property and general liability coverage.

Corporate Governance

- The Authority expects management to adhere to the following guiding principles:

  - ❖ Transparency of financial conditions and operations;
  - ❖ Transparency of transactions with interested parties with no improper benefits at the expense of the organization; and
  - ❖ Access to sound counsel unaffected by conflict of interest.

- The external auditors report to the Finance Committee:

  - ❖ All critical accounting policies and practices used by the Authority that have been discussed with management;
  - ❖ All alternative treatments of financial information, ramifications of such use and the treatment preferred by the certified public accounting firm;
  - ❖ Other material written communication between the certified public accounting firm and management, such as the management letter or schedule of unadjusted differences.

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CAPE FEAR PUBLIC UTILITY AUTHORITY
FY 17-18

OPERATING BUDGET SUMMARY
(Budgetary Basis)

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 15-16 Projected	CFPUA FY 17-18 Adopted Budget
APPROPRIATIONS									
Operating Expenditures	$ 35,061,530	$ 31,801,997	$ 37,091,146	$ 33,777,930	$ 36,960,527	$ 8,570	$ 36,969,097	$ 30,923,520	$ 37,152,403
Non-Departmental	2,244,300	2,056,666	2,398,500	2,140,026	2,221,260	17,000	2,238,260	2,238,260	2,491,903
Contingency - Operating	348,182	-	472,000	-	953,000	-	953,000	-	675,000
Debt Service	27,951,899	26,190,598	34,153,693	33,402,391	24,260,053	-	24,260,053	24,260,053	24,292,749
Bond Issuance Costs	750,000	619,539	1,466,100	690,170	690,000	-	690,000	-	-
Payment to Refunded Bond Escrow Agent	49,035,703	49,035,703	187,785,880	187,785,880	-	-	-	-	-
Transfer to Capital Projects	15,915,100	15,915,100	16,233,854	16,233,854	10,530,726	5,900,184	16,430,910	16,430,910	14,906,616
Total Appropriations	131,306,714	125,619,603	279,601,173	274,030,251	75,615,566	5,925,754	81,541,320	73,852,743	79,518,671
REVENUES									
Water Revenues	$ 29,770,000	$ 31,182,128	$ 30,887,000	$ 31,830,525	$ 31,870,000	$ -	$ 31,870,000	$ 32,628,948	$ 33,791,230
Wastewater Revenues	34,270,000	35,516,501	34,837,000	36,014,815	36,220,000	-	36,220,000	37,199,308	35,986,641
System Development Charges	4,300,000	4,740,568	5,545,400	6,068,285	3,600,000	-	3,600,000	5,842,333	4,000,000
Investment Earnings	747,000	807,590	2,810,710	3,267,763	434,000	-	434,000	356,632	700,000
Other Charges for Service	2,132,000	4,602,497	3,749,500	4,754,794	2,526,566	-	2,526,566	4,937,675	4,500,800
Appropriated Fund Balance	10,237,811	-	17,895,818	-	242,000	5,925,754	6,167,754	-	540,000
Operating Grants	-	-	35,000	60,479	33,000	-	33,000	-	-
Sale of Capital Assets	64,200	77,599	90,521	172,740	-	-	-	108,216	-
Bond Proceeds	49,785,703	49,524,868	183,750,224	183,000,224	690,000	-	690,000	-	-
Total Revenues	$ 131,306,714	$ 126,451,751	$ 279,601,173	$ 265,169,625	$ 75,615,566	$ 5,925,754	$ 81,541,320	$ 81,073,112	$ 79,518,671
Revenues Over/(Under) Appropriations	$ -	$ 832,148	$ -	$ (8,860,626)	$ -	$ -	$ -	$ 7,220,369	$ -

CAPE FEAR PUBLIC UTILITY AUTHORITY
FY 17-18

STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
(Budgetary Basis)

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 15-16 Projected (Note 1)	CFPUA FY 17-18 Adopted Budget
REVENUES AND OTHER FINANCING SOURCES									
Operating Revenues									
Water Revenues	$ 29,770,000	$ 31,182,128	$ 30,887,000	$ 31,830,525	$ 31,870,000	$ -	$ 31,870,000	$ 32,628,948	$ 33,791,230
Wastewater Revenues	34,270,000	35,516,501	34,837,000	36,014,815	36,220,000	-	36,220,000	37,199,308	35,986,641
Other Charges for Service	2,132,000	4,602,497	3,749,500	4,754,794	2,526,566	-	2,526,566	4,937,675	4,500,800
Operating Grants and Contributions	-	-	35,000	60,479	33,000	-	33,000	-	-
Total Operating Revenues	**66,172,000**	**71,301,126**	**69,508,500**	**72,660,613**	**70,649,566**	**-**	**70,649,566**	**74,765,931**	**74,278,671**
Non-Operating Revenues									
System Development Charges	4,300,000	4,740,568	5,545,400	6,068,285	3,600,000	-	3,600,000	5,842,333	4,000,000
Investment Earnings	747,000	807,590	2,810,710	3,267,763	434,000	-	434,000	356,632	700,000
Total Non-Operating Revenues	**5,047,000**	**5,548,158**	**8,356,110**	**9,336,048**	**4,034,000**	**-**	**4,034,000**	**6,198,965**	**4,700,000**
Total Revenues	**71,219,000**	**76,849,284**	**77,864,610**	**81,996,661**	**74,683,566**	**-**	**74,683,566**	**80,964,896**	**78,978,671**
Other Financing Sources									
Sale of Capital Assets	64,200	77,599	90,521	172,740	-	-	-	108,216	-
Proceeds from Bonded Debt and Premium	49,785,703	49,524,868	183,750,224	183,000,224	690,000	-	690,000	-	-
Appropriated Fund Balance	10,237,811	-	17,895,818	-	242,000	5,925,754	6,167,754	-	540,000
Total Other Financing Sources	**60,087,714**	**49,602,467**	**201,736,563**	**183,172,964**	**932,000**	**5,925,754**	**6,857,754**	**108,216**	**540,000**
Total Revenues and Other Financing Sources	**$ 131,306,714**	**$ 126,451,751**	**$ 279,601,173**	**$ 265,169,625**	**$ 75,615,566**	**$ 5,925,754**	**$ 81,541,320**	**$ 81,073,112**	**$ 79,518,671**
EXPENDITURES AND OTHER FINANCING USES									
Operating Expenditures									
Authority Board	$ 77,427	$ 71,615	$ 66,543	$ 57,730	$ 64,630	$ (24)	$ 64,606	$ 53,178	$ 62,371
Administration	894,432	863,960	881,105	749,140	900,374	(100,253)	800,121	612,390	739,980
Finance	1,083,007	2,014,820	1,180,270	1,022,549	1,123,074	(6,294)	1,116,780	967,591	1,138,109
Human Resources	647,282	618,901	667,023	620,185	638,867	30,340	669,207	563,448	527,814
Engineering	2,127,192	1,970,980	2,373,530	2,165,693	2,332,628	3,535	2,336,163	2,080,109	2,708,826
Operations - Centralized Maintenance	2,128,405	1,610,001	2,221,135	2,225,301	1,991,784	409,420	2,401,204	2,250,335	2,685,692
Operations - Administration/IT	1,634,160	463,748	1,667,077	1,778,087	1,768,402	59,145	1,827,547	1,737,150	2,093,165
Operations - Water Treatment	6,029,168	5,905,334	6,539,294	6,335,573	6,634,509	40,052	6,674,561	6,080,987	7,009,233
Operations - Wastewater Treatment	4,083,039	3,900,595	4,063,801	3,856,063	3,990,079	(144,232)	3,845,847	3,564,936	4,077,199
Operations - Utility Services	9,370,646	8,727,854	9,509,485	8,239,042	10,025,584	106,546	10,132,130	7,537,174	9,241,363
Environment Management	2,346,632	2,028,653	2,304,999	2,189,351	2,417,463	49,015	2,466,478	1,978,723	2,665,826
Customer Service	3,629,739	2,727,332	3,657,710	3,327,978	3,932,977	65,069	3,998,046	3,010,192	4,062,825

CAPE FEAR PUBLIC UTILITY AUTHORITY
FY 17-18

STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
(Budgetary Basis)

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 15-16 Projected (Note 1)	CFPUA FY 17-18 Adopted Budget
Computer Replacement Program	85,100	68,497	-	-	76,000	9,825	85,825	85,825	50,000
Damage Claims	22,385	21,754	59,550	3,468	50,000	-	50,000	-	-
Outside Partnerships	75,015	74,037	82,839	78,490	76,650	-	76,650	76,650	-
Non-Capital Construction	255,000	236,188	285,000	164,663	415,000	(125,000)	290,000	130,207	-
Fines and Penalties	19,100	35	26,000	-	26,000	(868)	25,132	-	-
Scada Program	-	-	108,800	94,008	108,800	-	108,800	108,800	90,000
Capital Outlay	553,801	497,693	525,985	-	387,706	(387,706)	-	85,825	-
Nondepartmental	2,244,300	2,056,666	2,398,500	2,140,026	2,221,260	17,000	2,238,260	2,238,260	2,491,903
Litigation Settlement	-	-	871,000	870,609	-	-	-	-	-
Contingency-Operating	348,182	-	472,000	-	953,000	-	953,000	-	675,000
Total Operating Expenditures Before Debt Service	**37,654,012**	**33,858,663**	**39,961,646**	**35,917,956**	**40,134,787**	**25,570**	**40,160,357**	**33,161,780**	**40,319,306**
Debt Service, Net	**27,951,899**	**26,190,598**	**34,153,693**	**33,402,391**	**24,260,053**	**-**	**24,260,053**	**24,260,053**	**24,292,749**
Debt Issuance Cost	**750,000**	**619,539**	**1,466,100**	**690,170**	**690,000**	**-**	**690,000**	**-**	**-**
Other Financing Uses									
Payment to Refunded Bond Escrow Agent	49,035,703	49,035,703	187,785,880	187,785,880	-	-	-	-	-
Transfers to Capital Project Funds	15,915,100	15,915,100	16,233,854	16,233,854	10,530,726	5,900,184	16,430,910	16,430,910	14,906,616
Total Other Financing Uses	**64,950,803**	**64,950,803**	**204,019,734**	**204,019,734**	**10,530,726**	**5,900,184**	**16,430,910**	**16,430,910**	**14,906,616**
Total Expenditures and Other Financing Uses	**$ 131,306,714**	**$ 125,619,603**	**$ 279,601,173**	**$ 274,030,251**	**$ 75,615,566**	**$ 5,925,754**	**$ 81,541,320**	**$ 73,852,743**	**$ 79,518,671**
Revenues and Other Sources Over Expenditures and Other Financing Uses	**-**	**832,148**	**-**	**(8,860,626)**	**-**	**-**	**-**	**7,220,369**	**-**

Note 1: FY 2016 Projected is based on estimates by the Finance Department using actual financial data as of May 31,2016.

Note 2: For bugetary purposes, the Enterprise Fund is shown in this schedule on the modified accrual basis. The values for fund balance will differ from the change of net assets reported in the financial statements using the full accrual basis for Generally Accepted Accounting Principles (GAAP) purposes due to accounting adjustments that are required to bring the modified accrual basis to the full accrual basis required by GAAP.

CAPE FEAR PUBLIC UTILITY AUTHORITY
FY 17-18

EXPENDITURES SUMMARY BY DEPARTMENT AND CATEGORY

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	% Change - FY18 Adopted/FY17 Adopted
EXPENDITURES BY DEPARTMENT										
Authority Board	$ 77,427	$ 71,615	$ 66,543	$ 57,730	$ 64,630	$ (24)	$ 64,606	$ 53,178	$ 62,371	-3.50%
Administration	894,432	863,960	881,105	749,140	900,374	(100,253)	800,121	612,390	739,980	-17.81%
Finance	1,083,007	2,014,820	1,180,270	1,022,549	1,123,074	(6,294)	1,116,780	967,591	1,138,109	1.34%
Human Resources	647,282	618,901	667,023	620,185	638,867	30,340	669,207	563,448	527,814	-17.38%
Engineering	2,127,192	1,970,980	2,373,530	2,165,693	2,332,628	3,535	2,336,163	2,080,109	2,708,826	16.13%
Operations - Centralized Maintenance	2,128,405	1,610,001	2,221,135	2,225,301	1,991,784	409,420	2,401,204	2,250,335	2,685,692	34.84%
Operations - Administration/IT	1,634,160	463,748	1,667,077	1,778,087	1,768,402	59,145	1,827,547	1,737,150	2,093,165	18.36%
Operations - Water Treatment	6,029,168	5,905,334	6,539,294	6,335,573	6,634,509	40,052	6,674,561	6,080,987	7,009,233	5.65%
Operations - Wastewater Treatment	4,083,039	3,900,595	4,063,801	3,856,063	3,990,079	(144,232)	3,845,847	3,564,936	4,077,199	2.18%
Operations - Utility Services	9,370,646	8,727,854	9,509,485	8,239,042	10,025,584	106,546	10,132,130	7,537,174	9,241,363	-7.82%
Environment Management	2,346,632	2,028,653	2,304,999	2,189,351	2,417,463	49,015	2,466,478	1,978,723	2,665,826	10.27%
Customer Service	3,629,739	2,727,332	3,657,710	3,327,978	3,932,977	65,069	3,998,046	3,010,192	4,062,825	3.30%
Computer Replacement Program	85,100	68,497	-	-	76,000	9,825	85,825	85,825	50,000	-34.21%
Damage Claims	22,385	21,754	59,550	3,468	50,000	-	50,000	-	-	-100.00%
Outside Partnerships	75,015	74,037	82,839	78,490	76,650	-	76,650	76,650	-	-100.00%
Non-Capital Construction	255,000	236,188	285,000	164,663	415,000	(125,000)	290,000	130,207	-	-100.00%
Fines and Penalties	19,100	35	26,000	-	26,000	(868)	25,132	-	-	-100.00%
SCADA Program	-	-	108,800	94,008	108,800	-	108,800	108,800	90,000	-17.28%
Capital Outlay	553,801	497,693	525,985	-	387,706	(387,706)	-	85,825	-	-100.00%
Nondepartmental	2,244,300	2,056,666	2,398,500	2,140,026	2,221,260	17,000	2,238,260	2,238,260	2,491,903	12.18%
Debt Service, Net	27,951,899	26,190,598	34,153,693	33,402,391	24,260,053	-	24,260,053	24,260,053	24,292,749	0.13%
Debt Issuance Cost	750,000	619,539	1,466,100	690,170	690,000	-	690,000	-	-	-100.00%
Payment to Refunded Bond Escrow Agent	49,035,703	49,035,703	187,785,880	187,785,880	-	-	-	-	-	0.00%
Litigation Settlement	-	-	871,000	870,609	-	-	-	-	-	0.00%
Contingency-Operating	348,182	-	472,000	-	953,000	-	953,000	-	675,000	-29.17%
Transfers to Capital Projects	15,915,100	15,915,100	16,233,854	16,233,854	10,530,726	5,900,184	16,430,910	16,430,910	14,906,616	41.55%
TOTAL	**$ 131,306,714**	**$ 125,619,603**	**$ 279,601,173**	**$ 274,030,251**	**$ 75,615,566**	**$ 5,925,754**	**$ 81,541,320**	**$ 73,852,743**	**$ 79,518,671**	5.16%
EXPENDITURES BY CATEGORY										
Salaries & Benefits	$ 19,522,680	$ 18,512,235	$ 20,206,067	$ 18,843,807	$ 20,564,440	$ (98,740)	$ 20,465,700	$ 17,740,927	$ 21,420,446	4.16%
Operating	14,528,449	12,380,612	14,925,905	13,489,132	15,255,931	214,639	15,470,570	12,473,773	15,591,957	2.20%
Capital Outlay	553,801	508,639	525,985	233,753	387,706	8,714	396,420	307,338	-	-100.00%
Computer Replacement Program	85,100	68,497	-	-	76,000	9,825	85,825	85,825	50,000	0.00%
Damage Claims	22,385	21,754	59,550	3,468	50,000	-	50,000	-	-	-100.00%
Outside Partnerships	75,015	74,037	82,839	78,490	76,650	-	76,650	76,650	-	-100.00%
Non-Capital Construction	255,000	236,188	285,000	164,663	415,000	(125,000)	290,000	130,207	-	-100.00%
Fines and Penalties	19,100	35	26,000	-	26,000	(868)	25,132	-	-	-100.00%
SCADA Program	-	-	108,800	94,008	108,800	-	108,800	108,800	90,000	-17.28%
Nondepartmental	2,244,300	2,056,666	2,398,500	2,140,026	2,221,260	17,000	2,238,260	2,238,260	2,491,903	12.18%
Debt Service, Net	27,951,899	26,190,598	34,153,693	33,402,391	24,260,053	-	24,260,053	24,260,053	24,292,749	0.13%
Debt Issuance Cost	750,000	619,539	1,466,100	690,170	690,000	-	690,000	-	-	-100.00%
Payment to Refunded Bond Escrow Agent	49,035,703	49,035,703	187,785,880	187,785,880	-	-	-	-	-	0.00%
Litigation Settlement	-	-	871,000	870,609	-	-	-	-	-	0.00%
Contingency-Operating	348,182	-	472,000	-	953,000	-	953,000	-	675,000	-29.17%
Transfers to Capital Projects	15,915,100	15,915,100	16,233,854	16,233,854	10,530,726	5,900,184	16,430,910	16,430,910	14,906,616	41.55%
TOTAL	**$ 131,306,714**	**$ 125,619,603**	**$ 279,601,173**	**$ 274,030,251**	**$ 75,615,566**	**$ 5,925,754**	**$ 81,541,320**	**$ 73,852,743**	**$ 79,518,671**	5.16%

CAPE FEAR PUBLIC UTILITY AUTHORITY
FY 17-18

EXPENDITURES DETAIL BY DEPARTMENT

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	% Change - FY18 Adopted/FY17 Adopted
Authority Board										
Salaries & Benefits	$ 42,639	$ 42,635	$ 42,645	$ 41,615	$ 42,632	$ (24)	$ 42,608	$ 39,245	$ 42,635	0.01%
Operating	34,788	28,980	23,898	16,115	21,998	-	21,998	13,933	19,736	-10.28%
Total Authority Board	**77,427**	**71,615**	**66,543**	**57,730**	**64,630**	**(24)**	**64,606**	**53,178**	**62,371**	**-3.50%**
Administration										
Salaries & Benefits	574,932	571,578	591,705	553,355	606,813	(100,253)	506,560	467,528	519,780	-14.34%
Operating	319,500	292,382	289,400	195,785	293,561	-	293,561	144,862	220,200	-24.99%
Total Administration	**894,432**	**863,960**	**881,105**	**749,140**	**900,374**	**(100,253)**	**800,121**	**612,390**	**739,980**	**-17.81%**
Finance										
Salaries & Benefits	1,031,369	1,334,241	1,137,350	990,432	1,057,874	(6,294)	1,051,580	926,462	1,057,277	-0.06%
Operating	51,638	680,579	42,920	32,117	65,200	-	65,200	41,129	80,832	23.98%
Total Finance	**1,083,007**	**2,014,820**	**1,180,270**	**1,022,549**	**1,123,074**	**(6,294)**	**1,116,780**	**967,591**	**1,138,109**	**1.34%**
Human Resources										
Salaries & Benefits	465,482	465,976	470,970	460,228	496,307	30,340	526,647	448,595	407,288	-17.94%
Operating	181,800	152,925	196,053	159,957	142,560	-	142,560	114,853	120,526	-15.46%
Total Human Resources	**647,282**	**618,901**	**667,023**	**620,185**	**638,867**	**30,340**	**669,207**	**563,448**	**527,814**	**-17.38%**
Engineering										
Salaries & Benefits	2,015,002	1,880,176	2,262,912	2,066,882	2,245,067	(33,855)	2,211,212	2,019,074	2,376,529	5.86%
Operating	112,190	90,804	110,618	98,811	87,561	28,890	116,451	61,035	332,297	279.50%
Capital Outlay	-	-	-	-	-	8,500	8,500	-	-	0.00%
Total Engineering	**2,127,192**	**1,970,980**	**2,373,530**	**2,165,693**	**2,332,628**	**3,535**	**2,336,163**	**2,080,109**	**2,708,826**	**16.13%**
Operations - Centralized Maintenance										
Salaries & Benefits	1,175,882	1,145,501	1,197,064	1,142,034	1,213,240	118,430	1,331,670	1,206,642	1,373,646	13.22%
Operating	952,523	464,500	1,024,071	1,011,898	778,544	276,566	1,055,110	1,029,269	1,312,046	68.53%
Capital Outlay	-	-	-	71,369	-	14,424	14,424	14,424	-	0.00%
Total Operations - Centralized Maintenance	**2,128,405**	**1,610,001**	**2,221,135**	**2,225,301**	**1,991,784**	**409,420**	**2,401,204**	**2,250,335**	**2,685,692**	**34.84%**
Operations - Administration/IT										
Salaries & Benefits	971,305	454,781	891,139	892,821	946,669	(34,455)	912,214	821,817	1,020,887	7.84%
Operating	662,855	8,967	775,938	885,266	821,733	93,600	915,333	915,333	1,072,278	30.49%
Capital Outlay	-	-	-	-	-	-	-	-	-	0.00%
Total Operations - Administration/IT	**1,634,160**	**463,748**	**1,667,077**	**1,778,087**	**1,768,402**	**59,145**	**1,827,547**	**1,737,150**	**2,093,165**	**18.36%**

CAPE FEAR PUBLIC UTILITY AUTHORITY
FY 17-18

EXPENDITURES DETAIL BY DEPARTMENT

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Operations - Water Treatment										
Salaries & Benefits	1,568,090	1,555,304	1,640,825	1,520,689	1,715,658	(1,106)	1,714,552	1,513,294	1,830,309	6.68%
Operating	4,461,078	4,350,030	4,898,469	4,757,867	4,918,851	(27,088)	4,891,763	4,499,447	5,178,924	5.29%
Capital Outlay	-	-	-	57,017	-	68,246	68,246	68,246	-	0.00%
Total Operations - Water Treatment	**6,029,168**	**5,905,334**	**6,539,294**	**6,335,573**	**6,634,509**	**40,052**	**6,674,561**	**6,080,987**	**7,009,233**	**5.65%**
Operations - Wastewater Treatment										
Salaries & Benefits	$ 1,883,485	$ 1,849,465	$ 1,926,118	$ 1,794,790	$ 1,857,584	$ (116,606)	$ 1,740,978	$ 1,594,155	$ 1,894,801	2.00%
Operating	2,199,554	2,051,130	2,137,683	2,054,180	2,132,495	(27,626)	2,104,869	1,970,781	2,182,398	2.34%
Capital Outlay	-	-	-	7,093	-	-	-	-	-	0.00%
Total Operations - Wastewater Treatment	**4,083,039**	**3,900,595**	**4,063,801**	**3,856,063**	**3,990,079**	**(144,232)**	**3,845,847**	**3,564,936**	**4,077,199**	**2.18%**
Operations - Utility Services										
Salaries & Benefits	5,213,127	5,481,862	5,396,994	5,045,195	5,537,184	15,392	5,552,576	4,695,330	5,711,954	3.16%
Operating	4,157,519	3,235,046	4,112,491	3,123,757	4,488,400	(138,115)	4,350,285	2,737,166	3,529,409	-21.37%
Capital Outlay	-	10,946	-	70,090	-	229,269	229,269	104,678	-	0.00%
Total Operations - Utility Services	**9,370,646**	**8,727,854**	**9,509,485**	**8,239,042**	**10,025,584**	**106,546**	**10,132,130**	**7,537,174**	**9,241,363**	**-7.82%**
Environment Management										
Salaries & Benefits	1,867,386	1,649,588	1,861,936	1,784,851	1,929,535	(26,403)	1,903,132	1,611,293	2,094,509	8.55%
Operating	479,246	379,065	443,063	385,974	487,928	8,000	495,928	333,265	571,317	17.09%
Capital Outlay	-	-	-	18,526	-	67,418	67,418	34,165	-	0.00%
Total Environment Management	**2,346,632**	**2,028,653**	**2,304,999**	**2,189,351**	**2,417,463**	**49,015**	**2,466,478**	**1,978,723**	**2,665,826**	**10.27%**
Customer Service										
Salaries & Benefits	2,713,981	2,081,128	2,786,409	2,550,915	2,915,877	56,094	2,971,971	2,397,492	3,090,831	6.00%
Operating	915,758	646,204	871,301	767,405	1,017,100	412	1,017,512	612,700	971,994	-4.43%
Capital Outlay	-	-	-	9,658	-	8,563	8,563	-	-	0.00%
Total Customer Service	**3,629,739**	**2,727,332**	**3,657,710**	**3,327,978**	**3,932,977**	**65,069**	**3,998,046**	**3,010,192**	**4,062,825**	**3.30%**
Computer Replacement Program	**85,100**	**68,497**	**-**	**-**	**76,000**	**9,825**	**85,825**	**85,825**	**50,000**	**-34.21%**
Damage Claims	**22,385**	**21,754**	**59,550**	**3,468**	**50,000**	**-**	**50,000**	**-**	**-**	**-100.00%**
Outside Partnerships	**75,015**	**74,037**	**82,839**	**78,490**	**76,650**	**-**	**76,650**	**76,650**	**-**	**-100.00%**
Non-Capital Construction	**255,000**	**236,188**	**285,000**	**164,663**	**415,000**	**(125,000)**	**290,000**	**130,207**	**-**	**-100.00%**
Fine and Penalties	**19,100**	**35**	**26,000**	**-**	**26,000**	**(868)**	**25,132**	**-**	**-**	**-100.00%**
SCADA Program	**-**	**-**	**108,800**	**94,008**	**108,800**	**-**	**108,800**	**108,800**	**90,000**	**-17.28%**

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EXPENDITURES DETAIL BY DEPARTMENT

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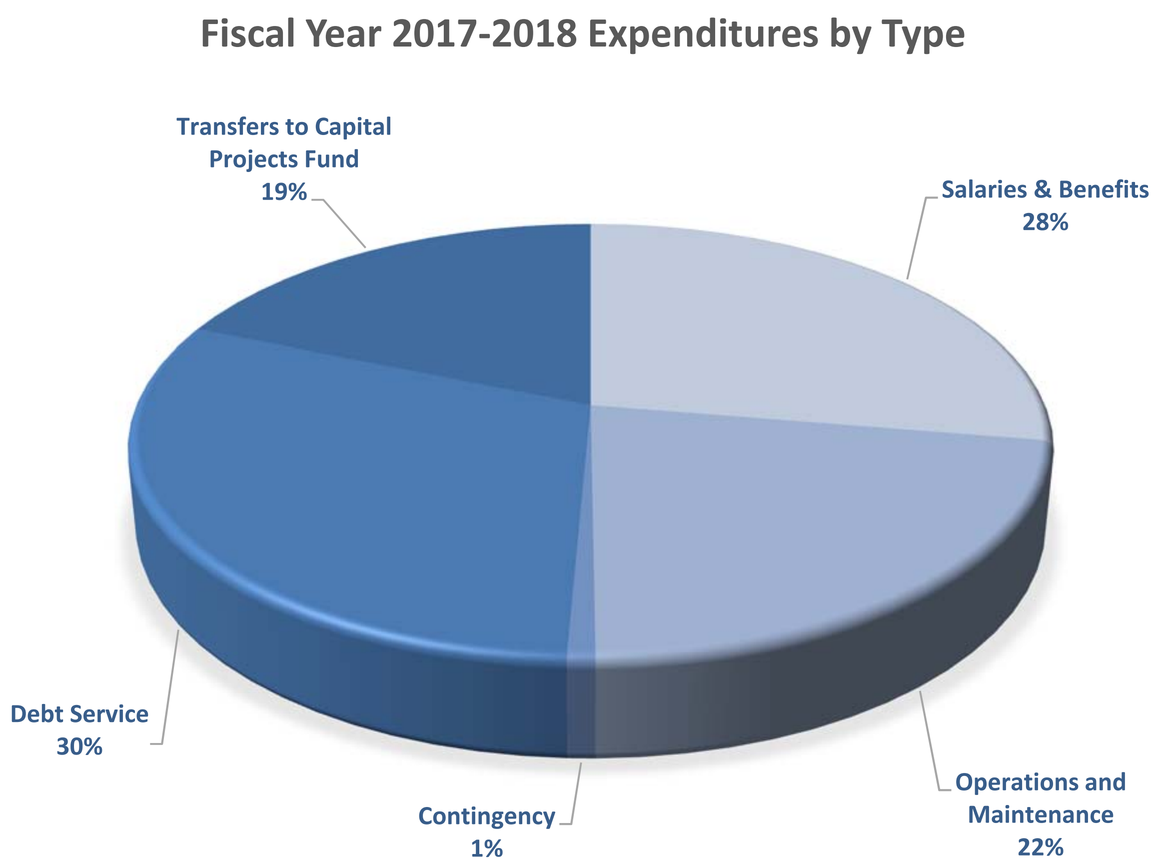
Capital Outlay	553,801	497,693	525,985	-	387,706	(387,706)	-	85,825	-	-100.00%
TOTAL OPERATING EXPENDITURES	35,061,530	31,801,997	36,220,146	32,907,321	36,960,527	8,570	36,969,097	30,923,520	37,152,403	0.52%
Nondepartmental	2,244,300	2,056,666	2,398,500	2,140,026	2,221,260	17,000	2,238,260	2,238,260	2,491,903	12.18%
Debt Service, Net	27,951,899	26,190,598	34,153,693	33,402,391	24,260,053	-	24,260,053	24,260,053	24,292,749	0.13%
Debt Issuance Cost	750,000	619,539	1,466,100	690,170	690,000	-	690,000	-	-	-100.00%
Payment to Refunded Bond Escrow Agent	49,035,703	49,035,703	187,785,880	187,785,880	-	-	-	-	-	0.00%
Litigation Settlement	-	-	871,000	870,609	-	-	-	-	-	0.00%
Contingency-Operating	348,182	-	472,000	-	953,000	-	953,000	-	675,000	-29.17%
Transfers to Capital Projects	15,915,100	15,915,100	16,233,854	16,233,854	10,530,726	5,900,184	16,430,910	16,430,910	14,906,616	41.55%
TOTAL EXPENDITURES	$ 131,306,714	$ 125,619,603	$ 279,601,173	$ 274,030,251	$ 75,615,566	$ 5,925,754	$ 81,541,320	$ 73,852,743	$ 79,518,671	5.16%

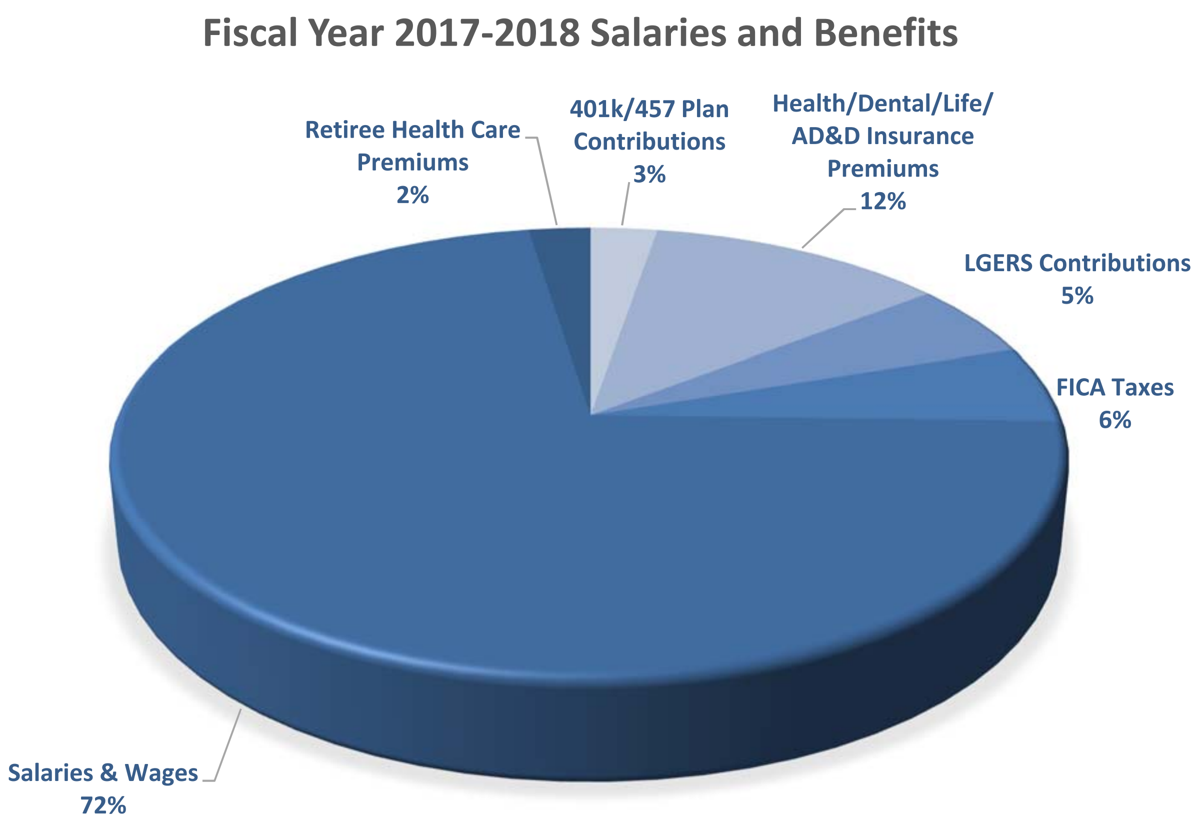
EXPENDITURE SUMMARY

The Authority's operating budget covers the cost to operate the system each year including water and wastewater treatment costs, water distribution, wastewater collection, system maintenance, environmental management, engineering, customer service, and administrative costs. Appropriations in the operating budget are made on an annual basis meaning that budget authority lapses at the end of each budget year. This contrasts with the capital budget in which specific project appropriations continue through the life of the project, which may span multiple budget years. The information below summarizes the major expenditure categories and some of the key factors and assumptions driving the FY17-18 operating budget.



Salaries and Benefits

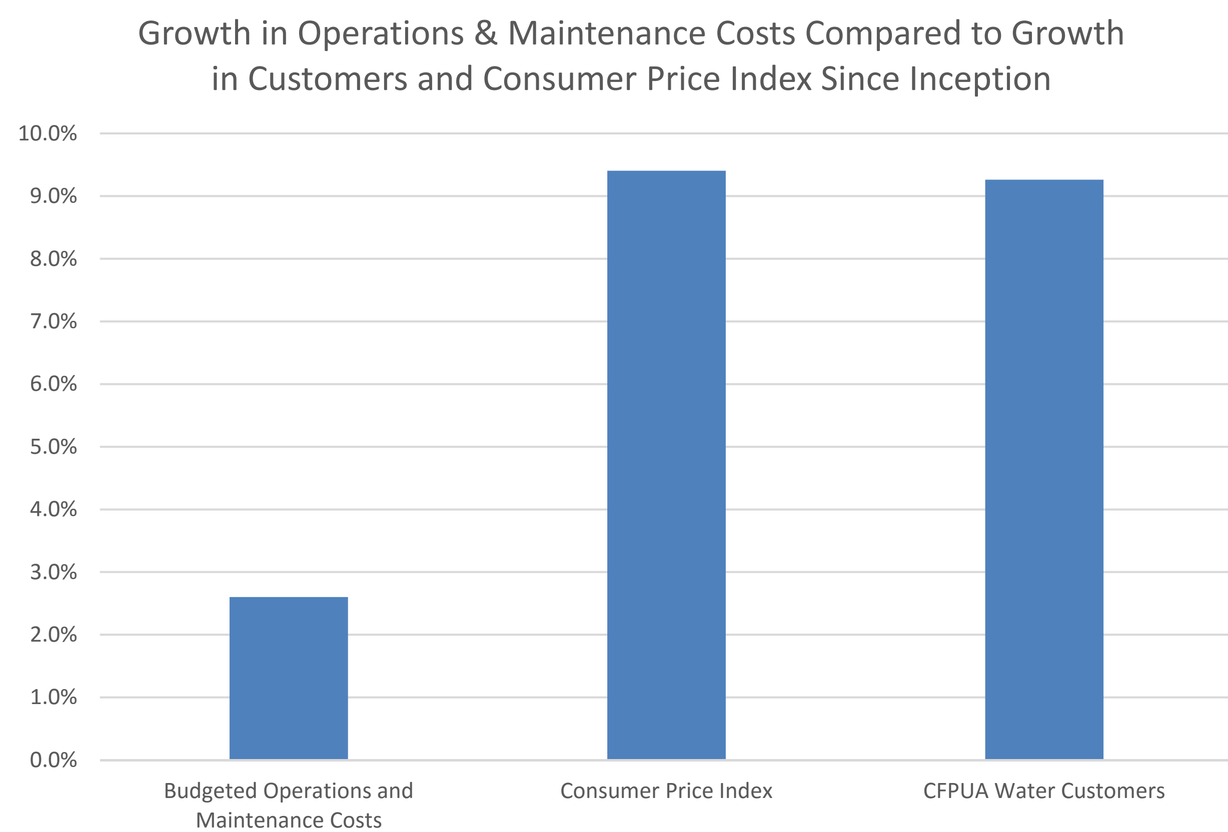
Approximately 28% of the Authority's operating budget is comprised of salaries and benefits costs related to the Authority's employees and retirees. The FY 17-18 budget includes appropriations to fund salaries and benefits for 306.5 full-time equivalent positions, which is 3 more full-time equivalent positions than was appropriated in the FY 16-17 budget. Salaries are budgeted with the second phase of the most recent classification & compensation study, a 1% market cost-of-living adjustment, and a 3% merit increase. Appropriations for benefits incorporate a composite 4% increase in North Carolina state health plan premiums (effective January 1, 2018); a 10% increase in dental premiums (effective January 1, 2018); and an increase in employer contributions to the North Carolina Local Government Employees Retirement System from 7.25% to 7.50% (effective July 1, 2017). The following chart details the composition of budgeted salaries and benefits costs for FY 17-18.



Operations and Maintenance

These costs include all direct, non-capital costs to operate the water and wastewater systems including water and wastewater treatment, water distribution, wastewater collection, engineering, customer service, environmental management and testing, and administrative costs. The FY 17-18 budget continues the Authority's commitment to delivering the highest quality services at the lowest practical cost. The graph below demonstrates the growth in operating and maintenance costs prior to the creation of the

Authority compared to percentage changes in customers and the consumer price index over the same time span.



Source: Bureau of Labor Statistics for Consumer Price Index Data

Contingency

North Carolina statutes allow for local governmental units to budget contingency appropriations up to 5% of the total operating budget. Contingency appropriations provide for a source of budgetary authority for unanticipated and unbudgeted costs that may occur during the year. These costs could include repair and system restoration costs necessitated by the occurrence of a natural disaster or deviations from assumptions incorporated into the budget such as significant increases in the cost or volume of chemicals used to treat water or wastewater. The $675,000 in contingency appropriations in FY 17-18 was based on actual contingency usage in past years as well as other elements of the Authority's risk mitigation program including regular infrastructure maintenance and capital improvements, appropriable cash reserves, other funding in the event of a natural disaster such as FEMA Public Assistance funding, and insurance coverages.

Debt Service

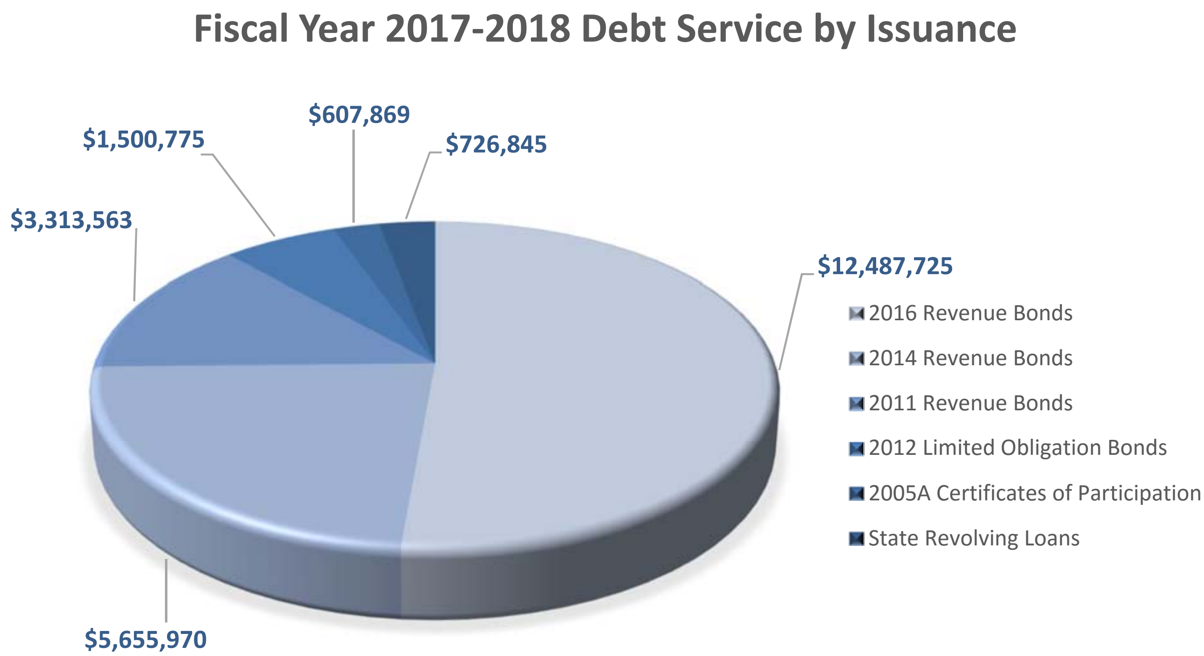
The Authority is empowered to issue revenue bonds to fund its capital program. Pursuant to the interlocal agreement transferring the City of Wilmington's and New Hanover County's water and wastewater system to the Authority, the Authority assumed responsibility for the related debt. All the debt transferred from the City has been retired, while the 2012 Limited Obligation Bonds and the 2005A Certificates of Participation transferred from the County remain outstanding.

The Authority is required to structure its rates to maintain coverage at 1.2 times the annual debt service requirement; however, the Authority's policy is to maintain coverage of at least 1.6 times the annual debt service requirement. In addition, in accordance with policy, the Authority is not able to issue debt if the issuance of such debt would cause the Authority's debt balance to exceed 45% of the Authority's capital asset balance. The Authority does not plan to issue debt in FY 17-18 and is projecting to achieve a coverage ratio of 1.6 times the FY 17-18 debt service requirement and maintain outstanding debt balances at 37% of capital assets. The Authority maintains credit ratings of AA+ and Aa2 from Standard & Poor's and Moody's, respectively. Both ratings are one level below the highest possible ratings.

The following chart details the Authority's outstanding debt issuances:

Issue Name	Principal	Interest	Total	Coupon	Maturity
2016 Revenue Bonds	$ 147,600,000	$ 61,994,113	$ 209,594,113	1.75% - 5.00%	2035
2014 Revenue Bonds	58,645,000	27,243,095	85,888,095	0.20% - 5.00%	2040
2011 Revenue Bonds	36,770,000	20,164,344	56,934,344	3.25% - 5.00%	2037
2012 Limited Obligation Bonds	10,850,000	2,673,900	13,523,900	2.50% - 4.34%	2028
2005A Certificates of Participation	587,800	20,069	607,869	3.41%	2018
State Revolving Loans	9,193,924	1,534,468	10,728,392	2.00% - 2.46%	2034
Total	**$263,646,724**	**$113,629,989**	**$377,276,713**		

The debt service appropriation for the FY 17-18 budget of $24.3 million includes amounts to pay principal and interest on the Authority's outstanding debt obligations. FY 17-18 principal payments total $13.0 million and interest payments total $11.3 million. The following graph details the composition of FY 17-18 budgeted debt service by issuance.

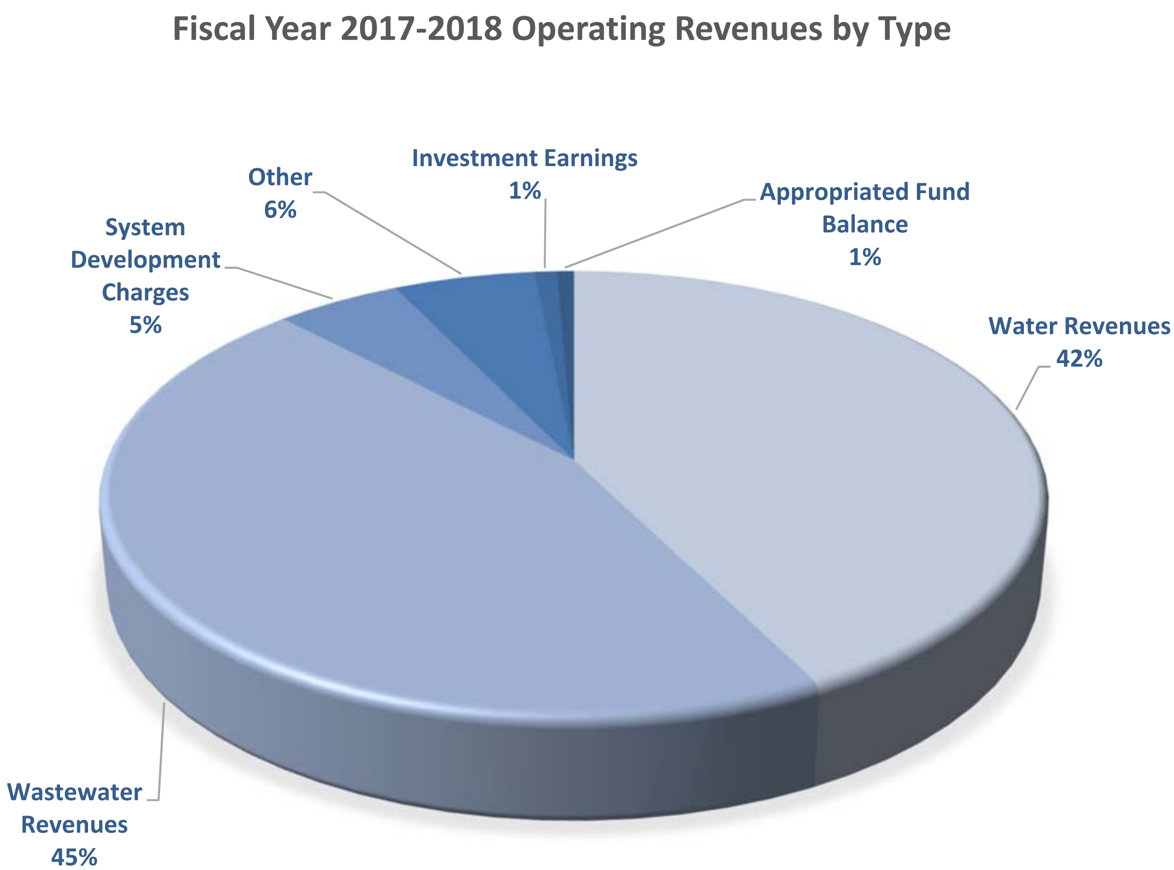


Transfers to Capital Projects Fund

In addition to proceeds from the issuance of debt, transfers of current year revenues to the capital projects fund is the other major source of funding for the Authority's capital program. With the adoption of the Authority's debt management policy, these transfers will gradually increase over the coming years until the Authority's average, recurring capital expenditures are fully funded from transfers. The appropriation in FY17-18 of $14.9 million, a 41.3% increase over the transfers appropriated in FY 16-17, reflects the implementation of this policy.

REVENUE SUMMARY

The Authority is empowered to set rates, fees and charges without oversight, supervision, or direction from any other state or local entity or agency. The Authority's operations, capital improvement program and debt payments are funded almost entirely through rates, fees and other charges for these water and wastewater services, with occasional grants from the state or federal governments and contributions from the City, the County or other entities.



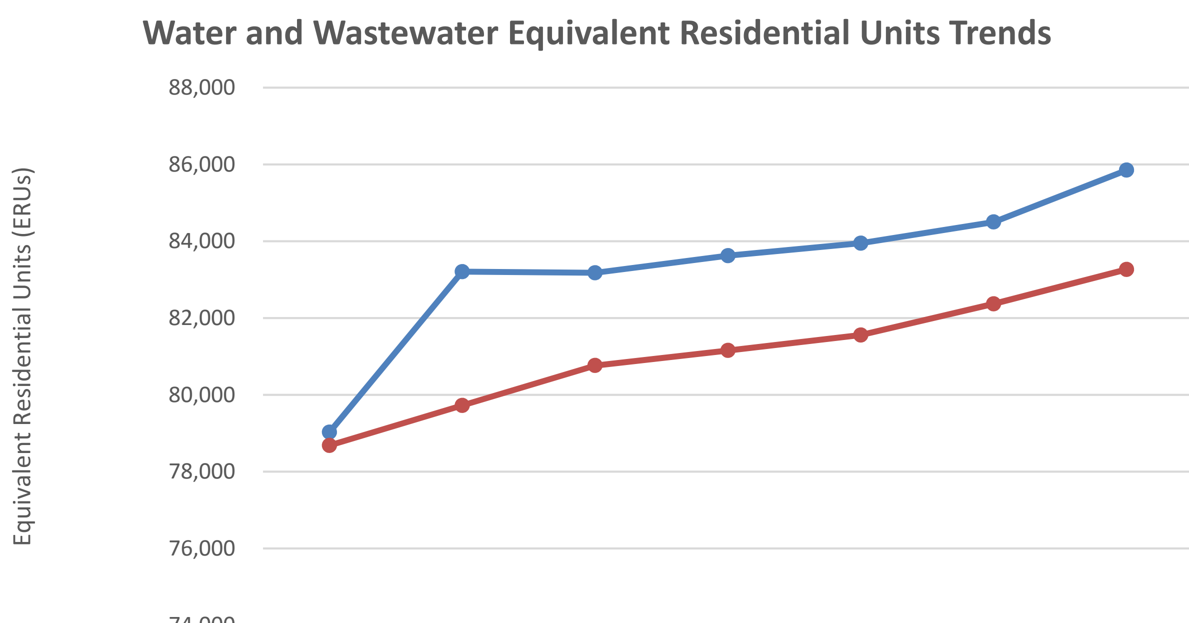
Water and Wastewater Revenues

Most of the Authority's revenues (87%) are generated by the sale of water and the collection and treatment of wastewater. As depicted above, in FY 17-18, 42% of total budgeted revenue is anticipated from water services and 45% of total budgeted revenue is anticipated from wastewater services. The existing water and wastewater rates consist of 1) fixed meter charges that designate the minimum amount a customer will pay regardless of consumption and 2) volumetric charges per 1,000 gallons based upon the amount of metered water flow.

REVENUE SUMMARY

Water and wastewater fixed charges are developed to recover the greater of debt service allocable to water and wastewater or 35% of the operating budget allocable to water and wastewater. This policy exists so that sufficient amounts are available to pay debt service irrespective of consumption. Fixed charges are developed to recover at least 35% of budgeted operating expenditures to protect the Authority's revenues from consumption shocks that may occur in periods in which annual debt service requirements are declining.

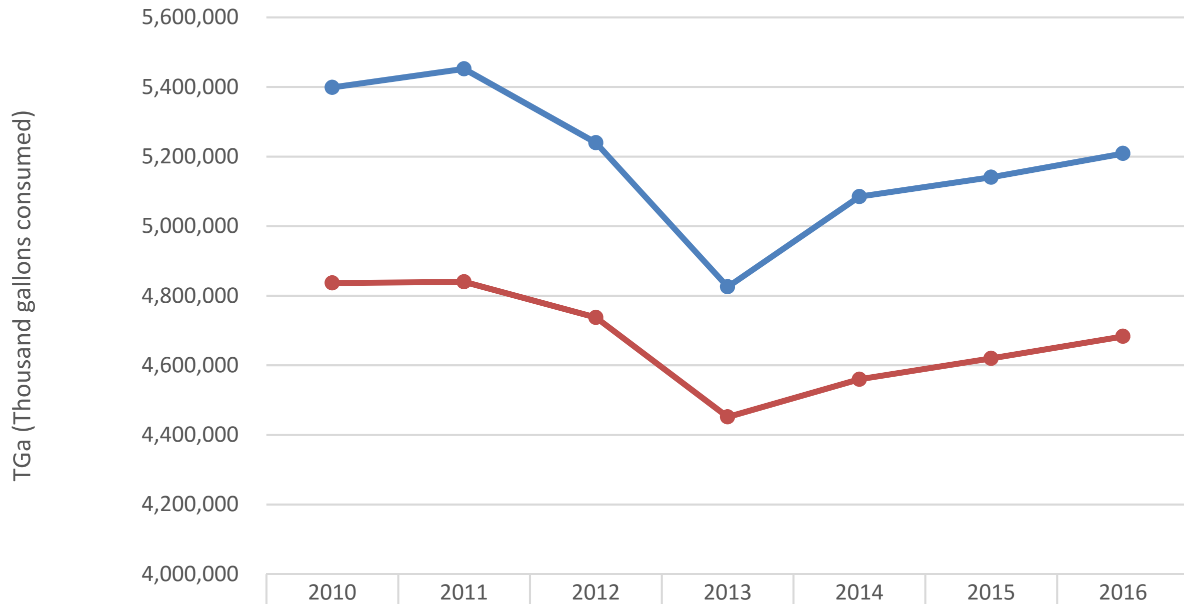
The fixed meter charges are incremented such that customers with larger water meter sizes pay a higher fixed charge. Fixed meter charges are calculated based on the number of equivalent residential units (ERUs), which expresses the number of accounts as if each customer were a residential customer. ERUs assumed for the FY 17-18 budget are based on recent actual counts. The graph below depicts the actual ERUs since FY 11-12 and the projected ERUs for FY 17-18 for water and wastewater.



	2012	2013	2014	2015	2016	2017	Projected 2018
Water ERUs	79,029	83,209	83,179	83,626	83,950	84,502	85,853
Wastewater ERUs	78,685	79,726	80,766	81,156	81,558	82,372	83,268

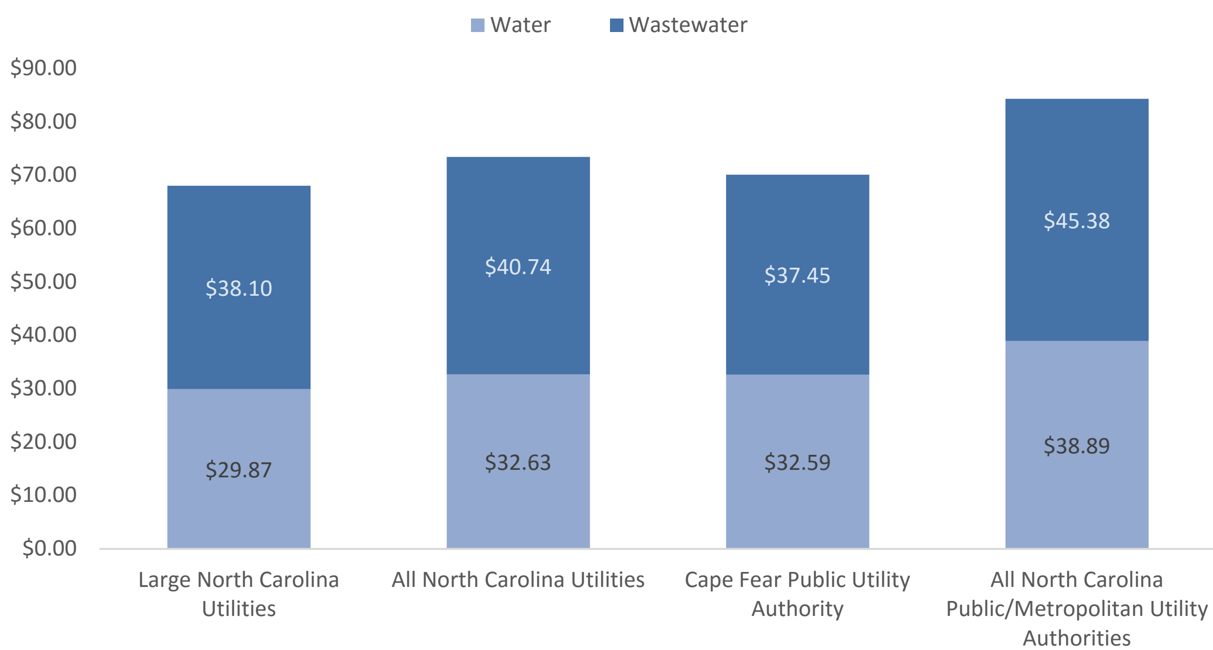
The volumetric charge utilizes a uniform rate structure such that the rate per 1,000 gallons remains constant for all levels of consumption. Volumetric charges are developed to recover operating costs allocated to water and wastewater, respectively, that aren't recovered from fixed charges and other revenues. The remaining allocated costs pools for water and wastewater are divided by projected water and wastewater consumption. Consumption projections are based on actual consumption for the most recent calendar year. For FY 17-18, actual consumption for calendar year 2016 was used. The graph on the following page depicts the actual calendar year consumption since 2010.

Water and Wastewater Consumption by Calendar Year



	2010	2011	2012	2013	2014	2015	2016
Water (TGa)	5,398,715	5,451,866	5,239,678	4,825,485	5,084,771	5,140,369	5,208,580
Wastewater (TGa)	4,836,382	4,840,008	4,737,475	4,451,643	4,559,563	4,619,794	4,682,980

Median Monthly Residential Water and Sewer Bill



Source: Environmental Finance Center, *Water and Wastewater Rates and Rate Structures in North Carolina, 2017*

The table below compares the FY17-18 fixed and volumetric charges for water and wastewater to the rates in effect for FY 16-17.

	FY 17-18	FY 16-17	$ Difference	% Difference
Water:				
Fixed	$26.67	$25.81	$0.86	3.3%
Volumetric	$3.85	$3.67	$0.18	4.9%
Wastewater:				
Fixed	$29.10	$29.10	-	-
Volumetric	$4.58	$4.56	$0.02	0.4%

Assuming monthly consumption of 5,000 gallons, a residential customer will pay $70.04 per month ($140.08 every two months) in FY 17-18. The graph on the previous page compares the Authority's monthly residential water and wastewater bills to those of other North Carolina public water and wastewater utilities. Although the Authority bills customers every two months, monthly bill amounts were calculated for purposes of comparability.

The peer groups for bill comparison include all North Carolina public water and wastewater utilities, large North Carolina public water and wastewater utilities (defined as those utilities with more than 25,000 customer accounts), and all North Carolina public/metropolitan public utility authorities. The median monthly bills for the peer groups are based on rates in effect for FY 16-17. The amounts presented for the Authority are based on adopted rates for FY 17-18. The Authority's average monthly residential bill compares favorably to the median bills for each of the peer groups. The total monthly residential bill is lower than the median bills for all North Carolina public utilities and the North Carolina public/metropolitan utility authorities and slightly higher than the median bill for large North Carolina Utilities. The Authority's monthly residential wastewater bill is lower than the median monthly residential wastewater bills for each peer group, while the Authority's monthly residential water bill is lower than the median bill for all peer groups except for the large North Carolina utilities.

System Development Charges

The system development charge is the upfront charge that a new customer pays to buy into infrastructure that has been paid for with past rate collections that will benefit the new customer. For purposes of the calculation, the value of infrastructure that will benefit the new customer is reduced by the outstanding balance of debt issued to acquire or construct the infrastructure. For transparency and verifiability, the Authority uses the Net Investment in Capital Assets component of net position found on the Statement of Net Position in the Authority's most recently audited Comprehensive Annual Financial Report. The Net Investment in Capital Assets is allocated between water and wastewater in proportion to cumulative capital investment in the water and wastewater systems. These allocations are then divided by the number of equivalent residential units for the respective systems. The system development charges are applied based on the size of the water meter for the new connection and are scaled for larger connection sizes. To reduce potential volatility, the system development charge is recommended to not exceed or fall below 5% of the system development charge currently in effect. System development charges are $1,590 and $2,130 for water and wastewater, respectively, both 5% increases from the charges in effect for FY 16-17. System development charges are anticipated to comprise 5% of the Authority's operating revenues for FY 17-18.

Other Charges for Service

Other charges for service account for 6% of total budgeted revenues. Other charges include penalties and late fees, application and premise visit fees, meter fees and tap fees. Budgeted amounts are based on historical averages adjusted for current trends.

Investment Earnings

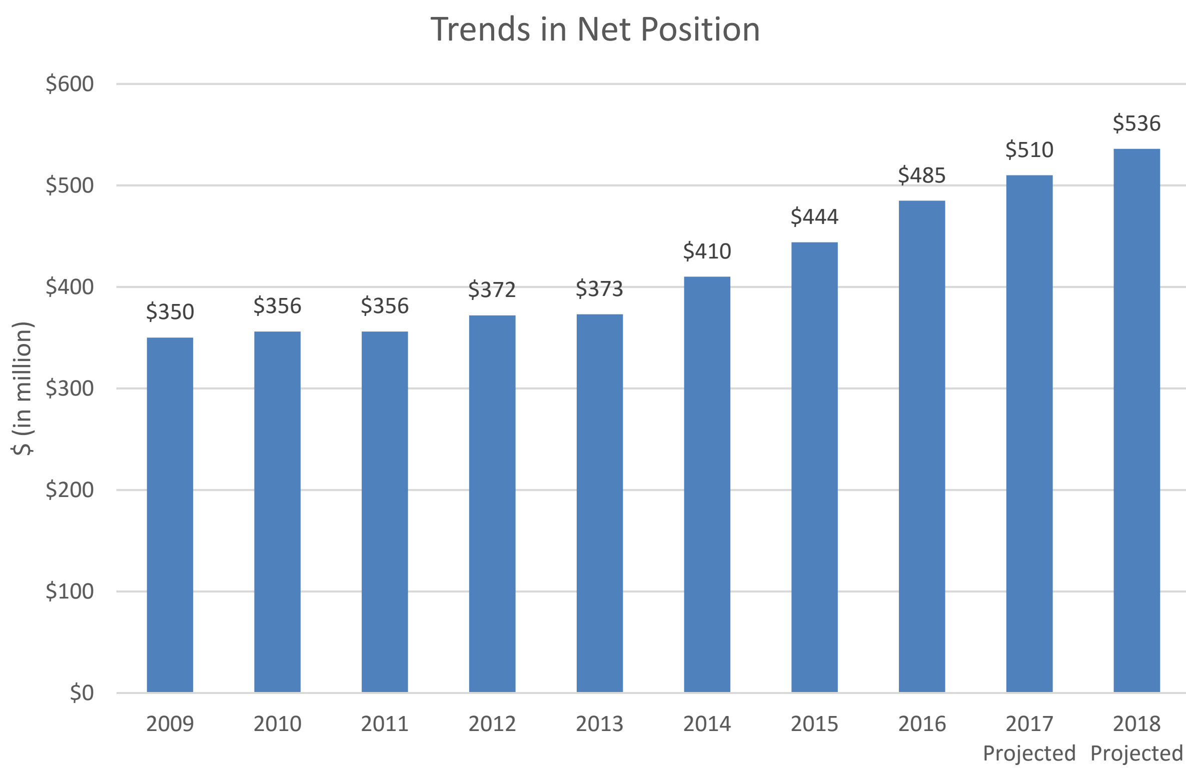
Investment earnings are budgeted at $700,000 in FY 17-18 which is approximately 1% of total budgeted revenue. Maintaining investment earnings at levels experienced in previous fiscal years will be a challenge as available cash and investment balances are spent down to fund the capital program in accordance with the Authority's recently adopted liquidity and reserve policy. Staff is planning to implement procedures to forecast cash flows to maximize the dollars that can be invested in longer-term, higher-yielding investments that comply with State laws to ensure safety and liquidity.

Appropriated Fund Balance

In accordance with the Local Government Fiscal Control Act, the Authority may use some unexpended funds from previous years to balance the budget. This is like an individual using his or her savings account. To ensure compliance with revenue bond rate covenants, appropriated fund balance is used for one-time expenditures. The FY 17-18 Budget includes an estimated use of $540,000 of appropriated fund balance to fund appropriations related to the provision of retiree health insurance benefits. These amounts will be funded from cash contributions made at the inception of the Authority by the City of Wilmington and New Hanover County that were explicitly designated for funding post-employment health insurance benefits to legacy employees.

ANALYSIS OF NET POSITION

The Authority operates like a stand-alone enterprise in which the cost of service is recovered exclusively through customer rates and charges. Consequently, the most meaningful measure of financial position for the Authority's operations is net position. This measure represents the extent to which the Authority's assets and deferred outflows of resources exceed its liabilities and deferred inflows of resources on the full accrual basis of accounting similar to a private company. The following bar chart shows the trends in the Authority's net position since inception.



The main driver of the Authority's net position is the way in which the Authority's capital program is funded. Funding capital improvements with revenues increases net position, while funding capital improvements with debt has no effect on net position. As the chart demonstrates, the Authority's net position has increased since inception and this trend is expected to continue in FY 17-18. Net position is projected to improve in FY 17-18. Rate revenues, grant funding and capital contributions to pay capital expenditures are projected to outpace depreciation on capital improvements by $13 million. In addition, the Authority's long-term debt will decrease as approximately $13 million in principal will be retired during the year with water and wastewater rate revenue collections.

POSITIONS SUMMARY
FY 17-18

The budget authorizes a total of 306.5 positions.
Full-time Equivalent (FTEs) by department.

	FY16	FY17	FY18
Administration	5	4	**4**
Finance	12	12	**12**
Human Resources/Safety	5	5	**4**
Engineering	25	27	**27**
Operations - Administration	3	3	**3**
Operations - Information Technology	6	6	**7**
Operations - Centralized Maintenance	19	19	**19**
Operations - Utility Services	88	90	**90**
Operations - Wastewater Treatment	30	30	**31**
Operations - Water Treatment	24	25	**26**
Environmental Management	28.5	28.5	**29.5**
Customer Service/Meters	50	54	**54**
Total	295.5	303.5	**306.5**

APPROVED SALARY PAY SCALE

Grade	Minimum	1st Quartile	Midpoint	3 Quartile	Maximum
G06	$ 25,074.47	$ 28,522.21	$ 31,969.95	$ 35,417.69	$ 38,865.43
G07	$ 26,343.86	$ 29,966.14	$ 33,588.42	$ 37,210.70	$ 40,832.98
G08	$ 27,677.52	$ 31,483.18	$ 35,288.84	$ 39,094.50	$ 42,900.16
G09	$ 29,078.70	$ 33,077.02	$ 37,075.34	$ 41,073.66	$ 45,071.98
G10	$ 30,550.81	$ 34,751.55	$ 38,952.29	$ 43,153.02	$ 47,353.76
G11	$ 32,097.45	$ 36,510.85	$ 40,924.24	$ 45,337.64	$ 49,751.04
G12	$ 33,722.39	$ 38,359.21	$ 42,996.04	$ 47,632.87	$ 52,269.70
G13	$ 35,429.58	$ 40,301.14	$ 45,172.71	$ 50,044.28	$ 54,915.85
G14	$ 37,223.21	$ 42,341.40	$ 47,459.59	$ 52,577.78	$ 57,695.97
G15	$ 39,107.61	$ 44,484.91	$ 49,862.21	$ 55,239.50	$ 60,616.80
G16	$ 41,087.45	$ 46,736.97	$ 52,386.49	$ 58,036.02	$ 63,685.54
G17	$ 43,167.50	$ 49,103.03	$ 55,038.56	$ 60,974.10	$ 66,909.63
G18	$ 45,352.85	$ 51,588.86	$ 57,824.88	$ 64,060.90	$ 70,296.91
G19	$ 47,648.84	$ 54,200.56	$ 60,752.27	$ 67,303.99	$ 73,855.70
G20	$ 50,061.05	$ 56,944.45	$ 63,827.84	$ 70,711.24	$ 77,594.63
G21	$ 55,258.05	$ 62,856.03	$ 70,454.01	$ 78,051.99	$ 85,649.98
G22	$ 60,994.54	$ 69,381.29	$ 77,768.03	$ 86,154.78	$ 94,541.53
G23	$ 67,326.56	$ 76,583.96	$ 85,841.36	$ 95,098.77	$ 104,356.17
G24	$ 74,315.93	$ 84,534.37	$ 94,752.81	$ 104,971.25	$ 115,189.69
G25	$ 82,030.88	$ 93,310.12	$ 104,589.37	$ 115,868.61	$ 127,147.86
G26	$ 90,546.74	$ 102,996.92	$ 115,447.10	$ 127,897.27	$ 140,347.45
G27	$ 99,946.66	$ 113,689.33	$ 127,431.99	$ 141,174.66	$ 154,917.32

Source: CFPUA Human Resources-March 2017, FY18 - 1% market adjustment

AUTHORITY BOARD

Board Chair, Michael C. Brown, III

The Cape Fear Public Utility Authority Board consists of eleven members. The City of Wilmington and New Hanover County appoint five members each; two of those appointments come from their respective governing boards. The eleventh member is jointly appointed. The Board is responsible for: the adoption of the annual budget; setting water and sewer rates; making policy decisions; appointing the Executive Director, and contracting with the Authority's Legal Counsel.

Key Accomplishments for FY 17

- Supported regional, cooperative solutions to water and sewer needs through partnerships in the public and private sectors.
- Adopted a financial plan and formal policies supporting the generation and use of pay-go capital and limiting debt issuance for large expansion or growth projects.

Authority Board Notable Goals for FY 18

- Continue to set policies and objectives for the organization.
- Provide direction for the Authority to meet its mission to p*rovide high-quality water and sewer service in an environmentally responsible manner, while maintaining the lowest practicable cost.*

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Authority Board										
Salaries & Benefits	$ 42,639	$ 42,635	$ 42,645	$ 41,615	$ 42,632	$ (24)	$ 42,608	$ 39,245	$ 42,635	0.01%
Operating	34,788	28,980	23,898	16,115	21,998	-	21,998	13,933	19,736	-10.28%
Total Authority Board	**77,427**	**71,615**	**66,543**	**57,730**	**64,630**	**(24)**	**64,606**	**53,178**	**62,371**	**-3.50%**

ADMINISTRATION – OFFICE OF THE EXECUTIVE DIRECTOR

Executive Director, James R. Flechtner, P.E.

The Executive Director is responsible for the overall management of Cape Fear Public Utility Authority. The Executive Director employs and manages the management staff, designates assignments, and is responsible for carrying out the policies and directives of the Board. The Authority's Administration Department includes an Executive Administrator who provides direct support to the Executive Director and the Chief Communications Officer.

Key Accomplishments for FY 17

- Provided leadership to ensure that the organization's overall mission was accomplished.
- Promoted and maintained outstanding service and communications with customers.
- Provided the Authority Board with timely support and information.
- Ensured that water and wastewater facilities operated in compliance with applicable standards.
- Implemented sound fiscal policies, budgets and controls.
- Implemented and maintained effective long-term financial, operational and environmental sustainability plans.
- Provided high-level direction and support for the sustainability and resource management activities throughout the Authority.
- Encouraged teamwork within the Authority and with our partners in the community.
- Promoted training and development of all employees in order to improve services.
- Promoted an environment of open communications within the Authority.
- Endorsed and encouraged a safe working environment.

Office of the Executive Director Notable Goals for FY 18

- The Office of the Executive Director carries out the Authority's mission to provide high quality water and sewer service in an environmentally responsible manner, while maintaining the lowest practicable cost. This is accomplished through the Authority's Guiding Principles:
  - *Stewardship* – Maintain a stable financial position that balances rates, the environment and the Authority's long-term capital and operating needs.
  - *Sustainability* – Build partnerships that encourage growth while optimizing the protection and use of water and sewer resources.

- *Service* – Strengthen relationships with customers, regulators, government officials, including the City of Wilmington and New Hanover County, and support staff by providing a competitive, safe, work environment that offers rewards for excellence.

ADMINISTRATION – COMMUNICATIONS DIVISION

Chief Communications Officer

The Communications Division within the Administration Department is responsible for keeping customers and other key stakeholders, including the news media, informed about CFPUA's role within the City of Wilmington and New Hanover County. The division also supports various departments within CFPUA with outreach to customers affected by scheduled construction projects or by providing emergency response assistance.

Key Accomplishments for FY 17

Fiscal Year 17 was a year where CFPUA was constantly at risk for potentially negative attention. The communications process quickly and properly responded to the issues at hand, cutting down on anyone's ability to cast the work of the organization in a poor light. In fact, many of the issues were turned into positives for CFPUA.

Every media outlet in the area now contacts the Chief Communications Officer to determine if a story is newsworthy before devoting resources, which guarantees a story is covered regardless of the facts. In almost every case in 2016, CFPUA's response quickly defused several potentially negative stories by transparently providing evidence to knock down the charges made by the person or persons complaining to the media outlet. More than 100 newspaper pieces and television stories were written about CFPUA in the past year, resulting in more positive coverage of our work than during any other year in our history.

The most substantive example was how the communications process worked during October's raw water main break that resulted in three weeks of mandatory water restrictions and the use of emergency water wells that presented aesthetic challenges. CFPUA served as the Unified PIO for the incident, leading the responses with the press and the public throughout the event. We immediately landed support from the StarNews with a lead editorial, and – by being always on call - garnered consistent, correct coverage from the paper and the television stations who reported on the situation for days.

Social media presented a heightened threat to CFPUA's reputation during the emergency response but - thanks to constant monitoring, relationship building with key influences, and immediate posts that responded quickly and clearly to rumors – we diffused charges of poor work and diminished water quality. CFPUA created a new channel on YouTube to showcase videos and photos from the scene and properly "feed the beast" with information.

In addition, Communications worked directly with the StarNews to receive editorial coverage that touted CFPUA's success in ways we have not seen before. The editorial, titled "CFPUA was right decision for the area," stated, "Born out of chaos in 2008…, it wouldn't be surprising if CFPUA were dysfunctional. What's astounding, however, is how well the authority has actually run and how it's steadily improved."

The editorial followed the political primary campaign where CFPUA became a focal point. During the campaign, CFPUA Communications landed a key op-ed to defend the organization against unsubstantiated charges that had made their way into the media. The op-ed, titled "Setting the record straight on CFPUA", received strong support from key stakeholders and, combined with CFPUA's positive news about its cuts in sewer spills, directly led to the StarNews' "right decision" editorial two months later.

Other issues handled by CFPUA Communications included: complete and positive coverage of our full emergency exercise in March; an algae bloom in Silver Lake; the overall reaction to the situation in Flint, Michigan; concerns about unregulated contaminants found in the nation's rivers; the results of UNC's rate study; ConnectNC funding; the continuing issues with the VA clinic; Hurricanes Matthew and Hermine; and future 421 work.

Our emergency communications process for daily incidents continues to serve CFPUA well. Today, we continue to use more methods for disseminating information to our customers than any other water and sewer utility in the state.

Our work on several key construction projects also effectively relayed information to current and future customers. Working closely with the Engineering Department, we continued to manage the Heritage Park and Marquis Hills Septic-to-Sewer projects, and served as a direct point-in-contact for other efforts, enabling residents to have their concerns addressed as quickly as possible.

Communications wrote and produced the 2016 Annual Report, which took the unique angle of presenting a brief history of the area's water and sewer services and how they directly connect to CFPUA's work today. It received overwhelmingly positive reviews from key stakeholders for its design and content.

Communications continued the "Cease the Grease" successful lid campaign by helping EMD purchase 15,000 more lids.

Communications Division Notable Goals for FY 18

- FY 17 was a high-profile year, due to circumstances largely beyond our control. Communications will focus on continuing to receive appropriate levels of positive/neutral coverage for our work but with an eye towards settling into a lower level of attention.
- Focus on the website to make it more of a go-to destination for information about CFPUA.
- Review the past year for ways to improve upon the current communications process.
- Explore the use of video to add to CFPUA's communications vehicles, including our new YouTube channels.
- Improve our social media work to develop a constant, beneficial presence using Twitter.
- With the addition of a second station, expand the use of CFPUA's water stations for community outreach.

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Administration										
Salaries & Benefits	574,932	571,578	591,705	553,355	606,813	(100,253)	506,560	467,528	519,780	-14.34%
Operating	319,500	292,382	289,400	195,785	293,561	-	293,561	144,862	220,200	-24.99%
Total Administration	**894,432**	**863,960**	**881,105**	**749,140**	**900,374**	**(100,253)**	**800,121**	**612,390**	**739,980**	**-17.81%**

FINANCE

Chief Financial Officer, John McLean, CPA

The Finance Department is responsible for managing the Authority's finances in accordance with best practices and statutory requirements. The major responsibilities of the Finance Department include preparing the annual budget and Comprehensive Annual Financial Report in accordance with generally accepted accounting principles, making timely payments to vendors, processing payroll and managing the bidding and contract process.

Key Accomplishments for FY 17

- Maintained credit ratings at AA+ with Standard & Poor's and Aa1 with Moody's by achieving target levels of debt service coverage, days cash on hand, debt, and rate affordability.
- Worked with the Authority Board to adopt new financial policies on debt management and reserves.
- Prepared the Authority's eighth Comprehensive Annual Financial Reports (CAFR) for the fiscal year that ended June 30, 2016, obtaining an unmodified audit opinion.
- Awarded the Government Finance Officers Association's Certificate of Achievement for Excellence in Financial Reporting for the fiscal year ended June 30, 2016, for the eighth consecutive year.
- Awarded the Government Finance Officers Association Distinguished Budget Presentation Award for the FY17 Adopted Budget for the fifth consecutive year.
- Selected an ERP solution and executed the contract for the ERP software implementation.

Finance Department Notable Goals for FY 18

- Maintain credit ratings at AA+ with Standard & Poor's and Aa1 with Moody's by achieving target levels of debt service coverage, days cash on hand, debt, and rate affordability.
- Achieve time savings by preparing the basic financial statements for the FY17 CAFR and the monthly board financial statements using the general ledger and reporting modules of the new ERP system.
- Optimize investment returns by maximizing funds invested in longer-term, higher-yielding investments as allowed by applicable laws.
- Review and update all financial policies.
- Preparation of the Authority's FY18 Adopted Budget to meet the Government Finance Officers Association's Distinguished Budget Presentation Awards Program criteria.
- Preparation of the Comprehensive Annual Financial Report for the fiscal year ended June 30, 2017 in accordance with the Government Finance Officers Association's Certificate of Achievement for Excellence in Finance Reporting Program.

Finance Department Performance Measures

	Goal	FY15	FY16
Key Financial Metrics			
Debt Service Coverage	> 1.60	1.77	1.46
Days Cash on Hand	> 250	1,223	1,331
Leverage – Debt to Capitalization Ratio	< 45%	52%	41%
Affordability – Annual Utility as a % of MHI	<2.0%	1.7%	1.7%
Financial Reporting Efficiency			
Produce basic financial statements using general ledger and reporting modules in the new ERP system	Yes	N/A	N/A
Annual Review/Update of Financial Policies			
Completion of policy review/update	Yes	Yes	Yes
Optimize Investment Returns			
Demand deposits as a % of total cash/investment	<15%	34%	44%
Annual time-weighted return >12-mo LIBOR	Yes	Yes	Yes
Achievement in Financial Reporting			
Receipt of GFOA Budget Award	Yes	Yes	Yes
Receipt of unmodified audit opinion	Yes	Yes	Yes
Receipt of GFOA CAFR Award	Yes	Yes	Yes

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Finance										
Salaries & Benefits	1,031,369	1,334,241	1,137,350	990,432	1,057,874	(6,294)	1,051,580	926,462	1,057,277	-0.06%
Operating	51,638	680,579	42,920	32,117	65,200	-	65,200	41,129	80,832	23.98%
Total Finance	**1,083,007**	**2,014,820**	**1,180,270**	**1,022,549**	**1,123,074**	**(6,294)**	**1,116,780**	**967,591**	**1,138,109**	**1.34%**

HUMAN RESOURCES

Director of Human Resources, Denise Matroni

The Human Resources Department provides quality service and support in employment, employee relations, benefits, compensation, health and safety, and training to the employees so that they can best serve the needs of the customers of Cape Fear Public Utility Authority.

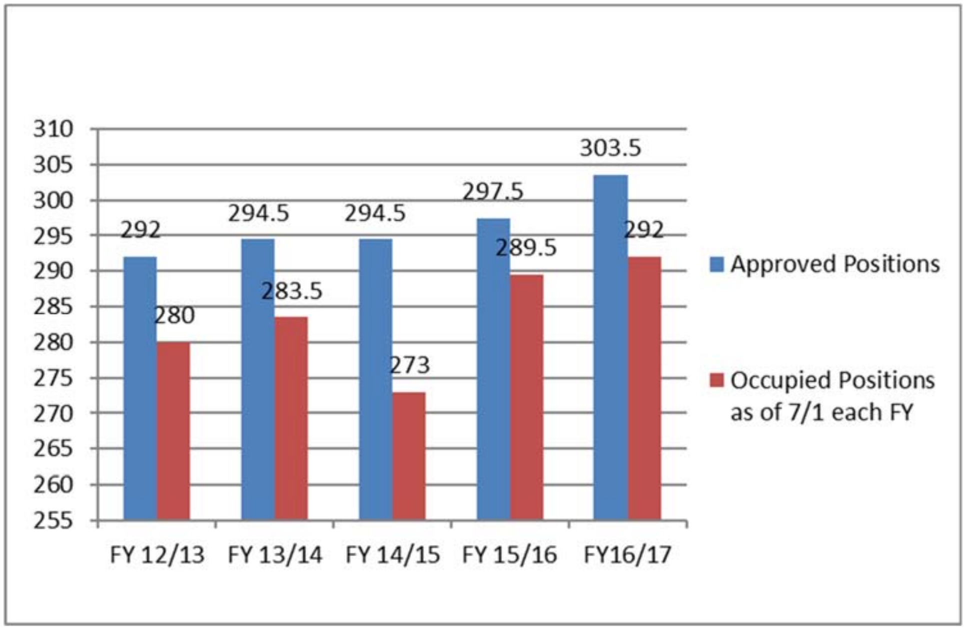
Key Accomplishments for FY 17

- Secured employee benefit renewal contracts consistent with the Authority’s HR Committee and Board recommendations, and converted all employee benefits contracts from fiscal year to calendar basis.
- Successfully obtained 100% employee participation in the on-line enrollment into the State Health Plan for the initial enrollment period and the subsequent open enrollment period.
- Organized and scheduled seasonal flu vaccinations clinics and employee biometric screenings.
- Scheduled and conducted Human Resources and Safety training classes totaling over 1,780 training hours.
- Maintained monthly tracking of Authority personnel training hours for Level of Service reporting; logged over 5,643.00 hours of training organization wide.
- Sponsored over 3,675 hours of organizational training hours with the equivalency of 1125 employees attending.
- Assisted with the annual CFPUA United Way Campaign and the Employee Appreciation Day.
- Organized the employee service awards ceremony honoring 30 employees who achieved service milestones. These employees represented a combined 345 years of service.
- Conducted annual drivers license record checks for all employees who are required to have a valid driver’s license through NC DMV, and maintained the employee drug-testing program in accordance with the Authority’s prescribed policies and procedures.
- Completed end of fiscal year annual compliance audit of personnel files and I-9 forms.
- Processed more than 1,350 employment applications.
- Assisted in new hire orientation for 40 employees.
- Assisted 9 employees with the retirement process, retirement receptions, enrollment in the retiree individual health policies and exit interviews. Assisted an additional 19 employees with exit interviews following separation.
- Implemented phase 1 of the Evergreen compensation and classification study.
- Coordinated training through Cape Fear Community College for the Annual Supervisory & Leadership Training, and the Administrative Professional and Technology program.
- Administered the Employee Incentive Program for licenses and certifications.

- Managed the employee performance evaluation process and implemented merit pay increases based on established process.
- Participated in 2 Virtual Job Fairs to obtain qualified applicants and promote CFPUA.
- Administered the Employee of the Quarter Program.
- Participated in three ISO audits with the Environmental Management Department.
- Maintained and updated performance benchmarking measurements for the HR Department.
- Maintained and monitored budget and expenditures for the HR and Safety Department.
- Processed payments under CFPUA's self-insured workers' compensation insurance program.
- Managed the business insurance/risk management program and processed associated premium payments.
- Continued participation in enterprise resource planning software evaluation process and training for the ERP implementation.
- Complied with the requirements of the Affordable Care Act for the employee health insurance plan(s) to include: preparation of the 1095C tax forms for employees, calculation and payment of the PCORI fees, and coordination with BCBS to ensure payment of the transitional reinsurance fee.
- Coordinated the termination of CFPUA's self-insured employee health insurance plan.

Human Resources Department Notable Goals for FY 18

- Continue the core HR function of filling vacant positions, maintaining personnel files, administering the classification and compensation plan, complying with regulatory guidelines, administering the employee benefit plans, development and interpretation of policy and promoting positive employee relations.
- Implement the final phase of the Evergreen classification and compensation study.
- Continued to promote enhanced health and wellness initiatives for employees.
- Complete the conversion of inactive personnel files to electronic (Laserfiche) format.
- Monitor the Employee Incentive Program to determine effectiveness.
- Promote cost-effective organizational training and workforce education to enhance employee's skills to meet the workforce needs of the Authority in the present and future.
- Continue with the development and implementation of formalized programs to promote effective workforce succession management.
- Enhance the safety function to promote a more positive organizational safety culture.
- Continue to support the ERP implementation process for the first phase and second phase of implementation.



Human Resources Department Performance Measures

	FY15	FY16	FY17
• No. of Worker Comp. Claims-	13	14	6[2]
• Average Monthly Vacancy Rate-	4.4%	4.5%	6.8%[2]
• Average Monthly Turnover Rate-	0.9%	1.3%	1.25%[2]
• Average Training Hrs./Employee[1]	3.96	4.66	6.80[2]

[1]Organizational training sponsored by HR Dept.
[2] YTD for FY 17

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT

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Human Resources										
Salaries & Benefits	465,482	465,976	470,970	460,228	496,307	30,340	526,647	448,595	407,288	-17.94%
Operating	181,800	152,925	196,053	159,957	142,560	-	142,560	114,853	120,526	-15.46%
Total Human Resources	**647,282**	**618,901**	**667,023**	**620,185**	**638,867**	**30,340**	**669,207**	**563,448**	**527,814**	**-17.38%**

ENGINEERING - ADMINISTRATION

Director of Engineering, Carel Vandermeyden, P.E.

The Administration Division is responsible for the overall management of the Engineering Department and for ensuring that department functions are aligned to meet the Authority's strategic objectives. The Department is comprised of five divisions: Administration, Asset Management, Planning and Design, Project Management and Development Services.

The Asset Management Program continued to bring benefit to the organization by identifying and mitigating areas of risk, exploring means of cost effective decisions, and striving to maximize asset life cycles. This is accomplished by utilizing effective means of communication and expanding upon asset management principles and practices.

Key Accomplishments for FY 17

- Implemented key performance indicators for the Engineering Department that set performance goals for key functions of the Department.
- Continued the implementation of project scheduling tools to help project managers manage the number of projects, sequence new projects, and help develop project spending plans and spending projections.
- Published the Development Process and Procedures Manual that documents all the steps and procedures in the development process.
- Supported the development of the FY17 and 10-year CIP. Introduced the concept of project risk (consequence of failure x probability of failure) in the development of the FY 2018 CIP. Also, guided the implementation of business cases for all projects in the 10-year CIP.
- Provided leadership and support for the development of a CIP database conceived by Planning and Design Division staff and developed by an outside vendor.
- Guided implementation of design-build as a tool for project delivery. Three design-build projects were implemented.
- Provided enhanced customer service with several new documented initiatives during the calendar year. The customer service enhancements were:
  - Plan review improvements
  - Performance measures for plan reviews, RFI's, building permit review
  - Automatic notification of standard changes
  - Development Process and procedures manual
  - Monthly survey of completed development projects
  - Development Advisory Committee
  - After-hours inspections

- Continued to expand and enhance the plan review tracking tool. The purpose of the tool was to better track the duration of plan reviews and make process improvements where necessary to reduce the plan review time. The goal has been to keep plan reviews under 20 days at the 90th percentile level and to minimize the number of plans that need a 3rd review.
- Implemented and facilitated a Development Advisory Committee with meetings every other month. The Committee includes representatives from Developers, Engineers, and Contractors. BASE is also attending the committee meetings.
- Developed a quarterly CIP report for internal and Board communication to present the status and accomplishments of the capital improvement program.
- Continued to refine and organize functions and procedures to promote efficiency and productivity. Good examples of this are the addition of in-house water and sewer modeling capabilities and the GIS tools that were created for internal and external customers.
- Conducted Risk Assessment of the Gravity Sewer System
- Used of Business Cases as a tool to support Capital Improvement Planning
- Expanded use of reporting tools to support analysis and decisions
- Supported the loan and grant application with a comprehensive overview of Asset Management

Engineering Administration Division Overall Goal for FY 18

- The Administration Division of the Engineering Department ensures that engineering staff is provided adequate resources to successfully fulfill the department's goals, which includes maintaining an environment that promotes customer service, safety, flexibility and professional and personal development.
- Ensure an effective implementation of the FY 2018 Capital Improvement Program.
- Complete and implement the updates to the Authority's technical specifications and standards.
- Continue risk assessments on areas of infrastructure including water distribution system.
- Complete the transition of managing inventory in Maximo
- Expand on the management and maintenance of assets through run-time data instead of calendars
- Champion the concept of the use of good data to support good decision making
- Support process which ties Finance Fixed Assets to Infrastructure Assets in a one-to-many relationship.

ENGINEERING – PLANNING & DESIGN

Engineering Manager – Planning and Design Division, Gary McSmith

The Planning and Design Division leverages technology to enhance organizational efficiency. The Team consists of professional engineers and information systems management professionals that collect, evaluate and analyze information to provide master planning, capital planning, sewer and water hydraulic modeling, geographical information systems management, and gravity sewer rehabilitation design and project management. The Team also manages the production of Preliminary Engineering Reports for complex projects that involve hydraulic modeling and master planning scenarios. This team also supports the Authority's Asset Management Program with data and analysis for decision support.

Key Accomplishments for FY 17

- In-house design, build and calibration of a sewer model that incorporates wet weather flows.
- Senior Project Engineer attended nine sewer pump station drawdown tests to support new development requests for capacity in existing pump stations. Performed complex hydraulic modeling of sewer to confirm sewer availability, or identify needs.
- Increased the accuracy of legacy data in the GIS by determining and entering the date installed and pipe material for which is over 50 years old.
- Developed and provided customers and staff appropriate access to information through ARCGIS Online mapping and analysis tools that identifies areas of active construction, conveyances, emergency boil- water advisories, and warranty inspections tracking.
- Used data analytics to enhance organizational efficiency in risk ranking of gravity sewer assets.
- Incorporated asset management principles into rehabilitation capital projects.
- Developed customer service enhancements by drafting ordinance revisions, which provides for cost recovery of Authority funds invested in infrastructure that benefits future development.
- Prepared applications for low interest state loans, resulting in $10.5 million in Clean Water State Revolving Funds Loans successfully awarded to rehabilitate or replace high risk aging sewer infrastructure.
- Prepared applications for $16.3 million grant funding, resulting in $16.3 million Connect NC grants successfully awarded to rehabilitate or replace high risk aging sewer infrastructure. The grants are 50/50 match funding for projects that were already in the 10-year CIP.
- Developed Draft FY-18 CIP during Beta trial of new Capital Improvements Planning database conceived by CFPUA Engineering staff and coded on Microsoft Access by local service provider.
- Led development of initial Business Case analysis for every project in the ten-year CIP and incorporated risk evaluation into the CIP for every relevant FY-18 project.

- Performed emergency exercise water modeling support and actual emergency water modeling support for the raw water transmission main emergency. Modeling support instrumental to organizational success.
- Designed two cut and cover sewer rehabilitation projects, and one sewer-lining project in-house. Completed construction closeout of two previously designed sewer-lining projects.
- Managed U.S. 421 Preliminary Engineering Report consulting contract in support of Interlocal Agreement with New Hanover County.
- Managed Brunswick County Water Interconnect Preliminary Engineering Report consulting contract in support of Interlocal Agreement with New Hanover County.
- Managed Monterey Heights Interconnection Preliminary Engineering Report consulting contract.
- Provided evaluation of new NC Utility Commission rules and impacts of those rules on CFPUA growth expectations and established communications between private utility and CFPUA to consider integrated master planning where appropriate.
- Evaluated Jordan Lake Water Supply Allocation document and provided review comments, developed draft Board resolution.
- Compiled and reviewed departmental comments on conversion of Ordinances to Muni-code.
- Managed purchase and installation of silicone bead well packing at aquifer storage and recovery wells.
- Prepared master planning maps, with capacity availability in response to ninety-six (96) developer, professional engineer and realtor inquiries.
- Input four-hundred and sixty-three (463) as-built drawing sheets into GIS so that accurate location information is available to engineers, technicians and operators in the field.

Planning and Design Division Notable Goals for FY 18

- Provide leadership and support in design, build and calibration of a sewer model that incorporates wet weather flows and rebuild of the water model into a new GIS based platform.
- Provide leadership and support in increasing the accuracy of legacy data in GIS and convert water and sewer GIS data to geometric networks, incorporating linear referencing resulting in a measurable increase in data quality and organizational efficiencies.
- Provide leadership and support in providing customers and staff appropriate access to information through ARCGIS Online mapping and analysis tools.
- Provide leadership and support in use of cloud based project management software pilot tests.
- Provide leadership and support to incorporate asset management principles into rehabilitation capital projects, software procurement to prioritize linear assets using risk evaluation and execution.
- Provide leadership and support to improve the CIP database to include project milestone execution and cash flow planning.

- Provide leadership and support in guiding future water/wastewater growth including master planning and management of water and wastewater capacity.
- Prepare a white paper on CFPUA asset data collection, quality, access and analysis to increase operating efficiencies and lower life-cycle asset costs. Life-cycle costs include capital design through commissioning, energy, maintenance, and decommissioning.

ENGINEERING – PROJECT MANAGEMENT

Engineering Manager, Project Management Division, Phil Brower

The Project Management Division is responsible for overseeing numerous capital improvement projects ranging in scope from multi-year projects, such as Heritage Park and Marquis Hills Septic to Sewer, to multi-month turnaround projects, such as the customer service renovation at 235 Government Center. CFPUA's project managers facilitate moving capital projects into the engineering and construction market place and complying with many internal and external agencies. The primary role of the Project Management Division is executing capital improvement projects through traditional delivery or the recent utilization of the design-build delivery method.

Key Accomplishments for FY 17

Construction Projects Completed

The Project Management Division completed construction on 16 projects with a total construction value of $22.9 million. Many of these projects were started years earlier with planning, design, and bidding. Their construction received substantial completion certification or was closed-out during FY17. The table below lists these construction projects.

Construction Project	Cost
Marquis Hills Septic to Sewer Service	$ 9,315,110
Barnards Creek Pump Station Replacement	$ 3,732,750
Kerr Ave Greater Loop Water Ext. Ph2	$ 1,997,187
DBP Compliance Aeration Mixer Ph2 (Ground Storage Sweeney WTP)	$ 1,774,822
Northside Alum Sludge Storage Tanks	$ 1,416,100
Edgewater Pumping Station	$ 1,258,073
DBP Compliance Aeration Mixer Ph1 (Dawson & 17th St ET)	$ 681,625
Walnut Hills WWTP Decommission	$ 670,516
Water St Infrastructure Ph1 - City ILA	$ 600,959
Sweeney Meter Services Bldg. Renovation	$ 438,478

Alandale Dr. - Kerr Ave. MH Replacement	$	270,376
Raw Water Meter Vault Improvements	$	314,021
Northside - Caustic & Sodium Hypochlorite Tank Replacements	$	184,510
Richardson Plant Sulfuric Acid Tank Repairs	$	108,777
235 GC Customer Service Remodel	$	95,661
Northside & Southside Clarifier Repairs	$	50,950
Ringo Drive Water Main Ext.	$	24,424
TOTAL	**$**	**22,934,339**

Notable projects in the above list are:

- The Marquis Hills area has been served with sewer through financing by the Clean Water State Revolving Fund.
- Upgrades of existing structures and equipment were accomplished at the Northside and Southside Wastewater Treatment Plants, Sweeney Water Treatment Plant, Richardson Water Treatment Plant, and system elevated tanks.

Construction Contract Awards

To date, the Project Management Division bid and awarded over $10.4 million in construction projects as shown below. Projects marked with an asterisk are scheduled for bidding in FY17.

FY 17 Project Bid/Awards	Amount	
Water Meter Replacement Program Phase 2	$	5,620,555.58
Air Release Valve Replacement	$	1,973,313.00
NSWWTP and SSSWWTP Clarifiers	$	49,000.00
Alandale/Kerr Avenue Manhole Replacement (Design-Build)	$	315,376.00
SSWWTP Heat Exchanger (Design-Build)	$	650,000.00
Blue Clay Road Force Main	$	966,165.00
4th Street Water Main Rehabilitation	$	724,724.00
Water Treatment Structural Steel	$	162,654.00
*Landfall - Summer Rest Road Waterline		
*13th St & Lake Shore Dr Sanitary Sewer Replacement & Rehab		
*Water Sampling Sites		
*Miscellaneous Pump Stations Rehabilitation		
*Pump Station 89 Capacity Upgrade		
*Northside Digesters 4 & 5 Cleaning & Coating		
*Pump Station 8 Capacity Upgrade		
TOTAL	**$**	**10,461,787.58**

Property & Easement Acquisitions

- Negotiated with owners and/or owners' representatives, making requests for 27 easements, completing 24.
- Negotiated with property owners and completed three well abandonments.
- Worked with property owners to finalize 22 easement encroachments to move or remove the encroachment, to provide a variance, or both, based on decisions by Operations ORC. Three easement encroachments are actively in the resolution phase.
- Updated Standard Operating Procedure (SOP) on Addressing Easement Encroachments.
- Completed research on 225 pump station, well, and water tower parcels to ensure CFPUA ownership or easements.
- Developed an Easement Awareness link that has been placed on the CFPUA website.

Project Management Division Notable Goals for FY 18

- Provide leadership and support for timely FY 18 capital project implementation.
- Continue leadership and support to further enhance the use of project scheduling and reporting as a tool to better manage, schedule and deliver projects.
- Continue to recognize opportunities to coordinate projects and identify partnerships with area stakeholders, such as the City of Wilmington, New Hanover County, NC Ports, NC-DEQ, NC-DOT, Duke Energy Progress, etc.
- Continue working closely with Chief Communications Officer and assist with outreach to customers and public regarding impacts of major capital projects.
- Continue to recognize opportunities for efficiency in overall capital projects management, specifically:
    - Identify and execute design build projects and promote understanding the benefits of this new project delivery method.
    - Implement quality assurance and control measures during projects preliminary design phase to improve overall project value and delivery. Engage internal and external stakeholders in this process.
    - Seek to provide earlier tactical support and guidance in capital project definition and approach through business case evaluation and record decisions with the goal of improving overall project value and delivery.
    - Provide support to modernize standard specifications, details and design criteria to improve capital project quality and value via the on-going CFPUA standards update program

ENGINEERING – DEVELOPMENT SERVICES

Engineering Manager, Development Services Division, Matthew Tribett

The Development Services Division (DSD) has a key role in new development, redevelopment, commercial construction and new home construction. DSD interacts with utility customers, contractors, and developers. DSD collaborates with the Operations, Customer Service, and Environmental Departments within the Authority to provide customers with accurate and timely information.

The division provides information regarding service availability, service connection requirements, and service connection fees. DSD works closely with the New Hanover County Building Inspections, Planning, and Health Departments as well as the City of Wilmington Development Services Department. DSD manages the plan review and construction inspection process for developer installed public water and sewer systems. To facilitate this process, staff participates in the City of Wilmington and New Hanover County Technical Review Committees, and regularly meets with individual developers to review projects and explain Authority standards.

Additionally, DSD manages the implementation of the Authority's mandatory connection requirements. New development, home construction, existing structures, and structures connected to failing septic and/or well systems are required to connect to the Authority's utility facilities if they are available.

The division assists developers and the Customer Service Department through the Request for Information (RFI) process by documenting service availability, connection requirements, and fees. These requests are most commonly associated with applications for new service or new development. Developer agreements that benefit the public and the developers are written by staff of DSD. This division serves and partners with developers to capitalize on opportunities to improve the utility system for the public benefit.

Key Accomplishments for FY 17

- Developers are on pace to convey a record amount of completed infrastructure to the Authority for ownership this year.
- Building permit reviews, inspections, and requests for information (RFI's) are on pace to increase for the sixth straight year.
- Established the CFPUA Development Advisory Committee. The committee is comprised of leaders of local development, engineering, and contracting companies. Regular meetings were held to obtain external input and expertise on new CFPUA processes and procedures that affect development, address concerns, and enhance customer service.
- Participated in the technical review committee of the City and the County.

- Collaborated with New Hanover County to select building permit software to replace One-Solution.
- Implemented the mandatory connection program. The mandatory connection process focused on Heritage Park, Marquis Hills, Kerr Avenue, Sago Bay, and Edgewater Trace.
- Implemented after-hours inspections.
- Expanded tracking of work orders, as-built review, and sewer video review with Maximo.
- Expanded implementation of the ISO procedures in the Division.
- Incorporated Construction Project Manager into plan review process, resulting in a reduction of plan review comments at preconstruction meetings.
- Reviewed benefits and opportunities of proposed Expedited Plan Review Program for projects with limited scope.
- Developed a policy for implementing changes to Authority standards.
- Managed a capital project for outsourcing installation of service laterals for individual lots within the service area.
- Assisted the Planning and Design Division with collecting and incorporating data related to the legacy Cape Fear Utilities system.

Development Services Division Notable Goals for FY 18

- Collaborate with New Hanover County to implement new permitting software for building permit review.
- Improve the methods and accuracy of key performance indicator tracking, particularly building permit review.
- Continue to facilitate and participate in regular meetings with CFPUA’s Development Advisory Committee to obtain policy and procedure input, address concerns, and enhance customer service.
- Develop S.O.P.’s and policies as needed to improved work procedures in the DSD, particularly for tap installations, billing for capacity reservations, and collection of expedited development fees.
- Initiate the pilot expedited review program.
- Make incremental improvements to the Development Policy and Procedure Manual.
- Expand Maximo work order and project tracking.
- Evaluate and develop a database driven project tracking system.
- Contribute to technical specifications and design standards update.

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT										
	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Engineering										
Salaries & Benefits	2,015,002	1,880,176	2,262,912	2,066,882	2,245,067	(33,855)	2,211,212	2,019,074	2,376,529	5.86%
Operating	112,190	90,804	110,618	98,811	87,561	28,890	116,451	61,035	332,297	279.50%
Capital Outlay	-	-	-	-	-	8,500	8,500	-	-	0.00%
Total Engineering	**2,127,192**	**1,970,980**	**2,373,530**	**2,165,693**	**2,332,628**	**3,535**	**2,336,163**	**2,080,109**	**2,708,826**	**16.13%**

OPERATIONS – ADMINISTRATION

Chief Operations Officer, Frank C. Styers, P.E.

The Operations Department is committed to delivering essential water and wastewater services to our customers in an efficient and environmentally responsible manner. Divisions include water treatment, wastewater treatment, utility services distribution and construction, utility services collections operations and maintenance, centralized maintenance and information technology. The department is responsible for regulatory compliance of the various utility systems and providing outstanding water and sewer service to our customers.

The Operations Department continues to evaluate short and long term needs and prioritize and implement improvements necessary to provide excellent service to our customers. The Department continues its efforts to minimize sanitary sewer overflows (SSOs), to improve water quality in the distribution system, and to improve readiness to respond to critical events to minimize damage to infrastructure and the environment.

OPERATIONS – INFORMATION TECHNOLOGY

IT Manager, Cord Ellison, CGCIO

The Information Technology Division is responsible for the connectivity of eight facilities, as well as the SCADA network that consists of over 250 outlying sites. It also supports and maintains all Authority servers, personal computers (PC's), network equipment, and telephony systems. In addition, the Information Technology Division is responsible for the Authority's physical security, the website, closed-circuit television (CCTV), and network security across the organization.

Key Accomplishments for FY 17

- Completion of the first CSET (Cyber Security Evaluation Tool) for the Northside Wastewater Treatment facility. This tool was recommended and implemented as a result of meetings that took place between IT and the Department of Homeland Security. This tool helps identify potential vulnerability's as well as creates a snapshot and defined security posture (at that specific time) for each site. We will continue to perform these and then re-run them as technology is implemented in order to better secure potential vulnerabilities as well as record the current security posture for each particular Authority facility. This project directly ties to the cyber security initiative.
- SCADA Master plan is complete and we are now on the implementation phase.
- Complete redesign and upgrade of the Southside Wastewater facility SCADA network. This included repairs to the fiber itself, and the installation of more intelligent and secure switches. Results from this project have allowed for redundancy/fault tolerance of the Southside SCADA network, increased speed, and the ability to provide port security to prevent unauthorized access to the SCADA network. This project directly ties to the cyber security initiative.
- Upgraded and replaced the Authority firewall's (edge security device to protect the business and SCADA network from unwanted external access) with minimal downtime and high availability which allows for one to go down and the other instantly take its place. This project directly ties to the cyber security initiative.
- Repair of multiple fiber breaks that impacted the following facilities. Southside, Sweeney, Northside, and Nano well sites.
- Provisioned secure network links for the new Southside Maintenance building (former Walnut Hills) and Meter Services building located at Sweeney.
- Installation of new secure firewall at Sweeney for Disaster Recovery in the event failover has occurred from the primary datacenter. This project directly ties to the cyber security initiative.
- Increased the link speed for all sites located at Groundwater Way. This has been the slowest facility link for some time (due to multiple Internet providers not offering higher speeds) and the result of this project increased the total speed by 200%.
- Upgrades to the Authority Wide Web filter and Security gateway which is how all Internet traffic is filtered. These devices are critical to the security of the Authority network and connects directly into the newly upgraded firewalls. This project directly ties to the cyber security initiative.
- Implementation of Syslog for multiple devices across the Authority. This project directly ties to the cyber security initiative that the Division has been working on and allows event logs from network devices, servers, and equipment to report to a single server for analyzing abnormalities which improves our security and meets auditing requirements.
- Replacement of the existing Wireless access points to Meraki wireless devices. This upgrade allowed for a single network name and credentials to apply to all Authority facilities instead of the previous way which was separate wireless networks with varying credentials per facility. Additionally, it allows for content filtering to occur based on the network (Employee, Vendor, AD) connection, and allows for multi-level authentication to the wireless network, and security reports. This project directly ties to the cyber security initiative.
- Virtualization of the Southside SCADA Servers, which provide true secondary and tertiary redundancy for the SCADA servers that operate the plant.

- Creation of a SCADA communications lab to allow for the configuration and testing of new devices, and/or troubleshooting current devices without impact to the SCADA network.
- All former City stations have been upgraded from telemetry to Ethernet. This project also added HMI devices at several stations for onsite operation, removed the pump stations from the Southside Plant SCADA server and relocated them to the Authority Pump Station SCADA server. Additionally, it tied the Southside Wastewater facility to the Wireless SCADA network which is now the second facility connected to this independent wireless network and is a means for providing Authority owned redundancy to the fiber network.
- Installation of CCTV in the 235 conference room, IT Server room, and all Authority server/network closets. This work (equipment ordered, cabling, physical installation of cameras, connection to CCTV server and alerts) was performed completely by the IT division. The camera’s in-server and network closets are set to alert the IT Division for intrusion and record all motion in these secure areas. This project directly ties to the cyber security initiative.
- Upgraded 120 push to talk Verizon devices to remain compliant with the Verizon upgrades that occurred to the VZW network. Without this upgrade, the previous push to talk devices would not have worked.
- Installation and configuration of a second SQL database server to reduce resource utilization on the primary server, and to provide redundancy and create availability for future initiatives.
- Upgraded Maximo on the test environment to version 7.6. While testing an unreported bug was found which was reported to IBM. This upgrade will occur once IBM has produced a working patch for this bug. I mention this because the upgrade itself is a major release upgrade to our Asset Management and CMMS system and required a lot of work to perform. Had the upgrade not been performed in this manner, the production environment would have been compromised and led to downtime of this critical server.
- Custom applications were created in Maximo for County legacy data so that Authority staff can view and search old records. This also saved the Authority money and project time from not having to migrate this data to the new ERP system.
- Worked in Silent Passenger to fix the errant speed limits that were being incorrectly reported for our service area. These inaccuracies created false alerts for Authority drivers and created significant work for Division Managers and Department Heads to sort through and figure out which were truly violations of the Authority policy.
- Managed the import phase of the ESM backflow notifications into Maximo. All backflows are entered into Maximo and ESM has to send out notifications for these devices. This required importing the monthly data for who received which letters (notices, failures, etc.) and then bulk load these to keep ESM from having to manually perform this task.
- Rewired CCTV trucks for POSM CCTV pipe video hardware.
- Full, complete, and successful failover to include running for extended periods of time in order to test the IT Disaster Recovery plan. This test directly ties to the cyber security initiative.
- Migration from on premise Exchange server to offsite Office 365 E3 governmental offering. This migrated all Authority Exchange data (emails, calendars, tasks, contacts, etc.) to the Microsoft Azure datacenter and includes the replacement of the existing office suite to Office365 E3 2016.
- Maintenance of Authority Wide Anti-virus, and Windows update servers. This maintenance directly ties to the cyber security initiative.

- Expanded the Virtual Desktop Environment from 1 to 5 Departments. Introduced the addition of Windows 8 & 10 operating systems and the applications for each environment. Also deployed 5 zero clients (these devices are what takes the place of a traditional PC once a user is running a virtual desktop) Have multiple staff cross training this virtual desktop environment for backup and support. This project directly ties to the cyber security initiative.
- New servers created for Innovyze (Engineering modeling software), and Solarwinds (Network monitoring software) applications. Also performed upgrades to vRanger (to 7.3 used for virtual server backups), Unidesk (to 2.10 used for Virtual Desktop configuration and management), Laserfiche (to 10.1 used for document imaging), VNX storage code upgrade (used for all data hosted on the Authority Storage Area Network), ESX host patches & updates (used for Server Virtualization for all Authority servers), iOmega storage (to 4.1.216.33998 used for backup to tapes which are sent weekly for tertiary offsite secure storage), and Operator 10 to 10.3 (used for SCADA process control and data management) This project directly ties to the cyber security initiative.
- Implemented vendor access policy throughout the organization. This policy identifies which vendors require access to devices that reside on the Authority network and includes a questionnaire that identifies the security (OS version, Antivirus version, which version they're running, etc.) of the devices prior to their connecting. Additionally, we have created secure virtual machines that most vendors requiring access will now connect to which will not allow for the spreading of malware and virus that may be present on an outside vendor machine from infecting the Authority network. Furthermore, we only allow specific access from this virtual machine (via network rules) to the equipment being worked on. This project directly ties to the cyber security initiative.
- Installed KnowB4 security awareness training software. This included configuring the application and creating training for Authority staff to help prepare them for potential cyber-attacks caused by phishing (email) and vishing (voicemail). Also ran tests to determine current vulnerability assessment from this sort of attack. This project directly ties to the cyber security initiative.
- Created new print server and moved all Authority networked printers to new server.
- Continue to Inventory all IT assets annually. Also replaced and sent old/bad technology equipment to GovDeals.
- Continued moving forward with traditional PC replacement program for devices (laptops and surfaces) that are currently not candidates for virtual desktops.
- Answered, triaged, and resolved helpdesk tickets throughout the Authority.
- Sent IT staff to Comprehensive Cyberterrorism Defense training. This training directly ties to the cyber security initiative. Also had staff complete exams to become A+ certified.

Information Technology Division Notable Goals for FY 18

- Continue implementation of the Authority's SCADA Master Plan.
- Continue replacement of antiquated pump station remote terminal units (RTU's) located throughout the service area across the SCADA wireless Ethernet network.

- Tie in the remaining facilities (Sweeney, Northside, and Admin building) to the SCADA backhaul wireless network and expand the wireless access points. This will create an Authority owned wireless network, increase the speed of the links for each facility, and allow us to terminate the reoccurring fees we pay internet service providers at the remote facilities for network redundancy. This has been approved and is currently in the implementation phase.
- Continue to test the Disaster Recovery/business continuity plan for all critical technology resources.
- Move forward with CSET for the next facility.
- Continue network documentation of all newly upgraded facilities.
- Upgrades (physical and software) of the SCADA servers at all facilities and their transition to virtual servers. This will allow for faster recovery of these critical servers if/when they fail and will tie in with the SCADA Master plan. This may end up being complete this fiscal year depending on scheduling.
- Virtual Desktop implementation for additional users. This project will reduce the need to annually replace the Authority desktops, increase the lifespan of our assists while reducing costs, and will create efficiency's and centralization of maintenance within IT.
- Continue replacement of network devices throughout the Authority. Many of our critical network devices have been running since the Authority formed. This will allow us to proactively replace this critical equipment while at the same time increasing speeds throughout the network, and providing better redundancy and security. This project is reoccurring to avoid single year replacement of all devices and aligns with the SCADA Master plan in regards to logical network security.
- Continue to upgrade server Operating Systems and Desktop Operating systems throughout the Authority.
- Complete remaining security measures for business/SCADA network, and perform penetration test to find out where gaps may exist.
- Continue cyber security training for IT staff.

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Operations - Administration/IT										
Salaries & Benefits	971,305	454,781	891,139	892,821	946,669	(34,455)	912,214	821,817	1,020,887	7.84%
Operating	662,855	8,967	775,938	885,266	821,733	93,600	915,333	915,333	1,072,278	30.49%
Capital Outlay	-	-	-	-	-	-	-	-	-	0.00%
Total Operations - Administration/IT	**1,634,160**	**463,748**	**1,667,077**	**1,778,087**	**1,768,402**	**59,145**	**1,827,547**	**1,737,150**	**2,093,165**	**18.36%**

OPERATIONS – CENTRALIZED MAINTENANCE

Maintenance Superintendent, Kevin Boyett

The Centralized Maintenance Division is responsible for maintenance activities associated with the water and wastewater treatment plants, well sites, buildings and other facilities, as well as maintenance and fleet management. Efforts to consolidate maintenance resources have proven beneficial. Centralized Maintenance is continuing to evaluate strategies to become more efficient by moving towards a more predictive type approach to maintenance. The Authority's Computerized Maintenance and Management System (CMMS) has proven to be a key component in this transition and will continue to prove effective.

Key Accomplishments for FY 17

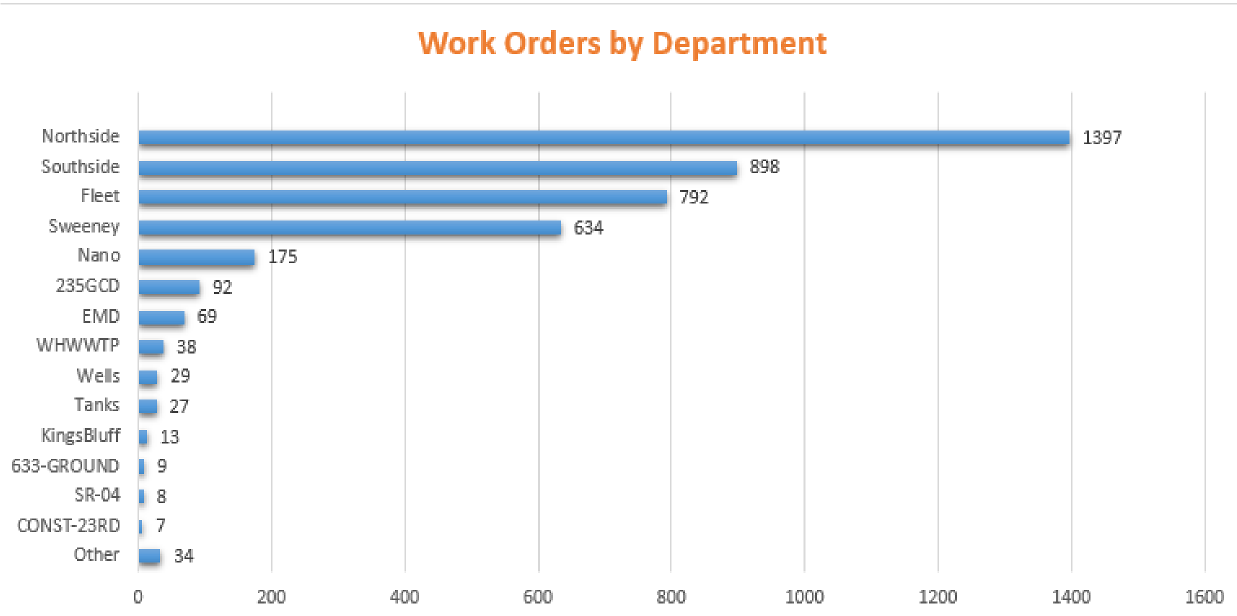
- Completed over 2000+ work orders.
- CM staff have made special efforts to create preventive maintenance schedules and work orders to assist with predictive maintenance goals.
- Fleet replacement program has ensured vehicles are purchased to meet specific functions and needs.
- Facilities maintenance has taken responsibility of most our facilities providing the best customer service.
- Fleet Management continued to keep abreast of all maintenance needs associated with our fleet. This information proves valuable when making decisions about replacements.
- Staff's knowledge has grown with the creation of our new pm schedule. CM staff can increase our knowledge of equipment through interaction with vendors and service techs.
- Centralized Maintenance now manages the entire Landscaping contract for CFPUA. This has been a split up between several departments in the past.

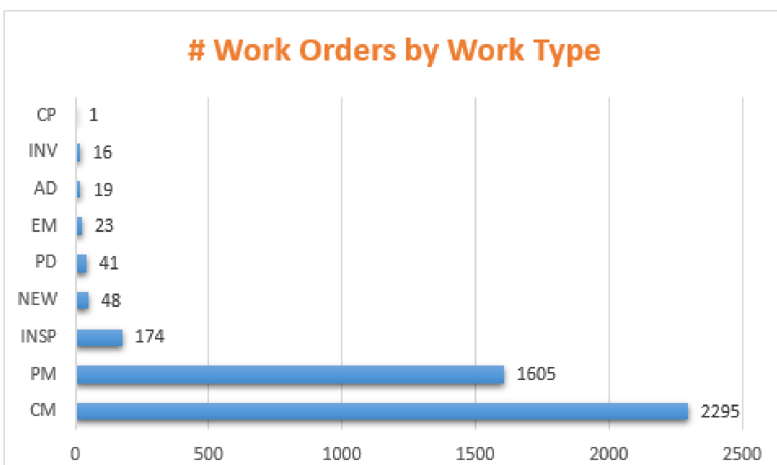
Centralized Maintenance Division Notable Goals for FY 18

- Increase PM schedules for all plants and facilities equipment.
- Explore new training avenues for staff to minimize outsourcing.
- Continue with Collection of Facilities asset information to be added to CMMS to increase efficiency.
- Work with Operations to streamline work orders and data collection.

Centralized Maintenance Division Performance Measures

July 2015 to July 2016





PM -Preventive Maintenance **AD- Administrative** **PD -Predictive Maintenance**

INV- Investigation **INSP-Inspection** **EM- Emergency**

CM –Corrective

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Operations - Centralized Maintenance										
Salaries & Benefits	1,175,882	1,145,501	1,197,064	1,142,034	1,213,240	118,430	1,331,670	1,206,642	1,373,646	13.22%
Operating	952,523	464,500	1,024,071	1,011,898	778,544	276,566	1,055,110	1,029,269	1,312,046	68.53%
Capital Outlay	-	-	-	71,369	-	14,424	14,424	14,424	-	0.00%
Total Operations - Centralized Maintenance	**2,128,405**	**1,610,001**	**2,221,135**	**2,225,301**	**1,991,784**	**409,420**	**2,401,204**	**2,250,335**	**2,685,692**	**34.84%**

OPERATIONS – UTILITY SERVICES

Superintendent, Robert P. Daughtry and Jim Tayson

The Collection System Operations and Maintenance division, among other things, provides for repairs to collection systems, as well as monitors the system, maintains outfalls, and operates and maintains 144 pump stations. As of December 2013, the Authority is under the review of the EPA through the executed consent decree, placing stringent recording and response requirements on the division.

Each day, the Authority safely collects and treats wastewater. From time to time and under various circumstances, sanitary sewer overflows (SSOs) occur and wastewater is discharged before being treated. Causes of SSOs include, among other things, grease, debris, pipe failure, power failure and pump failure. Although most SSOs are typically caused by Fats, Oils and Grease (FOG), the largest SSO volumes are typically the result of pipe failures. Various initiatives are underway to meet the Authority's goal of minimizing SSOs.

Almost all initiatives involving the wastewater collection and treatment systems help reduce the frequency and volume of SSOs. Public outreach concerning the effects of grease and wipes raises awareness, and allows concerned citizens to understand how their actions affect the system. Likewise, regular cleaning of gravity lines removes grit and debris, in addition to restoring capacity. Ongoing condition assessments, coupled with Asset Management's risk criteria, ensure replacement and rehabilitation efforts address the most pressing pipe, pump station and plant issues. These activities are funded through various operating and capital improvement budgets, and are managed by staff throughout the Authority. Without question, reducing SSOs and their impacts is consistent with the Strategic Plan and is supported by the values and commitment of the Authority.

Key Accomplishments for FY 17

- Repaired approximately 668 feet of Pipe lines (60 feet of which were lined), 13 manholes and 11 sewer services at a cost of $875,700 to address emergency or imminent failures.
- Inspected/cleaned approximately 13.5% (115 miles) of mainline collection system to date exceeding the minimum required 10%.
- Inspected/videoed 51.9 miles of gravity sewer mains, approximately 5.9% of the system.
- Inspected and/or maintained/cleared 48 miles of outfall easements.
- Performed inspection on 3,957 sanitary sewer manholes.
- Completed over 10,275 work orders by pump station maintenance section.
- Completed SCADA upgrades at 30 former COW pump stations.
- Completed changes at NEI PS# 34 & 35 recommended by HDR to allow these stations to be more user friendly.
- Responded to 15 reportable SSOs, discharging a total of 39,856 gallons of sewage with the commitment of stewardship as the foremost concern.
- Managed OCCP and root control programs.
- Managed Repair of 48" large diameter raw water line from Lower Cape Fear to eliminate the water shortage crisis.
- Crews responded to 577 customer related sewer service calls.
- 207 Calls classified as emergency.
- 13 Calls classified as corrective maintenance.
- 357 Calls Classified as investigation.

Utility Services Division Notable Goals for FY 18

- Continue affirmative efforts to address an aging sewer system.
- Continue to implement Maximo and asset management best management practices.
- Manage inventory through Maximo CMMS.
- Promote Maximo and ISO 14001 usage and implementation throughout the Authority.
- Continue the effort to reduce the number of Sanitary Sewer Overflows.
- Continue to to educate the Stakeholders regarding current practices.
- Continue to promote a positive safety culture to CFPUA's most valuable assets our employees.
- Continue with Easement Management Program to provide for operation and maintenance of collection system.

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	% Change - FY18 Adopted/FY17 Adopted
Operations - Utility Services										
Salaries & Benefits	5,213,127	5,481,862	5,396,994	5,045,195	5,537,184	15,392	5,552,576	4,695,330	5,711,954	3.16%
Operating	4,157,519	3,235,046	4,112,491	3,123,757	4,488,400	(138,115)	4,350,285	2,737,166	3,529,409	-21.37%
Capital Outlay	-	10,946	-	70,090	-	229,269	229,269	104,678	-	0.00%
Total Operations - Utility Services	**9,370,646**	**8,727,854**	**9,509,485**	**8,239,042**	**10,025,584**	**106,546**	**10,132,130**	**7,537,174**	**9,241,363**	**-7.82%**

OPERATIONS – WASTEWATER TREATMENT

Wastewater Treatment Superintendent, Kenneth L. Vogt, Jr., PE, BCEE

The Wastewater Treatment Division manages the operation and maintenance of the Authority's two wastewater treatment plants (WWTPs): Northside (NSWWTP) and Southside (SSWWTP). The Walnut Hills WWTP ceased operation on June 30, 2016 with tributary flow redirected to the NSWWTP. These facilities have received diligent operation and maintenance attention, exhibited exemplary regulatory permit compliance, and observed strict compliance with the approved budget.

The Staff has participated in many Cape Fear Public Utility Authority program initiatives including: asset management, SCADA master planning, centralized maintenance, contingency emergency generator connection provisions and treatment chemical bidding and award. The Staff has maintained high training and certification standards, including operator, backflow prevention, and pesticide application certifications.

A significant accomplishment was realized with the procurement of contracted residuals management services. This contract award covers various aspects of CFPUA's residuals management program from January 1, 2017 through December 31, 2019 with two possible one-year renewal options extending the contract period to December 31, 2021.

Key Accomplishments for FY 17

- The period January 2016 – December 2016 was characterized by outstanding plant performance. WWT Statistics: Overall (2 WWTPs) – Average Wastewater Flow = 18.103 MGD; % NPDES Compliance = 99.80; Treatment Operation and Maintenance Cost = $536/MG. Individual WWTP statistics are as follows (NSWWTP and SSWWTP – January 2016 – December 2016; WHWWTP –

January 2016 – June 2016 – flow was halted to WHWWTP and was diverted to NSWWTP effective July 1, 2016:

- NSWWTP – Average Wastewater Flow = 11.013 MGD; % BOD Removed = 98.87; % TSS Removed = 99.87; % NPDES Compliance = 99.62; Wastewater Residuals Produced = 14,076 CY; Treatment Operation and Maintenance Cost = $503/MG.
- SSWWTP – Average Wastewater Flow = 7.090 MGD; % CBOD Removed = 96.88; % TSS Removed = 97.42; % NPDES Compliance = 100.00; Wastewater Residuals Production = 5,801 CY; Treatment Operation and Maintenance Cost = $587/MG.
- WHWWTP – Average Wastewater Flow = 0.053 MGD; % BOD Removed = 99.00; % TSS Removed = 99.93; % NPDES Compliance = 100.00; Wastewater Residuals Production = 30 CY; Treatment Operation and Maintenance Cost = $7,668/MG.

- The NSWWTP Expansion/Upgrade project, which transformed the former 8 MGD secondary plant to the current 16 MGD advanced plant, was completed in 2009. Re-rating the plant for its design flow of 16 MGD occurred in December 2014. The plant produces an exceptionally high quality effluent which qualifies as Type 1 reclaimed water, making it suitable for many non-potable uses. CFPUA has received a bulk reclaimed water distribution permit which enables the NSWWTP to dispense this resource to authorized customers at the NSWWTP, and NSWWTP operations staff have all been trained to carry out this program.
- Ongoing plant upkeep proceeds with the exteriors of several process areas, including the primary clarifiers, receiving application of new coatings.
- The NSWWTP is participating in two Duke Energy Progress energy conservation programs - Real Time Pricing (RTP) and Large Load Curtailment (LLC) - offering financial incentives.
- To better participate in these programs, the NSWWTP air permit was modified to enable one of its generators to operate for extended durations.
- The NSWWTP participated in a cybersecurity audit to identify any gaps/vulnerabilities in our IT infrastructure and procedures.
- Late in 2016, the NSWWTP experienced elevated levels of effluent BOD5, resulting in several minor NPDES permit violations. An interdisciplinary team from within the CFPUA, together with the assistance of an outside consultant, investigated source(s) and corrective action(s) for this incident. Unfortunately, no apparent conclusive cause(s) internal or external to the NSWWTP were identified, and typically expected performance and NPDES permit compliance was regained.
- The NSWWTP nears completion of construction for the addition of two of the three planned liquid residuals storage tanks, completion of partial recoating of covers for Digesters 1, 2, and 3, and planning and design for the complete recoating of covers for Digesters 4 and 5.
- The NSWWTP awaits the tributary flows that will commence with the installation of the 421 infrastructure.
- The NSWWTP has received NCDOL/OSHA safety performance recognition since CFPUA's inception, including continued SHARP participation and its third consecutive gold safety

achievement certificate for its outstanding safety and health efforts contributing to substantial reduction in injuries and illnesses and promotion of safer working conditions.

- The SSWWTP Expansion/Upgrade project, transforming the current 12 MGD secondary plant to a proposed 16 MGD advanced plant has concluded with plans and specifications near completion.
- Well-maintained, the SSWWTP awaits its projected 2026 Expansion/Upgrade Project commencement. Plant condition assessments enable better anticipation and projection of necessary repairs, replacements and associated costs throughout this period.
- Work is completed or ongoing on primary clarifiers 1 and 2, secondary clarifiers 1 and 2, trickling filters 1 and 2 bearings, digester 4 heat exchanger replacement, site perimeter fence, gates, and controls, and emergency generator controls.
- Major capital improvement involving replacement of chlorine disinfection and sodium bisulfite de-chlorination with ultraviolet disinfection is planned.
- Planning for interim facilities improvements necessary to prolong equipment service life, effectiveness, and overall permit compliance from current conditions until when the SSWWTP Expansion/Upgrade Project is underway was made possible through CWSRF. Potential projects to be undertaken under this program include: rehabilitation/replacement of the solids dewatering building; rehabilitation/replacement of the residuals cake containment area roof and roof drainage; rehabilitation of the filtrate pump station, rehabilitation/replacement of the plant underdrain pump station; rehabilitation/replacement of the belt filter presses; upgrade/replacement of the belt filter press motor control centers; increasing of the storage/detention time in the screw pump wet well; aeration tank rehabilitation, including consideration of fine bubble diffusers; repair or addition of digester overhead gas main supports; primary and secondary clarifier structural improvements and main emergency generator replacement.
- SSWWTP has received NCDOL/OSHA safety performance recognition since CFPUA's inception, including SHARP participation and its seventh consecutive gold safety achievement certificate for its outstanding safety and health efforts contributing to substantial reduction in injuries and illnesses and promotion of safer working conditions.
- While well operated and maintained, the WHWWTP has historically exhibited high unit operating costs. Effective June 30, 2016, the WHWWTP ceased operations and has been decommissioned with its flow being redirected to the NSWWTP for processing.
- WWTD staff has continued to participate in various Authority initiatives, including: emergency preparations and coverage at the NSWWTP and the SSWWTP during Hurricane Matthew; monthly wastewater team meetings to keep the various CFPUA departments informed about wastewater issues; annual performance evaluations, budget preparation and administration; ISO 14001 program implementation; safety committees; review of Operations Sewer Exposure Personal Protective Equipment Standard Operating Procedure; capacity management; wastewater gravity collection system assessment (risk management); capital improvement program development; asset management (representation on most if not all committees); computerized maintenance

management software (CMMS) and work order implementation; Management of Assets in Sewer Treatment (MAST) participation; emergency preparedness (including exercises); reclaimed/reuse water; Contaminants of Emerging Concern (CECs), including Endocrine Disrupting Compounds and Pharmaceuticals and Personal Care Products (EDCs/PPCPs); acceptance and processing of non-connected wastes such as septage, grease, residuals and non-hazardous liquid wastes together with the establishment of associated fees covering customers both inside and outside of CFPUA's service area; recovery and use of excess anaerobic digester gas and progress toward SSWWTP participation in Duke Energy Progress' Demand Response Program.

- Emission control improvements have been installed and, to better participate in the demand response program, it is planned that the SSWWTP air permit will be modified to enable its generator to operate for extended durations.
- Staff remains involved on various levels with many environmentally active organizations, including the Cape Fear River Assembly (CFRA), the Lower Cape Fear River Program (LCFRP), the American Biogas Council (ABC), the North Carolina American Water Works Association – Water Environment Association (NC AWWA – WEA), the American Water Works Association (AWWA), and the Water Environment Federation (WEF).
- Work continues with several regulatory programs affecting our NPDES permits, including Total Maximum Daily Loads (TMDLs) and water quality pollutant credit trading programs. Action on the Cape Fear River estuary low DO TMDL resolution proposed by LCFRP has been deferred pending legislative review.
- Annual wastewater and residuals reports were prepared. A Class B residuals permit modification application was submitted to and issued by NCDEQ to secure added flexibility to accommodate greater combinations of permitted residuals sources which can be more efficiently routed to suitable land application sites directly without having to be transported to the SSWWTP for pre-land application blending and reloading. In conjunction with CFPUA EMR staff, NPDES permit renewals were prepared and submitted to NCDEQ. Annual waste disposal applications for the acceptance of NSWWTP screenings and grit and SSWWTP screenings and grit at the New Hanover County Landfill were prepared and submitted for authorization.

Wastewater Treatment Division Notable Goals for FY 18

- Continue implementation of creative revenue generation strategies, particularly the utilization/marketing of excess digester gas production at the NSWWTP and the SSWWTP. Many factors have resulted in project implementation delays, including economic and regulatory impacts, there being volatility in natural gas availability and pricing and changes in renewable energy/biomass-derived biogas incentives and arrangements by which onsite-generated electricity can be used/marketed.

- Continue the production of Type 1 reclaim water at the NSWWTP with a goal of successfully marketing this resource, gaining public confidence in its benefits, and investigating the additional value and benefits associated with direct potable reuse (DPR).
- Complete the SSWWTP Expansion/Upgrade/Renovation plans and specifications while continuing diligent maintenance and capital investment in the existing plant as long term improvements are deferred until project commencement in 2026.

Wastewater Treatment Division Performance Measures

	FY 14	FY 15	FY 16
Volume Treated (gallons)	6,004,110,000	6,379,565,000	6,865,851,000
Cost per million gallons - NSWWTP	689	722	536
Cost per million gallons - SSWWTP	495	487	542
Cost per million gallons - WHWWTP	7,644	6,783	6,873
NPDES Permit Compliance (%) – NSWWTP	100.00	100.00	100.00
NPDES Permit Compliance (%) – SSWWTP	100.00	99.86	100.00
NPDES Permit Compliance (%) – WHWWTP	100.00	99.80	100.00

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT

	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	% Change - FY18 Adopted/FY17 Adopted
Operations - Wastewater Treatment										
Salaries & Benefits	$ 1,883,485	$ 1,849,465	$ 1,926,118	$ 1,794,790	$ 1,857,584	$ (116,606)	$ 1,740,978	$ 1,594,155	$ 1,894,801	2.00%
Operating	2,199,554	2,051,130	2,137,683	2,054,180	2,132,495	(27,626)	2,104,869	1,970,781	2,182,398	2.34%
Capital Outlay	-	-	-	7,093	-	-	-	-	-	0.00%
Total Operations - Wastewater Treatment	**4,083,039**	**3,900,595**	**4,063,801**	**3,856,063**	**3,990,079**	**(144,232)**	**3,845,847**	**3,564,936**	**4,077,199**	**2.18%**

OPERATIONS – WATER TREATMENT

Interim Water Resources Manager, John F. Malone

The Water Treatment Division processes source water from the Cape Fear River and confined underground aquifers in order to distribute clean, treated drinking water through three different systems within New Hanover County. A staff of state-certified treatment operators and a team of skilled maintenance technicians keep all facilities operational 24 hours per day, seven days per week to ensure that a supply of safe drinking water is available for customers of the Authority.

Key Accomplishments for FY 17

- Met regulatory standards and goals for disinfection byproducts set forth by state and federal standards through the implementation of aeration systems placed in two of the elevated water storage tanks and the four-million-gallon ground storage tank located at the Sweeney Water Plant.
- Maintained, trained and supported a full complement of certified water operators at all facilities and supported continued education for certified operators as necessary to achieve the minimum of 6 hours of continued education credit per year per licensed operator.
- Integrated the full requirements of laboratory testing and record keeping as mandated by the Public Water Supply Section.
- Completed the modifications to the Aquifer Storage and Recovery (ASR) well and installed a new submersible pumping system, and proceeded with recovery phase of cycle two testing as required by our injection permit. Operated the Aquifer Storage and Recovery (ASR) system by incorporating it as an additional source to the water system during the Lower Cape Fear raw water main break emergency.
- Reactivated two additional well water sources to be immediately available in case of water supply emergencies. These wells are currently maintained in a ready state by WT staff.
- Continued implementation of the Maximo Computer Maintenance Management System (CMMS) into all facilities of the division to allow for the efficient maintenance tracking of equipment and cost.
- Managed source water flows between Lower Cape Fear Water and Sewer Authority (LCFWSA) and our own Kings Bluff Pump Station to provide the supply of raw water to meet demand at the most efficient and lowest practicable cost. Managed the overall ground water source water supply as needed to meet demand while attaining a balance within the ground water aquifers and the communities.

- Maintained all facilities to the highest degree of operational efficiency to meet the demands for water supply, to ensure adequate storage for fire protection, adequate staffing 24/7 of well qualified and trained operators, and provided full coverage and operation during emergencies.
- Received OSHA / NCDOL SHARP (Safety and Health Recognition Program) designation at both the Sweeney Water Treatment and Richardson Nanofiltration Facilities.

Water Treatment Division Notable Goals for FY 18

- Continue the effort of interconnecting water systems to allow for blending of water sources to balance operational efficiency and water quality within the entire service area.
- Rehabilitate aging infrastructure at wells used during water source or supply shortages.
- Continue monitoring of water quality and operation of aeration equipment to reduce the formation and residual of disinfection by-products within the distribution system.
- Complete final phase of cycle testing of the ASR Well and Incorporate its normal operation into the combined water system.
- Incorporate improvements into the Water Treatment SCADA systems and CFPUA network infrastructure to facilitate increased operation and monitoring efficiencies of Water Treatment and distribution pumping / storage facilities.
- Continue to maintain a reliable network of distribution monitoring instruments to allow for real-time data gathering from distribution systems.

Water Treatment Division Performance Measures

	To March 2014	To March 2015	To March 2016	To January 2017
Volume Treated- Surface to Ground Water	6.5 Billion Gallons	6.0 Billion Gallons	6.2 Billion Gallons	6.6 Billion Gallons
Compliance with all Federal & State Drinking Water Regulations	100%	100%	100%	100%
Maintain Operating Costs at Sweeney WTP per one million gallons	$806	$900	$870	$902
Maintain Operating Costs at Nano per one million gallons	$1,530	$1,530	$1,320	$1,471
Operating Costs per 1000 gallons (electrical, chemical & O&M costs)	$0.93	$0.95	$0.95	$1.02

Continue to meet AWOP[1] and partnership turbidity goals	0.1 ntu[2] in 95% in filtered water readings	0.1 ntu[2] in 95% in filtered water readings	0.1 ntu[2] in 95% in filtered water readings	0.1 ntu[2] in 95% in filtered water readings
Finished Water Total Organic Carbon Levels:				
Richardson Nano Filtration Plant:	1.0 mg/L or less	1.0 mg/L or less	1.0 mg/L or less	1.0 mg/L or less
Sweeney Water Treatment Plant:	2.0 mg/L or less	2.0 mg/L or less	2.0 mg/L or less	2.0 mg/L or less
[1]Area Wide Optimization Program				
[2]nephlometric turbidity units				

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Operations - Water Treatment										
Salaries & Benefits	1,568,090	1,555,304	1,640,825	1,520,689	1,715,658	(1,106)	1,714,552	1,513,294	1,830,309	6.68%
Operating	4,461,078	4,350,030	4,898,469	4,757,867	4,918,851	(27,088)	4,891,763	4,499,447	5,178,924	5.29%
Capital Outlay	-	-	-	57,017	-	68,246	68,246	68,246	-	0.00%
Total Operations - Water Treatment	**6,029,168**	**5,905,334**	**6,539,294**	**6,335,573**	**6,634,509**	**40,052**	**6,674,561**	**6,080,987**	**7,009,233**	**5.65%**

ENVIRONMENTAL MANAGEMENT

Environmental Management Director, Beth Eckert

The major focus of this group is to further develop and implement the ISO 14001 Environmental Management System to formalize operating criteria and the system of plan-do-check-act to drive continual improvement. The division also works closely with the Authority's Operations and Engineering staff on construction and emergency projects to ensure compliance. Environmental Management staff continually collaborates with N.C. Sedimentation and Erosion Control and North Carolina Department of Environment and Natural Resources (NCDENR) as well as the U.S. Army Corps of Engineers (USACE) and N.C. Coastal Area Management (CAMA) on various projects.

Key Accomplishments for FY 17

- Maintained Third Party Certification for our ISO 14001 Environmental Management System (EMS) within the Collection System, Pump Station, Right of Way and Environmental Management groups.
- Gained Third Party Certification for ISO 14001 EMS within the Distribution and Construction division.
- Began transitioning the ISO 14001 Environmental Management System from the 2004 version to the 2015 version.
- Began implementing the EMS with the Engineering Department, including incorporating each element of the EMS and continuing to work with staff to complete the operational control portion.
- Served as the liaison between CFPUA, N.C. Division of Water Quality (NCDWQ) and City of Wilmington during sanitary sewer overflow (SSO) events to ensure all reporting was done per the permit and SOP requirements.
    - Submitted renewal applications for five NPDES permits.
- Conducted the first Dumpster Dive (Waste Audit) with 2310 N 23rd Street Facility and identified items that are currently being taken to the landfill that could have potential recycling outlets.
- Modified recycling and trash containers in the Environmental Management Department facility to increase the recycling capacity and saving approximately $500 per year.
- Represented CFPUA as a member of the Lower Cape Fear River Program.

Environment Management Division Notable Goals for FY 18

- Identify and update staff on all pending and approved regulatory changes.
- Support operations as necessary to help ensure continued compliance.
- Provide immediate response to sanitary sewer overflows (SSOs) throughout the review period.
- Continue with EMS implementation in the Wastewater, and Water Treatment areas.
- Gain certification to the ISO 14001 – 2015 standard for all currently certified areas.
- Seek certification for the Engineering Department.
- Conduct waste audits at all remaining CFPUA facilities and identify recycling opportunities.
- Further develop the environmental partnerships with the Cape Fear River Assembly, Partnership, and other local and state environmental stakeholders.

ENVIRONMENTAL MANAGEMENT – COMMUNITY COMPLIANCE

Environmental Compliance Manager, William Roy

The Community Compliance Division is responsible for administering the Pretreatment (PT), Fats, Oil and Grease (FOG) and Backflow Prevention (Cross Connection Control) programs.

The PT and FOG programs include the regulation of discharge of non-domestic wastewater. These federal and state regulated programs ensure the protection of the Authority's Publicly Owned Treatment Works (POTW), employees, bio-solids, receiving stream, and other surface waters as well as compliance with National Pollutant Discharge Elimination System (NPDES) and collection system permits. The Compliance staff works closely with collection system personnel in responding to sanitary sewer overflows and sewer blockages that are caused by FOG, debris, or fibrous materials. Inspections are conducted in the affected areas and literature is distributed for educational purposes. Seven significant industrial users and over seven hundred food service establishments are permitted by CFPUA, each being monitored and inspected annually.

The Cross Connection Prevention Program ensures the quality of the potable water in the distribution system. Backflow prevention assemblies safeguard the distribution system by preventing potential contaminants within a customer's plumbing from flowing back into the distribution system from siphonage or back pressure. New and expanding water services are reviewed for backflow prevention compliance in cooperation with the Engineering Department's Development Services Division's plan review process. Facilities with existing services are inspected to ensure compliance with backflow prevention requirements.

Key Accomplishments for FY 17

- During the first six months of the review period staff monitored and inspected 52% of 784 total FSEs ensuring compliance with the Sewer Use Ordinance.
- Provided compliance assistance to FSEs helping reduce their waste disposal cost through the grease interceptor pumping frequency variance program.
- Investigated FOG related Sanitary Sewer Overflows and blockages in the collection system, providing educational resources and compliance assistance to 878 residential and commercial customers.
- Issued 25 Authorizations to Construct grease interceptors to FSEs.
- Completed long term sampling at both WWTPs, including additional sampling for HWA.
- Completed additional low level mercury samplings for data to be used in HWA and developing a mercury reduction program.
- Reviewed SIU and IU monthly monitoring reports for compliance within required time frames.
- Issued Notices of Violations to SIUs as required.

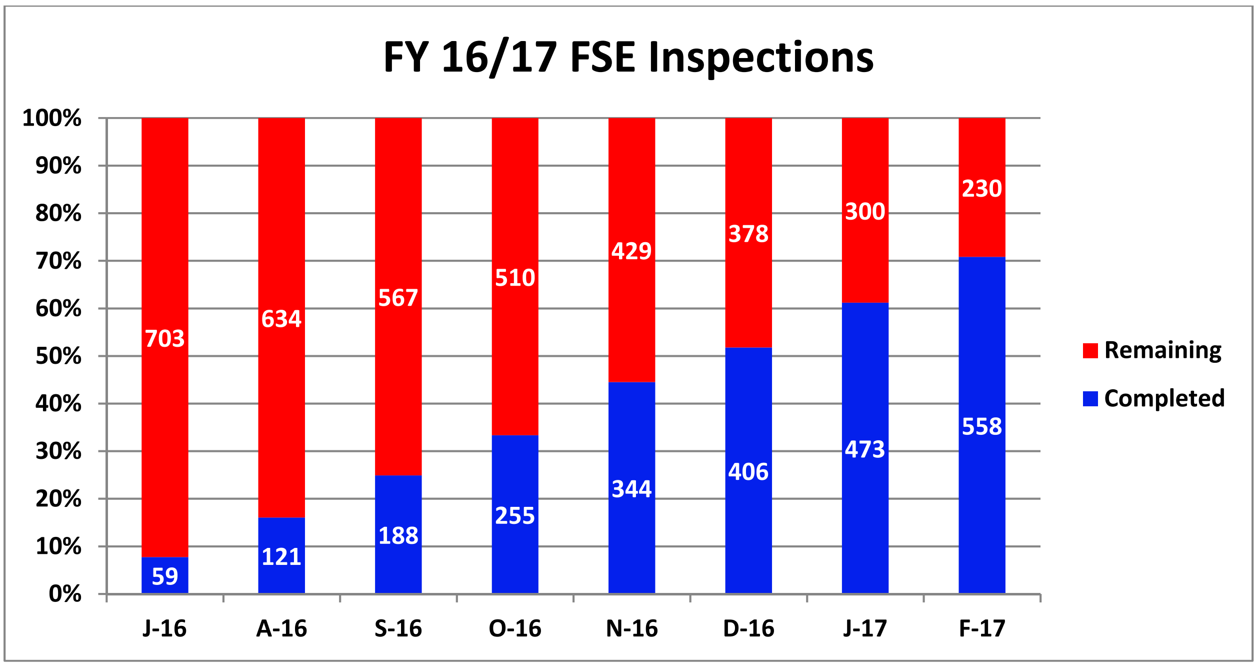
- Began cataloging specific oxygen uptake rates on all SIUs to be used in evaluating impacts on the wastewater treatment plants.
- Performed 15 water tampering investigations.
- Appeared in District Court 7 times related to tampering.
- Performed 38 irrigation/well disconnection verification inspections.
- Provided cross connection control and water metering to 57 special water use accounts consuming and billed for approximately 2,200,000 gallons.
- Processed 903 applications and permits for new backflow installations.
- Continued improvement with the implementation of Maximo within the division to better track inspection data and work time.
- Continued improvement with the automated process of transferring data from FSE inspections from field report to Maximo using Laserfiche.
- Partnered with the NC Rural Water Association in conducting training events that ensure competent backflow prevention assembly testers are available.
- Mailed past due “backflow preventer testing” postcard reminders to customers to improve testing compliance and customer safety.
- Continued updating Standard Operating Procedures (SOPs) and training to conform to ISO 14001 requirements.
- Performed multiple outreach efforts that included: can lid campaign; FOG educational billing inserts; Backflow Prevention educational billing inserts.
- Managed the water conservation compliance portion of the Water Emergency Management Ordinance during the raw water intake break. Coordinated efforts between CFPUA, WPD and NHCo. Sheriff’s Office. Conducted 131 investigations and issued 47 warnings.
- Successfully audited by the NCDEQ Pretreatment Department.
- Updated the Enforcement Response Plan.
- Updated the Cross Connection and Backflow Prevention Ordinance.
- Updated the Sewer Use Ordinance.
- Updated the Water Emergency Management Ordinance.

Community Compliance Division Notable Goals for FY 18

- Provide education outreach and enforcement for SSOs.
- Inspect all FSEs within the fiscal year.
- Use Maximo to identify new customers who need to receive Industrial Waste Surveys and submit the 5-year Industrial Waste Survey to NCDEQ by May 2018.
- Meet all pretreatment requirements of monitoring, inspecting, and enforcement per permit requirements and sewer use ordinance.

- Work to support the Authority's mission by completing compliance tasks in a timely manner and by promptly responding and assisting other areas of the Authority.
- Provide regulatory and billing support for the implementation of the reclaimed water and hauled residuals programs.
- Ensure all applicable backflow test reports are entered and the due notices are sent out within the schedule.
- Use Maximo to identify customers in noncompliance with backflow testing requirements who need to receive civil penalty letters.
- Coordinate backflow tester classes with NCRWA to ensure an adequate number of backflow testers in CFPUA service area.
- Survey and/or inspect laboratories discharging to CFPUA to determine compliance with the SUO.

Community Compliance Division Performance Measures



ENVIRONMENTAL MANAGEMENT – LABORATORY DIVISION

Lab Manager, Jill Deaney

The EMD Laboratory successfully completed sampling and testing to meet regulatory requirements and operational process needs for the Authority's four water distribution systems, three wastewater treatment plants, two water treatment plants, and their associated distribution and collection systems. The lab is certified by the state of North Carolina to provide analytical services for drinking water, wastewater, industrial discharges, ground, surface and storm waters. More than 21,000 samples are collected by EMD lab staff and over 64,000 analyses for organic and inorganic chemical components and microbiological organisms are performed annually. The EMD laboratory works with CFPUA's Water Quality department to offer our customer's quick turnaround times for responding to boil water advisories, new line activations and customer complaints. The Laboratory follows a stringent Quality Assurance Program which ensures specified data quality objectives are achieved and results are accurate for reporting and decision making purposes.

Key Accomplishments for FY 17

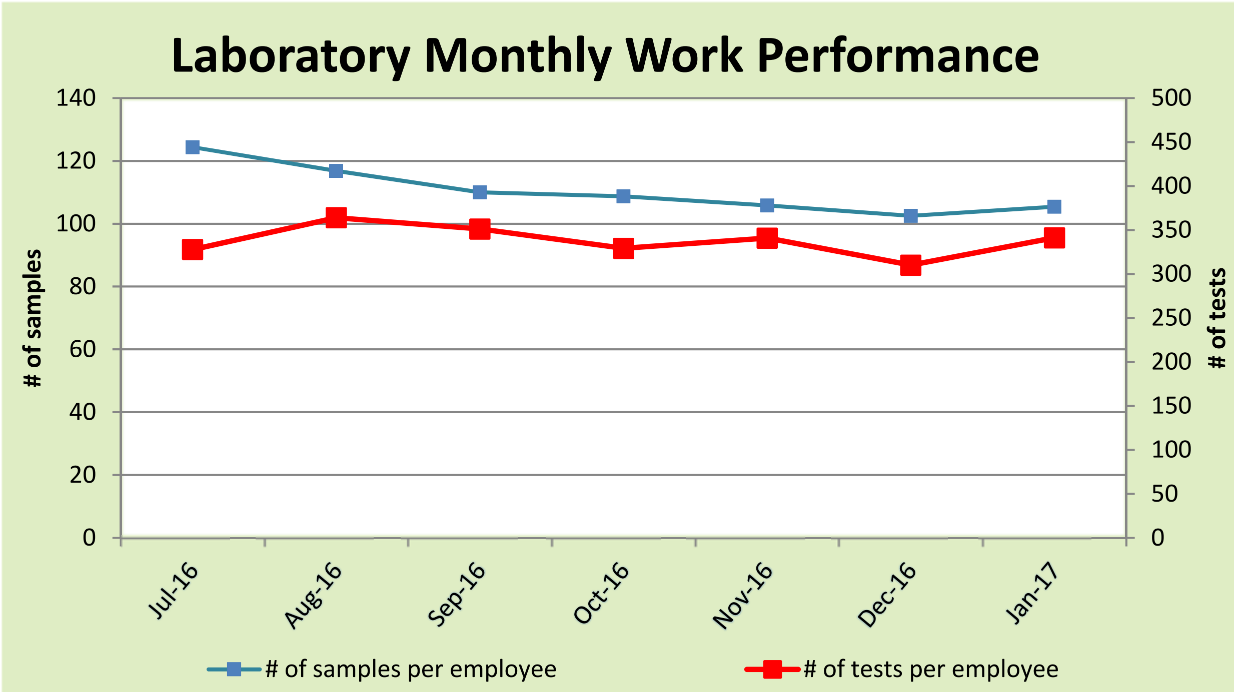
- Zero accident rate.
- Completed 28 safety trainings and tailgates including chemical hazard training each month.
- Implemented all requirements of the new OSHA Globally Harmonized System Standard.
- Laboratory staff successfully completed all annual proficiency testing as required by the laboratory's drinking water and wastewater analytical certifications.
- The Laboratory Continuity of Operations Plan was updated and training with all lab staff was conducted on the plan.
- Completed Lead and Copper sampling, testing and reporting for the 04-65-137 water system.
- Completed Lead and Copper sampling, testing and reporting for the 04-65-232 water system.
- Created new Sample Siting Plans for distribution sampling and lead and copper sampling in three water systems to meet the new requirements of the Revised Total Coliform Rule.
- Collected and analyzed over 380 special samples for TOC and THM analysis to assist Operations staff with monitoring DBP in the distribution system.
- Completed sampling and analysis for over 250 samples for multiple parameters for research related to the 010-232-137 blending study.
- Assisted Operations staff in an extensive investigation related to elevated BOD results at NSWWTP.
- Completed special sampling and analysis on samples in the Flemington area as requested by PWS.
- Continued to provide analytical data and reports in a timely fashion in support of all monitoring programs throughout the year.
- Continued to utilize Utility Cloud software to maximize efficiencies and documentation of distribution system monitoring.
- Began working with Operations and Engineering staff on a project to replace residential and business sample sites with sample stations.

- Assisted Operations staff with quarterly Quality Control checks of their lab and field instrumentation.
- Five lab staff members served on the internal EMS Audit team and completed audits.
- Completed transition training of all Laboratory Technicians on distribution system sampling.
- Hired and trained four new Laboratory Technicians.
- Conducted emergency sampling and analysis during Hurricane Matthew.
- Conducted emergency sampling and analysis during the raw water line break emergency.
- Completed ASR cycle 2 recovery sampling and analysis.
- Completed sampling and analysis for Raw water TOC rush analysis for Sweeney.
- Completed sampling and analysis for Long Term Monitoring and Significant Industry User analysis.
- Prepared eDMR reports for wastewater NPDES results and nDMR reports for reclaimed water.
- Completed sampling and analysis for NPDES Permit Renewal Toxicity sampling and testing began for NSWWTP and SSWWTP.
- Completed sampling and analysis for Annual TCLP (Toxicity Characteristic Leaching Procedure) was conducted at NSWWTP and SSWWTP.

Laboratory Division Notable Goals for FY 18

- Complete all required sampling and testing accurately and efficiently.
- Continue to meet all requirements to maintain water and wastewater lab certifications.
- Support Authority programs to ensure compliance with all environmental laws and requirements.
- Update and maintain laboratory business continuity plan.
- Update and maintain safety and chemical hygiene plan.
- Continue to maximize use of the Utility Cloud software to gain efficiencies in sampling.
- Continue to support succession planning, rotate job tasks among chemists and microbiologists to cross train and gain efficiencies. Further, look for ways to continue professional development of lab staff and cross training opportunities.
- Continue to comply with EMS document control requirements; participate in audits; maintain certification.
- Continue to evaluate laboratory testing costs; alternate suppliers and maintenance contracts for potential cost savings.
- Continue to support ASR activities as needed including permit requirements, data analysis and management and monitoring schedule requirements.

Laboratory Division Performance Measures



ENVIRONMENTAL MANAGEMENT – SECURITY & EMERGENCY MANAGEMENT

Security and Emergency Manager, Eric Hatcher

The Security & Emergency Manager ensures the Authority abides by relevant regulations for all-hazards mitigation, preparedness, response and recovery. The manager develops, maintains, and trains employees on the Emergency Response Plan and associated Incident Action Plans, and works to meet EPA's seventeen National Incident Management System (NIMS) water sector compliance objectives. In addition, this position conducts physical security inspections to identify gaps and assess best practices for safeguarding facilities and systems. With an ever-increasing national cyber-security threat, the manager also works closely with the IT Division to assess needed policies and procedures to increase the Authority's cyber-security posture.

Key Accomplishments for FY 17

- Coordinated first known water utility sector full scale water exercise. Highly successful event tested all aspects of CFPUA's response to a loss of supply scenario including plant operation, emergency well activations, public communications, and command and control elements. Exercise allows CFPUA to refine and identify potential gaps in readiness, training, and planning.
- CFPUA received NC AWWA-WEA's Large Utility Disaster Preparedness Award for 2016.
- Further expanded the use of Incident Action Plans for critical incidents and events: algal bloom Cape Fear River response; Continuity of Operations Plan for Laboratory.
- Supervised Stand-up and planning activities for the CFPUA's EOC during the Lower Cape Fear raw water transmission main break following Hurricane Matthew. Ensure posters, models, tools readily available to guide staff in the event's response.
- Facilitated Department of Homeland Security visit and use of a cyber-security evaluation tool to identify a baseline of our cyber-security readiness activities.
- Continued active participation as Secretary of the NCWaterWARN Mutual Aid and Assistance Program for North Carolina. Served as session speaker for North Carolina Rural Water Association Leadership Summit.
- Represent Cape Fear Public Utility Authority on the New Hanover County Local Emergency Planning Committee, which plans for Hazardous Materials (HAZMAT) response incidents within the community.
- Developed a vendor access procedure which allows contractors to access our network to perform vital functions, but ensures proper controls are in place to protect processes.
- Conducted site security inspection of Southside WWTP and provided assessment to Operations and Engineering Departments to address key deficiencies in physical security at the site.

Security and Emergency Manager Notable Goals for FY 18

- Conduct critical infrastructure system security inspections to identify gaps and remedy effective corrections.
- Hold a Virtual Communications Exercise w/ Senior Staff.
- Continue to conduct cyber security evaluations of major facilities using DHS CSET tool.
- Serve on several sector committees: WaterISAC Advisory Committee; NC AWWA- WEA Risk Management Committee; New Hanover County LEPC's Emergency Planning and Training Sub-Committee Chair; US Coast Guard's Area Maritime Security Committee's Cyber Sub-committee.
- Draft source water protection plan as the NCDEQ PWSS regulation is finalized.
- Continue training and working with staff to further expand the use of NIMS in our best practices.

- Continue to represent CFPUA at state and regional events to provide water sector emergency management training to improve utility readiness.
- Continue to work with IT Division to identify needed policies and procedures to increase cyber-security posture at CFPUA.

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Environment Management										
Salaries & Benefits	1,867,386	1,649,588	1,861,936	1,784,851	1,929,535	(26,403)	1,903,132	1,611,293	2,094,509	8.55%
Operating	479,246	379,065	443,063	385,974	487,928	8,000	495,928	333,265	571,317	17.09%
Capital Outlay	-	-	-	18,526	-	67,418	67,418	34,165	-	0.00%
Total Environment Management	**2,346,632**	**2,028,653**	**2,304,999**	**2,189,351**	**2,417,463**	**49,015**	**2,466,478**	**1,978,723**	**2,665,826**	**10.27%**

CUSTOMER SERVICE

Customer Service Director, Kristi Irick

The Customer Service Department is responsible for servicing over 67,000 customers for water and sewer services. This department reads meters and bills customers for services with a billing accuracy over 99%. There are two customer service locations and a call center staffed to address customer inquiries in an efficient and timely manner. The Department's objective is to meet our customers' needs through timely response, effective service and managed financial costs.

Key Accomplishments for FY 17

- Point of contact for all customer service related inquiries that include payments, service set ups, answering questions and concerns, etc. Our staff assists over 13,000 customers per month.
- Payment Processing:
  - Customer Service Representative (CSR) Assisted Payments: Only 19.7% of all payments received were handled by a CSR in FY16 compared to 22.3% in FY15. This is due to the many payment options available to our customers. Self-help payments continue to increase since implementation of automated processes.
  - A/R Payments: Continued customer notification process via letter/phone call to ensure customers update account numbers in their online bank so we receive ACH in lieu of paper check. A/R payments have increased .6% from an average monthly volume of 6,575 in

FY15 to 6,611 in FY16. A/R payments constitute approximately 19.4% of all payments received.

  - Remote Deposit: Remote deposit is the electronic same day deposit of payments received via mail or night drop box via automated file for batch creation. In FY16, 118,970 payments were processed through remote deposit, representing approximately 29.5% of all payments received.
  - IVR Payments: Total average monthly payments were up 13.1% from 2,406 in FY15 to 2,722 in FY16. Since implementation in July 2013, IVR payments now represent almost 8% of all payments received.
  - Bank drafts: The number of bank drafts has increased 8.5% from a monthly average of 2,338 in FY15 to 2,537 in FY16. Bank drafts represent about 7.5% of all payments.
  - EzBilling: EzBilling increased 15.4% from an average monthly payment total of 4,672 in FY15 to 5,390 in FY16. EzBilling represents about 15.9% of all payments.
- Customer Service management staff played a critical role in the ERP Project. Staff provided input for the contract, attended demos and have begun working through process work flows.
- Began implementation of Badger Orion Automated Reading System as part of the Meter Replacement Program. In the pilot phase, approximately 1500 units were converted to AMR technology that cut read time from 38 hours to four hours.
- Continued to make stuck/damaged meters a priority. For calendar year '16, Meter Services completed 1,520 work orders for stuck/damaged meters.
- Successful integration of Meter Services and Meter Reading divisions.
- Debt Setoff – Debt Setoff collected $114,546 in FY16; which is an increase of $27,794 from FY15.
- Outbound calls by CFPUA staff to customers with delinquent accounts resulted in the collection of $787,447 in FY15 and represents a $222,922 increase in in house collections from FY15.
- Finalized lien process for outstanding sewer and flat sewer accounts. During this period 122 judgements were filed for a total of $281,872. Of that total, $40,113 has been collected to date.
- Developed a procedure for the research of parcel sales to ensure accuracy of correct ownership for billing of services.
- Process for the collection of billed deposits for delinquent customers was defined and to date $182,920 has been billed to customer's accounts. These deposits ensure that the amount of uncollectable revenue is decreased on final accounts. Further, commercial deposits are checked within six months of establishment in order to validate the deposit collected was significant enough to cover potential loss.
- Facilitated processes to ensure accurate date is supplied to third party collection agencies with a monthly reconciliation to capture errors and alleviate the need for credit refunds.
- Continued collaboration efforts with Engineering and Operations departments to develop policies and procedures that support Authority goals and customers' needs, including community outreach and continued improvement of the Mandatory Connection process.

- Customer Service continued to leverage the use of GPS technology by assigning work orders to the meter reading staff closest to the work that needs to be done.

Customer Service Division Notable Goals for FY 18

- Increase calls handled in less than 6 minutes service level to 95% – Calendar year 2015 service level of 95% of all calls handled in less than 6 minutes, measured monthly.
- Continue development of a training program for Customer Service staff to include customer service skills, leadership, administrative, computer skills, safety, and cross training to provide the highest quality of customer service.
- Continue to actively contact delinquent customers to increase the collection of revenue and to provide an increased level of customer service.
- Review and implement meter reader route changes to improve efficiency and productivity in meter reading activity.
- Implement proper test procedures for all sizes of water meters to ensure accuracy.
- Develop a guide to ensure meters are replaced at the end of their useful life.
- To maintain stable financial position by effectively billing and collecting revenues:
  - Maintain 100% on-time billing
  - Maintain 99% bill preparation accuracy
  - Maintain 99% meter reading accuracy

Customer Service Division Performance Measures

	FY14	FY15	FY16	Target
Calls answered in less than 6 minutes:	96.3%	89.3%	95%	95%
Average Speed of Answer (in seconds):	83	135	177	180
Abandoned Calls	6.8%	10.7%	12.5%	< 10%
Billing Accuracy	99.2%	99.2%	99.1%	99%

Summary of Expenditures

EXPENDITURES DETAIL BY DEPARTMENT										
	CFPUA FY 14-15 Adjusted Budget	CFPUA FY 14-15 Actual	CFPUA FY 15-16 Adjusted Budget	CFPUA FY 15-16 Actual	CFPUA FY 16-17 Adopted Budget	CFPUA FY 16-17 Amendments & Transfers	CFPUA FY 16-17 Adjusted Budget	CFPUA FY 16-17 Projected	CFPUA FY 17-18 Adopted Budget	FY18 Adopted/FY17 Adopted
Customer Service										
Salaries & Benefits	2,713,981	2,081,128	2,786,409	2,550,915	2,915,877	56,094	2,971,971	2,397,492	3,090,831	6.00%
Operating	915,758	646,204	871,301	767,405	1,017,100	412	1,017,512	612,700	971,994	-4.43%
Capital Outlay	-	-	-	9,658	-	8,563	8,563	-	-	0.00%
Total Customer Service	**3,629,739**	**2,727,332**	**3,657,710**	**3,327,978**	**3,932,977**	**65,069**	**3,998,046**	**3,010,192**	**4,062,825**	**3.30%**

CAPITAL BUDGET

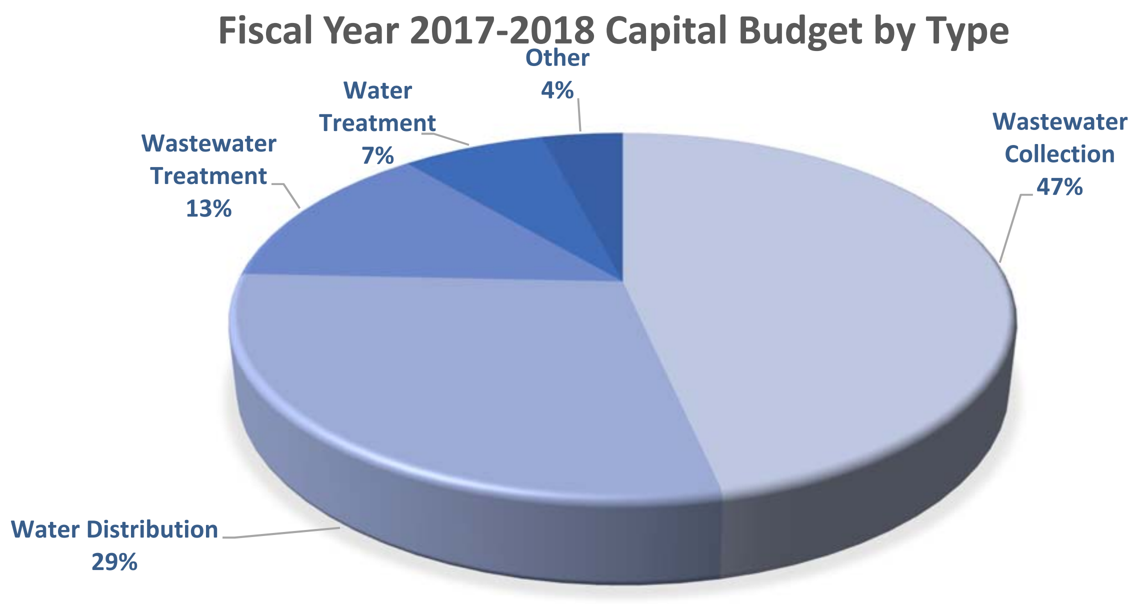
Capital improvements are necessary for rehabilitation, replacement, and acquisition of infrastructure and to provide safe, reliable, high-quality water and wastewater services. Capital improvements are budgeted through project ordinances that appropriate funds to be used over the life of the project, which may span several budget years. This contrasts with the Authority's operating budget appropriations which lapse at the end of each budget year. Capital budgets are developed by first preparing initial business cases to evaluate capital projects in terms of risk (defined as the product of the consequence of failure and the likelihood of failure) and whether the projects are necessary for compliance with regulatory requirements, improve efficiency, increase capacity, or are necessary to accommodate growth. Projects are prioritized based on risk and these other criteria.

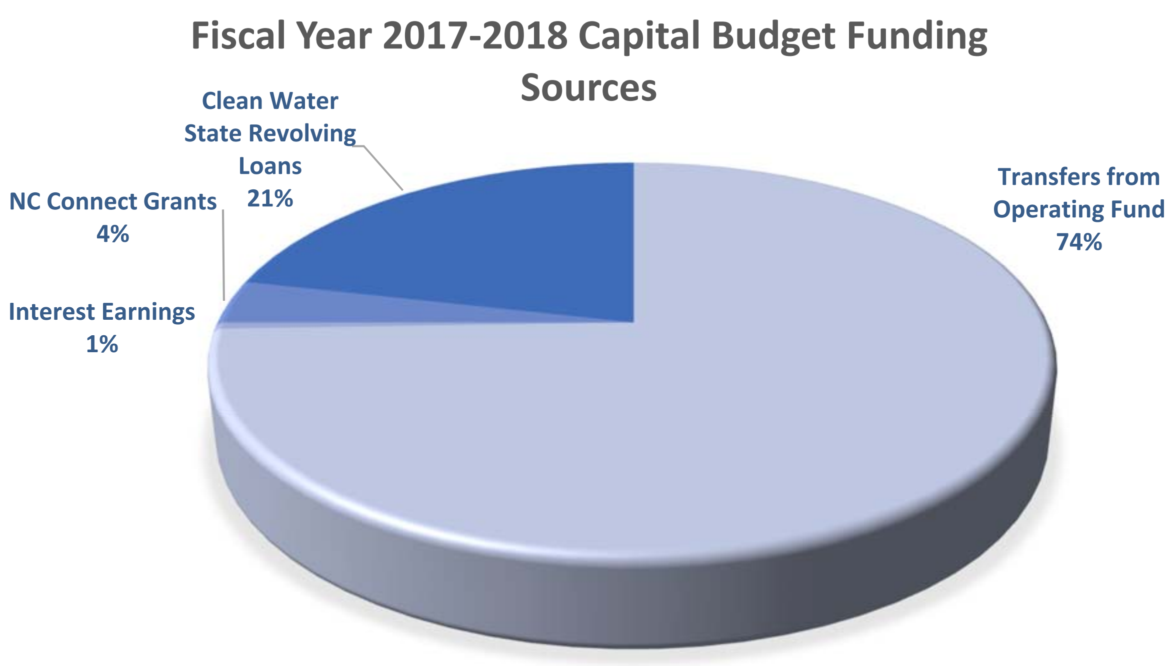
The capital budgeting process is also governed by certain financial limitations. Except for grants and capital contributions, the Authority's capital projects are funded through either annual operating revenue (pay-as-you-go funded) or with proceeds from the issuance of debt (debt funded). In accordance with policy, debt is generally limited to high-dollar and growth-oriented projects. Debt cannot be issued if such issuance would cause the Authority's debt-to-capitalization ratio to exceed 45%. These debt limitations mean that most other capital expenditures are funded on a pay-as-you-go basis. The Authority develops its capital budgets to provide that pay-as-you-go funded capital expenditures approximate a pre-determined target. Since pay-as-you-go funding comes from water and wastewater revenues, establishing an annual pay-as-you-go funded capital expenditure target reduces rate volatility and keeps rates affordable. The current amount of $18 million was determined based on the size of the system, current condition of the system, expectations of construction and materials costs, and rate affordability benchmarks.

An important aspect of capital budgeting is the effect that budgeted projects have on the annual operating budget. As previously mentioned, most of the Authority's capital expenditures are debt funded or pay-as-you-go funded. Both funding methods impact the annual operating budget. Under the pay-as-you-go method, customers are charged through rates to fund capital costs. Pay-as-you-go funding is appropriated as a transfer to the capital fund in the annual operating budget. Under the debt funding method, customers are charged through rates to cover debt service costs related to debt issued to fund capital costs. Debt service costs are appropriated in the annual operating budget. Appropriations for transfers to the capital projects fund and debt service for FY 17-18 are $14.9 million and $24.3 million, respectively. Combined, these appropriations comprise 49.3% of the FY 17-18 operating budget.

The FY 17-18 capital budget totals $45.5 million. The majority (58.2%) of the FY 17-18 capital budget is focused on rehabilitating or replacing existing infrastructure. Notable projects include the interim rehabilitation of the Southside Wastewater Treatment Plant, the comprehensive meter replacement program, and various pump station replacement and rehabilitation projects. Another 39.9% of the FY 17-18 capital budget is programmed for system expansion with the remainder (1.9%) programmed for improving efficiency. Notable expansion projects include the extension of water and wastewater service up the Highway 421 Corridor and the Castle Hayne water and wastewater service expansion project.

The pie charts on the following page detail project appropriations by type and the funding sources incorporated in the FY 17-18 capital budget.





The following pages include project summaries for the projects appropriated in FY 17-18. These summaries include a project description, project drivers, current and future funding needs, and an assessment of risk before and after project completion.

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Find It, Fix It Methodology Gravity Sewer Rehabilitation (AMP)	17S394
04		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Collection	

Summary:
Areas of our collection system are beyond their designed life-cycle. Utilizing asset management principles, including risk mitigation and remaining useful life, assets are determined to be rehabbed or replaced. Potential projects include eliminating infiltration and inflow tributary to Southside WWTP; manhole rehab along Laney Outfall; manhole rehab at Pump Stations 34 and 35; and rehabilitation or replacement of pipe which is over 40 years old and has a work order history or condition assessment that indicates failures or costly maintenance requirements.

CFPUA has approximately 870 miles of gravity sewer. It is estimated that 229 miles or 26% is over 40 years old, with 100 miles or 11% in the City which is over 70 years old.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$47,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$7,500,000	$1,500,000	$38,000,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD

5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD

5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	SCADA Implementation at Pump Stations	16S344
10		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Collection	

Summary:

This project is to fund systematic replacement of existing SCADA Remote Terminal Units (RTU's) at the Authority's 142 pump stations.

After ongoing replacements using current funding, approximately 115 existing RTU's will remain that are over 20-years old. Parts for these units are no longer available in the marketplace for repairs. In addition, these replacements are needed to convert to wireless Ethernet communication. $250,000 in FY 18 will upgrade approximately 25 RTU panels.

Project Drivers and Benefits:

- COMPLIANCE 75%: Required for compliance with some other beneficial considerations.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$1,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$500,000	$250,000	$250,000

REFERENCE NUMBER	Wastewater Treatment Facilities Rehabilitation (AMP)	17S392
13		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Treatment	

Summary:
This project performs improvements and rehabilitation to CFPUA assets prioritized by probability and consequence of operating failure or shortfalls in capacity that can be incrementally improved without major construction. These improvements include, but are not limited to, old blower building roof replacement, (2) EMCO 12" flow meters, replace secondary clarifier breaker cabinets, digester building intake and exhaust fans. Addressing these needed improvements between major renovations and upgrades prevents further degradation of assets.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$1,400,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$400,000	$100,000	$900,000

REFERENCE NUMBER	Water Distribution Sample Stations	17W245
18		
Project Type:	Enhancement	
Project Area:	Water Distribution	

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Summary:
CFPUA needs 250 sampling locations for its routine sampling of the distribution system water quality. A number of the sample sites are located on private property and owners want them removed. DEQ wants redundancy for compliance. This project will remove the sampling sites from private property while offering redundancy. For FY 18 this project will provide funding for approximately a third of the sample stations. Future funding will address the remaining sampling stations.

Project Drivers and Benefits:

- COMPLIANCE 75%: Required for compliance with some other beneficial considerations.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$670,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$70,000	$200,000	$400,000

REFERENCE NUMBER	Comprehensive Meter Replacement Program	16W215
22		
Project Type:	Rehab or Replace Assets	
Project Area:	Water Distribution	


Risk Before
RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Summary:
CFPUA has approximately 63,000 small meters (5/8" – typical residential) and 3,900 midsize meter (1", 1,1/2", and 2") The meter population is a mixture of radio read, touch/probe read, and manual read type. Billing is conducted bi-monthly, with a total of 221 routes and 9 meter readers. A majority of CFPUA's meters are approaching the end of their useful life, meaning a reduction in reading accuracy. CFPUA recognized the need to initiate a Meter Replacement Program to replace these aged meters and institute a consistent and efficient meter reading method. The Meter Replacement Program is a phased project that will replace water meters within the distribution system, currently programmed to completely replace all meters within FY 16 through FY 19. FY 18 will be the third phase of this project.


Risk After
RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Project Drivers and Benefits:

- COMPLIANCE 0%: No direct impact on compliance.
- EFFICIENCY 100%: Increases efficiency with no other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$18,580,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$10,850,000	$4,930,000	$2,800,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Rehabilitation of Sewer Infrastructure Matching with City Streets	17S395
23		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Collection	

Summary:

When the City of Wilmington initiates street repaving or stormwater projects there are opportunities for replacement of CFPUA sewer infrastructure as a part of the City's project. These funds are programmed to fund design and construction of Authority infrastructure rehab or replacement under contracts managed by the City as set forth by future Interlocal Agreements. Brick streets, repaving and streetscape projects are prime examples where the cost to the public and traffic disruptions can be reduced by concurrently addressing sewer infrastructure improvements. See also a matching project for water infrastructure.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$6,600,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$600,000	$600,000	$5,400,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Rehabilitation of Water Infrastructure Matching with City Streets	17W243
24		
Project Type:	Rehab or Replace Assets	
Project Area:	Water Distribution	

Summary:

hen the City of Wilmington initiates street repaving or stormwater projects there are opportunities for replacement of CFPUA sewer infrastructure as a part of the City's project. These funds are programmed to fund design and construction of Authority infrastructure rehab or replacement under contracts managed by the City as set forth by future Interlocal Agreements. Brick streets, repaving and streetscape projects are prime examples where the cost to the public and traffic disruptions can be reduced by concurrently addressing sewer infrastructure improvements. See also a matching project for water infrastructure.

Project Drivers and Benefits:

- COMPLIANCE 0%: No direct impact on compliance.
- EFFICIENCY 100%: Increases efficiency with no other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$6,600,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$600,000	$600,000	$5,400,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Information Technology Networking Infrastructure Replacement	16A007
30		
Project Type:	Rehab or Replace Assets	
Project Area:	Other	

Summary:
In 2008 the Information Technology Division purchased various electronics (Firewalls, Switches, Routers) to connect the Administrative building and the other CFPUA facilities to one another. These devices provide intelligent routing and segmenting for various (Data, Voice, SCADA) applications, security from outside networks, Internet access, and virus protection for the Authority. This project replaces that equipment in a prioritized manner across multiple years. Some equipment will be replaced only after it fails or is obsolete to extract maximum value and service life.

Project Drivers and Benefits:

- COMPLIANCE 25%: Some enhancement to compliance with substantial other benefits.
- EFFICIENCY 75%: Significant increase in efficiency with some other beneficial considerations.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$1,264,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$264,000	$100,000	$900,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Water Treatment Facilities Rehabilitation (AMP)	17W242
31		
Project Type:	Rehab or Replace Assets	
Project Area:	Water Treatment	

Summary:

CFPUA's Water Treatment Facilities require improvements and rehabilitation through asset management. Rehabilitation and replacement of tankage at water plants, engineered coating rehabilitation and replacement on floors at the Nano plant, engineered coating repairs to the backwash EQ basin and other moderate sized projects not included in recent upgrades are identified through asset management processes. Addressing these needed improvements between major renovations and upgrades prevents further degradation of assets. Potential projects for FY 18 include sulfuric acid feed pumps at Richardson WTP, moisture in lower ozone at Sweeney WTP, alum sludge building at Sweeney WTP and floor coatings at Richardson WTP.

Project Drivers and Benefits:

- COMPLIANCE 25%: Some enhancement to compliance with substantial other benefits.
- EFFICIENCY 75%: Significant increase in efficiency with some other beneficial considerations.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$1,340,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$340,000	$100,000	$900,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Motor Fleet Capital	17A013
34		
Project Type:	Rehab or Replace Assets	
Project Area:	Other	

Summary:

CFPUA developed a long term model for motor fleet replacements based on predetermined criteria. Each of these vehicles will be evaluated based on maintenance records and past history. Replacement of those that can be extended in life cost effectively will be deferred. Fleet capital costs are an ongoing major capital expense. By setting aside regular appropriations of capital each year, the Authority is better financially prepared to prevent unplanned funding demands due to motor fleet expenses, without adequate resources.

Project Drivers and Benefits:

- COMPLIANCE 25%: Some enhancement to compliance with substantial other benefits.
- EFFICIENCY 75%: Significant increase in efficiency with some other beneficial considerations.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$7,300,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$1,300,000	$600,000	$5,400,000

This Project Is Not Risk Driven

REFERENCE NUMBER	Water Meters for New Customers	17W247
36		
Project Type:	Expansion	
Project Area:	Water Distribution	

Summary:
Provides water meters for new customers added by development or other new connections. A sufficient number of water meters must be kept in inventory to meet the needs of new customers.

Project Drivers and Benefits:

- COMPLIANCE 0%: No direct impact on compliance.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 50%: Increase customer growth with additional benefits.

Total Estimated Cost	$2,900,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$400,000	$250,000	$2,250,000

This Project Is Not Risk Driven

REFERENCE NUMBER	Collection System - Standard Developer Agreements	16S347
38		
Project Type:	Expansion	
Project Area:	Wastewater Collection	

Summary:
Annual funds allocated to standard developer agreements. Provides cost sharing opportunities with private developers, decreasing overall cost of infrastructure and provides opportunities to increase customer base.

Project Drivers and Benefits:

- COMPLIANCE 0%: No direct impact on compliance.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 50%: Increase customer growth with additional benefits.

Total Estimated Cost	$2,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$500,000	$150,000	$1,350,000

This Project Is Not Risk Driven

REFERENCE NUMBER	Distribution System - Standard Developer Agreements	17W248
39		
Project Type:	Expansion	
Project Area:	Water Distribution	

Summary:
Annual funds allocated to standard developer agreements. Provides cost sharing opportunities with private developers, decreasing overall cost of infrastructure and provides opportunities to increase customer base.

Project Drivers and Benefits:

- COMPLIANCE 0%: No direct impact on compliance.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 50%: Increase customer growth with additional benefits.

Total Estimated Cost	$2,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$500,000	$150,000	$1,350,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Large Equipment Purchase	17A012
40		
Project Type:	Rehab or Replace Assets	
Project Area:	Other	

Summary:
This project funds replacement of large equipment such as HVAC, pumps and other equipment replacements large enough to be a capital project for any facility arising due to unplanned but non-emergency system failures that occur during the year.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$1,180,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$180,000	$100,000	$900,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	**20**	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	**8**	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Kings Bluff Pump Replacement	17W250
43		
Project Type:	Rehab or Replace Assets	
Project Area:	Water Treatment	

Summary:
A preliminary engineering report and rehabilitation and replacement project will be done at the Kings Bluff raw water intake facility. The work will include rehabilitation or replacement of the existing pump # 1 for redundancy, increased reliability and pumping flexibility.

Project Drivers and Benefits:

• COMPLIANCE 75%:	Required for compliance with some other beneficial considerations.
• EFFICIENCY 25%:	Increase in efficiency with substantial other benefits.
• CAPACITY 0%:	No direct Impact on capacity.
• GROWTH 0%:	No direct Impact on customer growth.

Total Estimated Cost	$500,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$50,000	$450,000	$0

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Elevated Tank Rehabilitation and Coatings
53	
Project Type:	Rehab or Replace Assets
Project Area:	Water Treatment

Summary:
Elevated tanks require renewal of engineered coatings periodically in order to extend life cycle. Rehabilitation and replacement of tank appurtenances and structures is also required to extend life cycle. FY-18 will provide funding for rehabilitation of the Porter's Neck Elevated Tank and Wild Dunes, Porter's Neck Ground Tank.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$5,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$500,000	$4,500,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	PS - 10 Force Main Replacement (CWSRF)	14S278
54		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Collection	

Summary:
Design & Construction of a new 30" force main from PS 10 to the NSWWTP site. Design of this project was previously completed. This funding for FY 18 is for consideration and is supported by a low interest loan from the State.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$4,273,500	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$350,000	$3,923,500	$0

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Production Well/Aquifer Storage and Recovery Southern Area
56	
Project Type:	Expansion
Project Area:	Water Treatment

Summary:

In the conversion of Monterrey Heights to the Sweeney Water System (010), accelerated aging will occur in the extremities of the 010 system, causing high disinfectant by-products (DBP's). Use of an Aquifer Storage and Recovery system (ASR) has been initially determined to be the best methodology to manage DBP's in this portion of the system. FY 18 funding will provide for design of a production well to be installed by FY 19 to meet current capacity demands. It could be converted to a ASR well in the future.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$3,350,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$100,000	$3,250,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Replace Castle Hayne Aquifer Source Water in Well Field	16W210
66		
Project Type:	Rehab or Replace Assets	
Project Area:	Water Treatment	

Summary:

Castle Hayne aquifer sources in the Richardson well field will be replaced with Pee Dee aquifer source waters. Withdrawals from Castle Hayne aquifer create greater Total Suspended Solids (TSS) in the discharge resulting in higher treatment costs than Peedee aquifer withdrawals. In addition, evidence of land subsidence may be related to groundwater withdrawals from Castle Hayne aquifer.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$2,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$300,000	$200,000	$1,500,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	PS - 34 Hewlett's Creek Redirect to Northside WWTP through NEI Northern Route
68	
Project Type:	Rehab or Replace Assets
Project Area:	Wastewater Collection

Summary:
Southside Wastewater Treatment plant has limited capacity approaching 80% of capacity which would require construction of the new Southside design. In order to extend the time until the new construction is required, this project will address the movement of the PS 34 basin to Northside Treatment Plant. This will include pumping PS 34 up the NEI to PS 35 and adding a gravity connection to the wet well of PS 35, allowing a re-pump to Northside.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 0%: No direct Impact on efficiency.
- CAPACITY 50%: Increase in capacity with additional benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$1,650,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$150,000	$1,500,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	**9**	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	**6**	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	PS - 137 Quail Woods (CWSRF)	13S237
79		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Collection	

Summary:
Operation upgrades to reduce maintenance and improve efficiency. This project will be funded through a low interest loan from the State.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$540,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$280,000	$260,000	$0

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Rehabilitation of Emergency Wells
80	
Project Type:	Rehab or Replace Assets
Project Area:	Water Treatment

Summary:

CFPUA uses eight existing Tier 1 groundwater wells to augment water supply during emergencies that reduce the normal capacity of the system. These wells are still functional, but many components are not reliable for dependable use during an emergency.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$200,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$200,000	$0

REFERENCE NUMBER	Groundwater Way Facilities - Install Fiber Optic Line	
81		
Project Type:	Enhancement	
Project Area:	Other	

Summary:
Both facilities at Groundwater way currently have one means of connectivity via an ISP (Internet Service Provider). Every other facility has Authority owned fiber and a secondary connection via ISP. This creates a single point of failure for these users and is one that the IT department has no real control over. We are at the mercy of the service provider regarding maintenance, and repair. Adding the fiber optic line provides for better redundancy and control.

Project Drivers and Benefits:

- COMPLIANCE 0%: No direct impact on compliance.
- EFFICIENCY 100%: Increases efficiency with no other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$200,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$200,000	$0

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD

5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	**15**
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD

5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	**6**	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Southside WWTP - Disinfection Project	
88		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Treatment	

Summary:
Remove chlorine gas at plant and replace with an alternative and safer disinfectant. Safety benefit to employees and the general public as well as introducing an improvement already planned for needed improvements to the facility.

Project Drivers and Benefits:

• COMPLIANCE 50%: Required for compliance with additional benefits.

• EFFICIENCY 50%: Increase in efficiency with additional benefits.

• CAPACITY 0%: No direct Impact on capacity.

• GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$2,450,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$350,000	$2,100,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	EMD HVAC and Power Supply	
91		
Project Type:	Rehab or Replace Assets	
Project Area:	Other	

Summary:
The EMD Facility and Richardson Plant have a shared power supply. Due to regular maintenance of the generator at the plant, the EMD facility experiences routine power bumps causing equipment to restart. This causes interferences with laboratory work and additional wear and tear to the equipment. The HVAC system has also been experiencing failures and volatility in both temperature and humidity.

<u>Project Drivers and Benefits:</u>

- COMPLIANCE 25%: Some enhancement to compliance with substantial other benefits.
- EFFICIENCY 75%: Significant increase in efficiency with some other beneficial considerations.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$600,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$600,000	$0

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Relocate NC Ports Master Meter	
93		
Project Type:	Rehab or Replace Assets	
Project Area:	Water Distribution	

Summary:
NC Ports master meter is located within restricted area and is inaccessible without consent from NC Ports personal. This project will move the master meter to an accessible area within a right of way or easement.

Project Drivers and Benefits:

- COMPLIANCE 0%: No direct impact on compliance.
- EFFICIENCY 100%: Increases efficiency with no other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$100,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$100,000	$0

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
	5-Very Likely	5	10	15	20	25
	4-Likely	4	8	12	16	20
	3-Possible	3	6	9	12	15
	2-Unlikely	2	4	6	8	10
	1-Very Unlikely	1	2	3	4	5
	FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
	5-Very Likely	5	10	15	20	25
	4-Likely	4	8	12	16	20
	3-Possible	3	6	9	12	15
	2-Unlikely	2	4	6	8	10
	1-Very Unlikely	1	2	3	4	5
	FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Water Distribution Main Enhancements	
94		
Project Type:	Enhancement	
Project Area:	Water Distribution	

Summary:
Existing dead end water mains create a necessity for excessive flushing and compliance issues. Local low fire flows have potential impacts to life and safety. Known locations have been identified and hydraulic benefit has been determined. Interconnects will be constructed to eliminate specific dead ends.

Project Drivers and Benefits:

- COMPLIANCE 75%: Required for compliance with some other beneficial considerations.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$1,300,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$100,000	$1,200,000


Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE


Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Sweeney WTP Ozone Replacement
100	
Project Type:	Rehab or Replace Assets
Project Area:	Water Treatment

Summary:

The ozone system at the Sweeney WTP consists of four ozone generators. Three of the ozone generators are 20 years old. The manufacturer of the ozone system no longer supports power supply units for the system.

Upgrades to the power supply units with more current technology and ozone system enhancements are needed to ensure reliable operation and high quality water production.

The project will be implemented in two phases, with the initial improvements in FY 2018.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$2,920,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$1,340,000	$1,580,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	**12**	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	**8**	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Westbrook Tank Aeration DBP Reduction
101	
Project Type:	Enhancement
Project Area:	Water Treatment

Summary:
Disinfection Byproducts (DBP's) have been measured at elevated levels near the Westbrook elevated storage tank. Reducing or mitigating the formation of DBPs in the tank is necessary to meet compliance levels. A similar aeration project was recently completed for the 17th Street and Dawson Street elevated tanks. Adding aeration to the Westbrook tank will reduce DBP's and reduce the need for water system flushing to maintain compliant DBP levels.

Project Drivers and Benefits:

- COMPLIANCE 75%: Required for compliance with some other beneficial considerations.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$350,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$350,000	$0

This Project Is Not Risk Driven

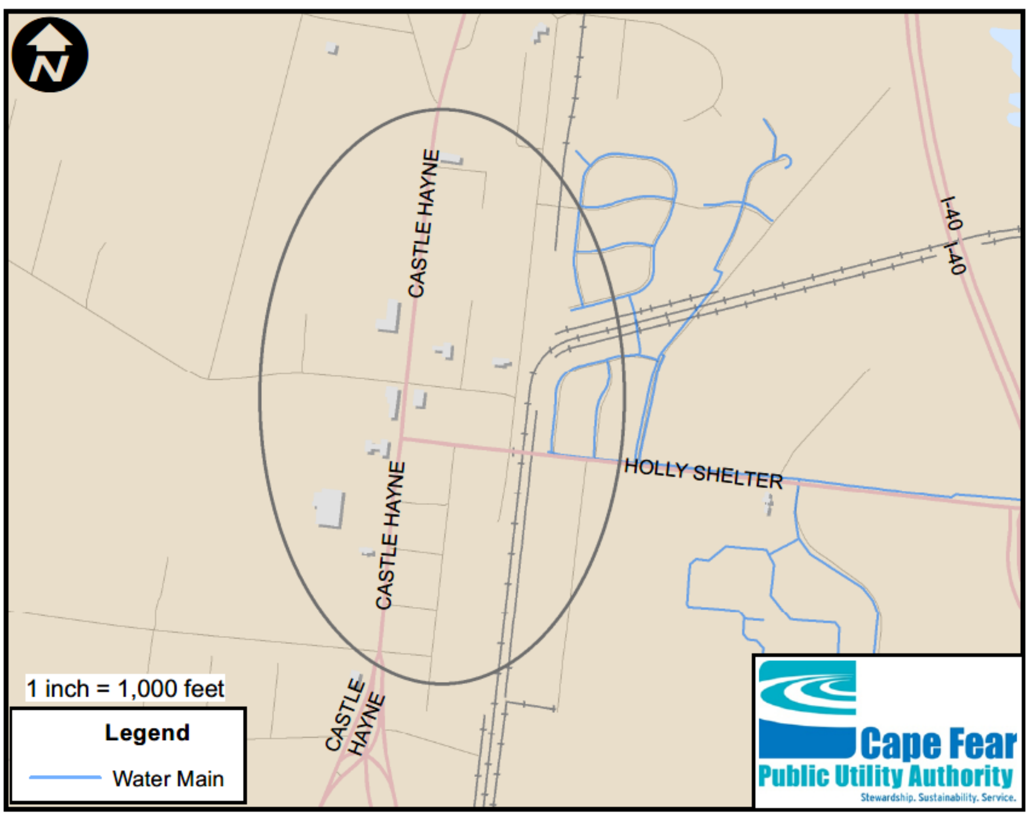
REFERENCE NUMBER	Castle Hayne Water Expansion
102	
Project Type:	Expansion
Project Area:	Water Distribution

Summary:
This project extends a 12-inch water main from the east side of the railroad track on Holly Shelter Road to the Castle Hayne Road Business Corridor.

Project Drivers and Benefits:

- COMPLIANCE 25%: Some enhancement to compliance with substantial other benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 50%: Increase customer growth with additional benefits.

Total Estimated Cost	$600,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$600,000	$0



Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Southside WWTP - Interim Rehabilitation (CWSRF)	17S411
104		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Treatment	

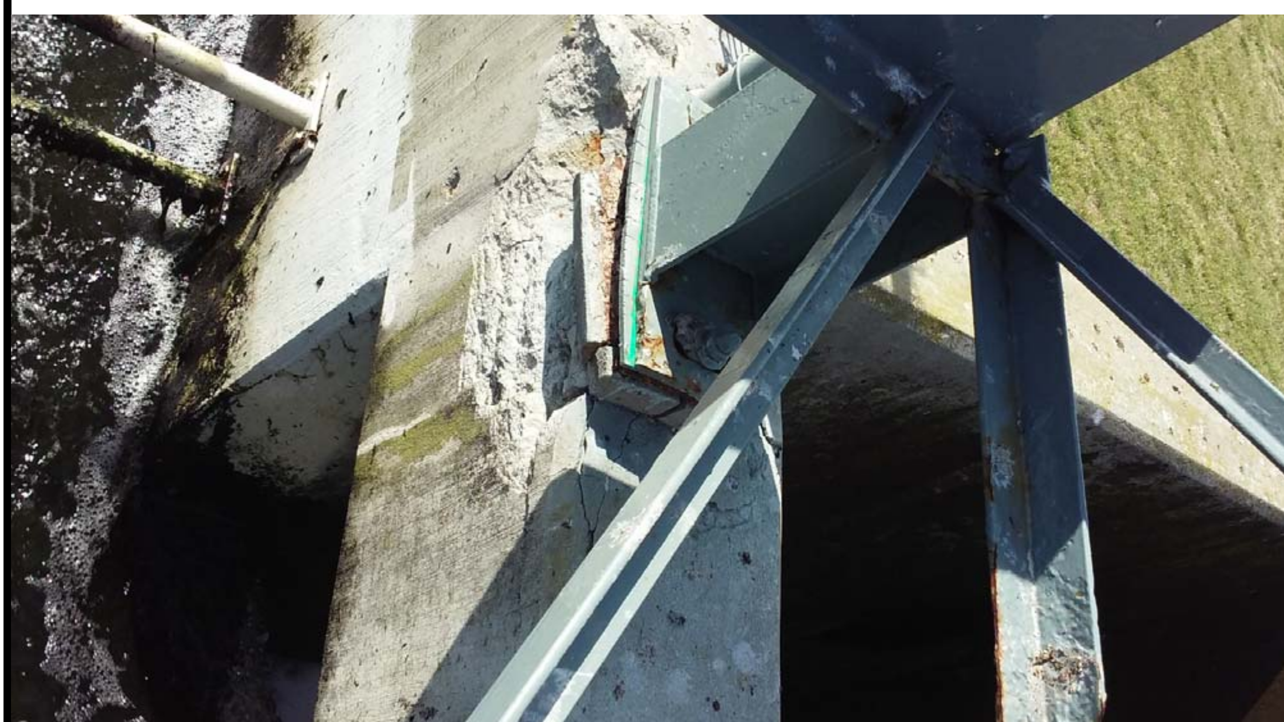
Summary:

CFPUA is deferring a major rehabilitation and capacity upgrade to the Southside WWTP until the capacity upgrade is required. In the meantime, the existing plant must operate within compliance and reasonable efficiency well past the plant's design lifecycle. Many components are nearly 40 years old and operate in a corrosive environment. Based on the best information available, several components need rehabilitation or replacement to continue compliant, efficient operation. These include: primary clarifier #2; secondary clarifiers; bio-solids filtrate pump station; underdrain pumping system; filter press facility; screw pumps; primary generator; dechlorination; and motor control centers. This project is funded through a low interest loan from the state.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$5,658,625	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$100,000	$5,558,625	$0



Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Find It, Fix It Methodology Pump Station Rehabilitation (AMP)	
106		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Collection	

Summary:

Sewer Pump Stations require on-going maintenance and renewal of assets. Infrastructure is identified for rehabilitation or replacement through the utilization of asset management principles. Determinations are based upon mitigation of risk while addressing life-cycles and remaining life of assets. For FY 18 the following improvements are planned: Control Panel replacement (approx. $10,000 each) at PS 94 and 101. PS 114 rehab will be designed in FY 18 for construction in FY 19.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 50%: Increase in efficiency with additional benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$1,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$100,000	$900,000

Risk Before


RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After


RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

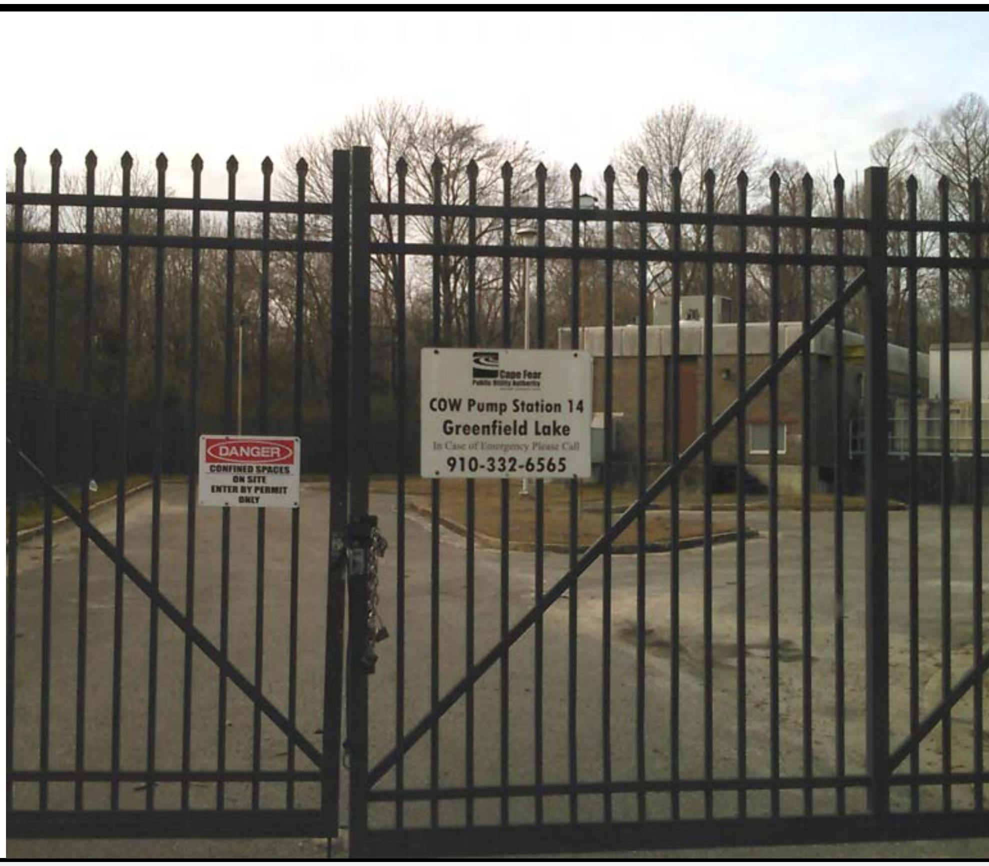
REFERENCE NUMBER	PS-014 Greenfield Lake FM Replacement	
107		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Collection	

Summary:
The PS 14 force main is over 45 years old and is one of the highest risk force mains. Concrete pipe material (PCCP) of the force main makes it difficult to do emergency repairs. The force main is approaching the end of its life cycle. This project is to start design of the force main replacement in FY 18.

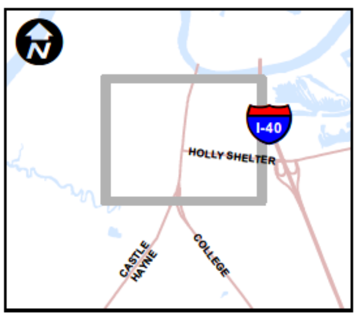
Project Drivers and Benefits:

- COMPLIANCE 100%: Required for compliance with no other benefits.
- EFFICIENCY 0%: No direct Impact on efficiency.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$4,400,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$400,000	$4,000,000



This Project Is Not Risk Driven



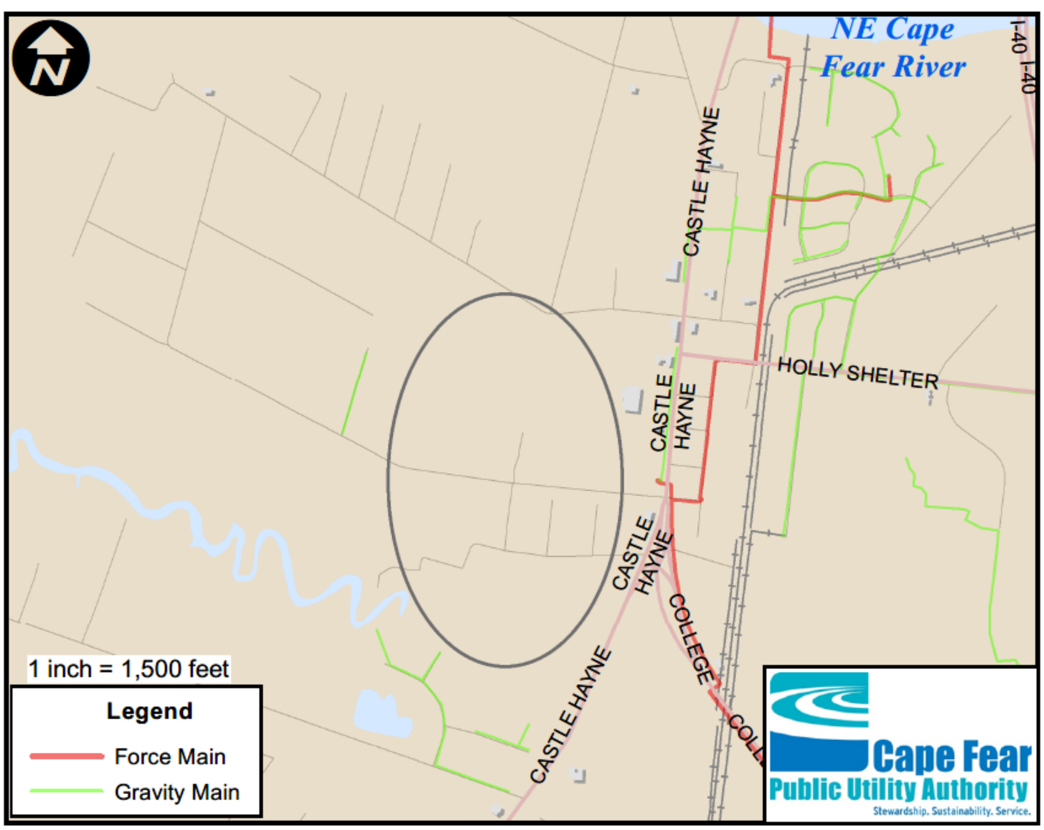
REFERENCE NUMBER	Castle Hayne Area Sewer Expansion
108	
Project Type:	Expansion
Project Area:	Wastewater Collection

Summary:
This project is to construct a regional sewer pump station to serve Castle Hayne Road Business Corridor and remove an existing private pump station from service. The existing private pump station currently handles sewer flow from Authority customers and does not meet Authority specifications for conveyance of ownership, nor is it located appropriately for a regional pump station.

Project Drivers and Benefits:

- COMPLIANCE 25%: Some enhancement to compliance with substantial other benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 50%: Increase in capacity with additional benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$600,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$600,000	$0



Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Generator Rehab and Replacement Program (AMP)
110	
Project Type:	Rehab or Replace Assets
Project Area:	Other

Summary:
CFPUA owns approximately 150 standing generators that are critical for the reliable operation of its wastewater pumping stations and well sites. This project is to systemically replace aging generators. For FY 18 the following generators will be replaced or rehabilitated: Sewer Pump Stations 20, 34, 44, 134, 150 and Water Well A.

Project Drivers and Benefits:

- COMPLIANCE 75%: Required for compliance with some other beneficial considerations.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$2,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$200,000	$1,800,000

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	Gravity Sewer Rehab (Burnt Mill Outfall and Major Roads)(50/50 Grant Match)	
116		
Project Type:	Rehab or Replace Assets	
Project Area:	Wastewater Collection	

Summary:

This project rehabilitates or replaces existing gravity sewer infrastructure within the Burnt Mill Creek Outfall and under major roads that require significant coordination with NCDOT and work zones. All sewer in the project is over 40 years old and high consequence of failure. CFPUA has applied for 50% grant funding from the State for this project.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$12,269,706	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$1,226,970	$11,042,736

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	PS 5, 6, 13, 16, 21 and 29 Replace and FM Rehab (50/50 Grant Match)
117	
Project Type:	Rehab or Replace Assets
Project Area:	Wastewater Collection

Summary:
This project replaces 6 existing package pump stations that are over 30 years old and approaching the end of their useful service life as well as rehabilitates or replaces their force mains, as necessary. All of the pump stations consist of pre-packaged steel structures that are subject to corrosion and structural failures. The project will replace all of the package pump stations with new stations designed to meet current regulations and standards. The project will evaluate and replace or rehabilitate all or portions of existing force mains, as necessary to extend the life of these assets and reduce the likelihood of sanitary sewer overflows (SSOs) due to force main failures. CFPUA has applied for 50% grant funding from the State for this project.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$8,855,788	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$885,579	$7,970,209

Risk Before

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

Risk After

RISK ASSESSMENT MATRIX

LIKELIHOOD					
5-Very Likely	5	10	15	20	25
4-Likely	4	8	12	16	20
3-Possible	3	6	9	12	15
2-Unlikely	2	4	6	8	10
1-Very Unlikely	1	2	3	4	5
FAILURE	1-Negligible	2-Minor	3-Moderate	4-Significant	5-Severe

CONSEQUENCE

REFERENCE NUMBER	PS - 10 Replacement (50/50 Grant Match)
118	
Project Type:	Rehab or Replace Assets
Project Area:	Wastewater Collection

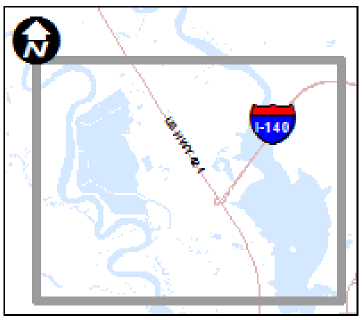
Summary:
PS-010 (Smith Street) is the largest capacity pump station in the CFPUA system and is approximately 47 years old. The station is the primary influent station to the Northside Wastewater Treatment Plane (NSWWTP) for customers within Wilmington's city limits. It was found through the 2007 Wastewater Master Plan Update that the pump station would require improvements to meet future needs. Replacement is needed to accommodate anticipated flow projections for a 20-year window and to increase firm capacity from 10,300 gallons per minute (gpm) to 16,800 gpm. CFPUA has applied for 50% grant funding from the State for this project.

Project Drivers and Benefits:

- COMPLIANCE 50%: Required for compliance with additional benefits.
- EFFICIENCY 25%: Increase in efficiency with substantial other benefits.
- CAPACITY 25%: Some increase in capacity with substantial other benefits.
- GROWTH 0%: No direct Impact on customer growth.

Total Estimated Cost	$11,474,500	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$1,147,450	$10,327,050

This Project Is Not Risk Driven



REFERENCE NUMBER	US Highway 421 Corridor Water Utilities
119	
Project Type:	Expansion
Project Area:	Water Distribution

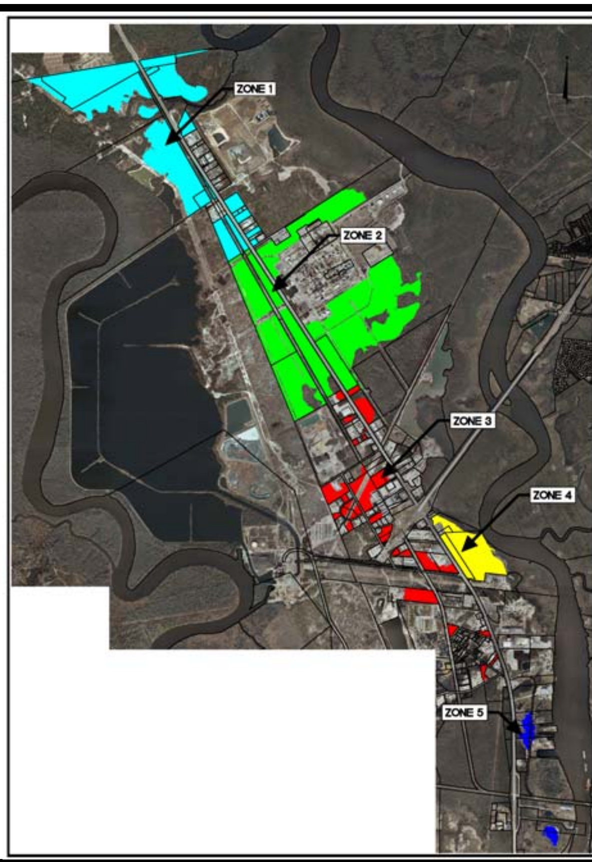
Summary:

This project constructs water transmission mains to the U.S. Highway 421 Corridor for economic development. Wastewater collection will also be expanded at the same time by project reference number 120. The sum total of both projects is $16,300,000.

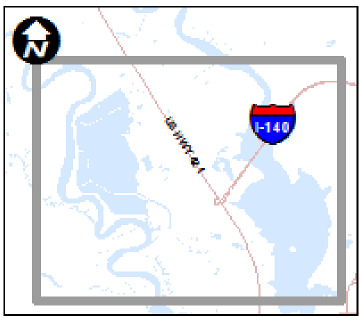
Project Drivers and Benefits:

- COMPLIANCE 0%: No direct impact on compliance.
- EFFICIENCY 0%: No direct Impact on efficiency.
- CAPACITY 0%: No direct Impact on capacity.
- GROWTH 100%: Provides customer growth with no other benefits.

Total Estimated Cost	$6,300,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$6,300,000	$0



This Project Is Not Risk Driven



REFERENCE NUMBER	US Highway 421 Corridor Wastewater Utilities
120	
Project Type:	Expansion
Project Area:	Wastewater Collection

Summary:
This project constructs wastewater collection mains to the U.S. Highway 421 Corridor for economic development. Water transmission mains will also be expanded at the same time by project reference number 119. The sum total of both projects is $16,300,000.

Project Drivers and Benefits:

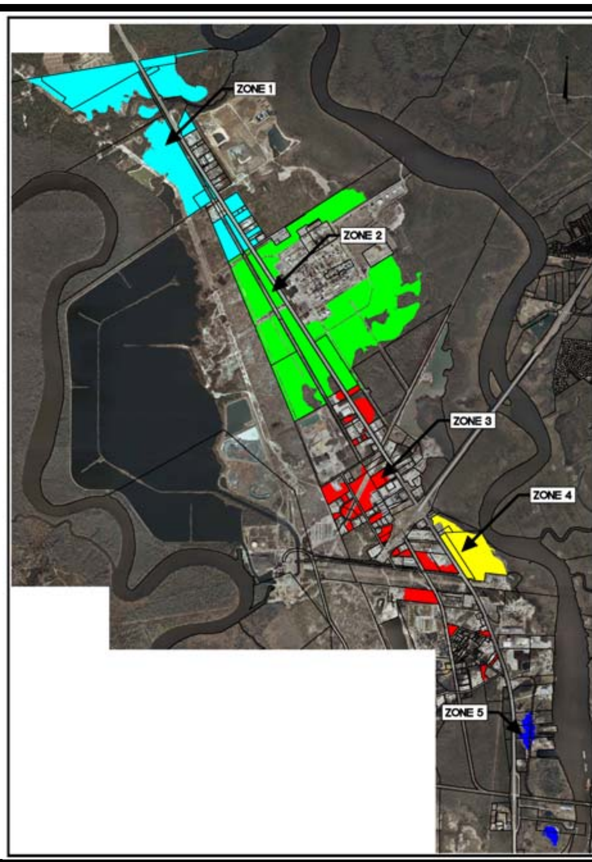
• COMPLIANCE 0%: No direct impact on compliance.

• EFFICIENCY 0%: No direct Impact on efficiency.

• CAPACITY 0%: No direct Impact on capacity.

• GROWTH 100%: Provides customer growth with no other benefits.

Total Estimated Cost	$10,000,000	
Budgeted FY 2013-2017	Requested FY 2018	Future Budget Needs
$0	$10,000,000	$0



WATER: Projected 10 Year Capital Improvements Plan

Ref. #	FY 2018 to FY2027 CIP	Current Project #	Project Balance Jan 1, 2017	Project Cost	FY 12 to FY17 Budgeted	FY 18 Planned	FY 19 Planned	FY 20 Planned	FY 21 Planned	FY 22 Planned	FY 23 Planned	FY 24 Planned	FY 25 Planned	FY 26 Planned	FY 27 Planned
	Water Capital Improvement Projects	*All dollar amounts are shown in FY 2018 dollars. No adjustments are made for projected inflation or deflation.*													
	Raw Water Improvements: Surface or Well Sources and Transmission														
66	Replace Castle Hayne Aquifer Source Water in Well Field	16W210	$300,000	$2,000,000	$300,000	$200,000	$500,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0
43	Kings Bluff Pump Replacement	17W250	$50,000	$500,000	$50,000	$450,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
45	Construction of New Raw Water Line with LCFWSA ILA			$31,000,000	$0	$0	$31,000,000	$0	$0	$0	$0	$0	$0	$0	$0
96	Rehab of Aerial Raw Water Lines and Pilings			$8,000,000	$0	$0	$0	$1,000,000	$3,000,000	$4,000,000	$0	$0	$0	$0	$0
98	Interim Rehab Kings Bluff Pump Station and Intake			$2,200,000	$0	$0	$0	$0	$0	$0	$200,000	$2,000,000	$0	$0	$0
	Water Treatment Plant Improvements														
77	Richardson WTP Membrane Replacement			$500,000	$0	$0	$0	$0	$0	$500,000	$0	$0	$0	$0	$0
97	Replace/Rehab Richardson WTP Sulfuric Acid Tanks			$850,000	$0	$0	$0	$0	$100,000	$750,000	$0	$0	$0	$0	$0
31	Water Treatment Facilities Rehabilitation (AMP)	17W242		$1,340,000	$340,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
99	Sweeney WTP Boiler Replacement			$150,000	$0	$0	$150,000	$0	$0	$0	$0	$0	$0	$0	$0
100	Sweeney WTP Ozone Replacement			$2,920,000	$0	$1,340,000	$0	$0	$1,580,000	$0	$0	$0	$0	$0	$0
113	WTP SCADA Improvements (Sweeney and Richardson)			$1,500,000	$0	$0	$750,000	$750,000	$0	$0	$0	$0	$0	$0	$0
	Water Storage Improvements: Elevated, Ground and Aquifer Storage														
56	Production Well/Aquifer Storage and Recovery Southern Area			$3,350,000	$0	$100,000	$750,000	$0	$0	$500,000	$0	$2,000,000	$0	$0	$0
53	Elevated Tank Rehabilitation and Coatings			$5,000,000	$0	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
51	River Lights Elevated Storage Tank			$6,500,000	$0	$0	$0	$0	$0	$0	$0	$500,000	$6,000,000	$0	$0
80	Rehabilitation of Emergency Wells			$200,000	$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
101	Westbrook Tank Aeration DBP Reduction			$350,000	$0	$350,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Distribution System Upgrades and Rehabilitation														
22	Comprehensive Meter Replacement Program	16W215	$5,700,000	$18,580,000	$10,850,000	$4,930,000	$2,000,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
57	Water Emergency Repair	16W223	$511,000	$2,867,658	$617,658	$0	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
5	Interconnect Monterey Heights Water System to Surface Water	14W177		$15,745,000	$1,245,000	$0	$0	$1,500,000	$3,000,000	$0	$5,000,000	$2,000,000	$3,000,000	$0	$0
24	Rehabilitation of Water Infrastructure Matching with City Streets	17W243	$437,338	$6,600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000
27	Find It, Fix It Methodology Water Replace and Rehab (AMP)	17W244	$200,000	$8,600,000	$1,200,000	$0	$200,000	$200,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
18	Water Distribution Sample Stations	17W245	$35,000	$670,000	$70,000	$200,000	$0	$200,000	$0	$200,000	$0	$0	$0	$0	$0
95	Cross Town Feeder Under Burnt Mill Creek Rehab/Replace			$400,000	$0	$0	$0	$50,000	$350,000	$0	$0	$0	$0	$0	$0
93	Relocate NC Ports Master Meter			$100,000	$0	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
94	Water Distribution Main Enhancements			$1,300,000	$0	$100,000	$0	$300,000	$0	$300,000	$0	$300,000	$0	$300,000	$0
	Water Growth Projects														
102	Castle Hayne Water Expansion			$600,000	$0	$600,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
103	Distribution System - Cost Recovery Projects			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
39	Distribution System - Standard Developer Agreements	17W248	$172,586	$2,000,000	$500,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
36	Water Meters for New Customers	17W247	$125,000	$2,900,000	$400,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
119	US Highway 421 Corridor Water Utilities			$6,300,000	$0	$6,300,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Water Capital Improvement Projects				$116,850,000		$16,470,000	$37,200,000	$6,950,000	$10,980,000	$9,200,000	$8,150,000	$9,750,000	$11,950,000	$3,250,000	$2,950,000
Total Wastewater Capital Improvement Projects				$265,742,119		$27,202,124	$36,039,995	$8,200,000	$6,450,000	$6,700,000	$10,350,000	$6,450,000	$6,450,000	$11,450,000	$146,450,000
Total System Wide Capital Improvement Projects				$13,180,000		$1,800,000	$1,390,000	$2,890,000	$1,000,000	$1,100,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Proposed Total Capital Improvement Projects				$395,772,119		$45,472,124	$74,629,995	$18,040,000	$18,430,000	$17,000,000	$19,500,000	$17,200,000	$19,400,000	$15,700,000	$150,400,000
Total Grant Funding Planned (Grant Portion Only)				$16,299,997		$1,629,999	$14,669,998								
Total CIP Minus Grant Funding Planned				$379,472,122		$43,842,125	$59,959,997	$18,040,000	$18,430,000	$17,000,000	$19,500,000	$17,200,000	$19,400,000	$15,700,000	$150,400,000

WASTEWATER: Projected 10 Year Capital Improvements Plan

Ref. #	FY 2018 to FY2027 CIP	Current Project #	Project Balance Jan 1, 2017	Project Cost	FY 12 to FY17 Budgeted	FY 18 Planned	FY 19 Planned	FY 20 Planned	FY 21 Planned	FY 22 Planned	FY 23 Planned	FY 24 Planned	FY 25 Planned	FY 26 Planned	FY 27 Planned
	Wastewater Capital Improvement Projects	*All dollar amounts are shown in FY 2018 dollars. No adjustments are made for projected inflation or deflation.*													
	Waste Water Treatment Plant Improvements														
13	Wastewater Treatment Facilities Rehabilitation (AMP)	17S392	$194,000	$1,400,000	$400,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
104	Southside WWTP - Interim Rehabilitation (CWSRF)	17S411	$18,900	$5,658,625	$100,000	$5,558,625	$0	$0	$0	$0	$0	$0	$0	$0	$0
88	Southside WWTP - Disinfection Project			$2,450,000	$0	$350,000	$2,100,000	$0	$0	$0	$0	$0	$0	$0	$0
89	Southside WWTP - Capacity Upgrade			$145,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,000,000	$140,000,000
90	Northside WWTP - Enhancements and Upgrades			$1,850,000	$0	$0	$100,000	$1,750,000	$0	$0	$0	$0	$0	$0	$0
114	WWTP SCADA Improvements (Northside and Southside)			$750,000	$0	$0	$0	$0	$500,000	$250,000	$0	$0	$0	$0	$0
	Collection System Rehabilitation/Replacement														
1	Sewer Emergency Repair	17S393	$4,744,000	$18,000,000	$15,000,000	$0	$0	$0	$0	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
116	Gravity Sewer Rehab (Burnt Mill Outfall and Major Roads) (50/50 Grant Match)			$12,269,706	$0	$1,226,970	$11,042,736	$0	$0	$0	$0	$0	$0	$0	$0
4	Find It, Fix It Methodology Gravity Sewer Rehabilitation (AMP)	17S394	$552,913	$47,000,000	$7,500,000	$1,500,000	$1,500,000	$1,500,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000
23	Rehabilitation of Sewer Infrastructure Matching with City Streets	17S395	$600,000	$6,600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000
	Pump Station & Forcemain Improvements														
10	SCADA Implementation at Pump Stations	16S344	$230,000	$1,000,000	$500,000	$250,000	$250,000	$0	$0	$0	$0	$0	$0	$0	$0
117	PS 5, 6, 13, 16, 21 and 29 Replace and FM Rehab (50/50 Grant Match)			$8,855,788	$0	$885,579	$7,970,209	$0	$0	$0	$0	$0	$0	$0	$0
118	PS - 10 Replacement (50/50 Grant Match)			$11,474,500	$0	$1,147,450	$10,327,050	$0	$0	$0	$0	$0	$0	$0	$0
54	PS - 10 Force Main Replacement (CWSRF)	14S278	$17,450	$4,273,500	$350,000	$3,923,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
68	PS - 34 Hewlett's Creek Redirect to Northside WWTP through NEI Northern Route			$1,650,000	$0	$150,000	$1,500,000	$0	$0	$0	$0	$0	$0	$0	$0
105	PS-034 and PS-035 Aesthetic Improvements			$300,000	$0	$0	$300,000	$0	$0	$0	$0	$0	$0	$0	$0
55	PS - 69 Motts Creek Pump Station Upgrade	15S307	$170,350	$4,300,000	$400,000	$0	$0	$0	$0	$0	$3,900,000	$0	$0	$0	$0
79	PS - 137 Quail Woods (CWSRF)	13S237	$247,105	$540,000	$280,000	$260,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
106	Find It, Fix It Methodology Pump Station Rehabilitation (AMP)			$1,000,000	$0	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
107	PS-014 Greenfield Lake FM Replacement			$4,400,000	$0	$400,000	$0	$4,000,000	$0	$0	$0	$0	$0	$0	$0
	Sewer Growth Projects														
102	Castle Hayne Area Sewer Expansion			$600,000	$0	$600,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
109	Collection System Cost Recovery Projects			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
38	Collection System - Standard Developer Agreements	16S347	$125,000	$2,000,000	$500,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
120	US Highway 421 Corridor Wastewater Utilities			$10,000,000	$0	$10,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Wastewater Capital Improvement Projects				$265,742,119		$27,202,124	$36,039,995	$8,200,000	$6,450,000	$6,700,000	$10,350,000	$6,450,000	$6,450,000	$11,450,000	$146,450,000
Total Water Capital Improvement Projects				$116,850,000		$16,470,000	$37,200,000	$6,950,000	$10,980,000	$9,200,000	$8,150,000	$9,750,000	$11,950,000	$3,250,000	$2,950,000
Total System Wide Capital Improvement Projects				$13,180,000		$1,800,000	$1,390,000	$2,890,000	$1,000,000	$1,100,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Proposed Total Capital Improvement Projects				$395,772,119		$45,472,124	$74,629,995	$18,040,000	$18,430,000	$17,000,000	$19,500,000	$17,200,000	$19,400,000	$15,700,000	$150,400,000
Total Grant Funding Planned (Grant Portion Only)				$16,299,997		$1,629,999	$14,669,998								
Total CIP Minus Grant Funding Planned				$379,472,122		$43,842,125	$59,959,997	$18,040,000	$18,430,000	$17,000,000	$19,500,000	$17,200,000	$19,400,000	$15,700,000	$150,400,000

SYSTEM WIDE: Projected 10 Year Capital Improvements Plan

Ref. #	FY 2018 to FY2027 CIP	Current Project #	Project Balance Jan 1, 2017	Project Cost	FY 12 to FY17 Budgeted	FY 18 Planned	FY 19 Planned	FY 20 Planned	FY 21 Planned	FY 22 Planned	FY 23 Planned	FY 24 Planned	FY 25 Planned	FY 26 Planned	FY 27 Planned
	System Wide Capital Improvement Projects	*All dollar amounts are shown in FY 2018 dollars. No adjustments are made for projected inflation or deflation.*													
	Systemwide projects for both Water and Wastewater														
40	Large Equipment Purchase	17A012	$100,000	$1,180,000	$180,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
30	Information Technology Networking Infrastructure Replacement	16A007	$120,000	$1,264,000	$264,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
28	Virtual Desktop IT Migration	16A008	$205,910	$520,000	$240,000	$0	$140,000	$140,000	$0	$0	$0	$0	$0	$0	$0
34	Motor Fleet Capital	17A013	$657,000	$7,300,000	$1,300,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000
110	Generator Rehab and Replacement Program (AMP)		$200,000	$2,000,000	$0	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000
58	Construct Utility Services Operations Center			$2,000,000	$0	$0	$250,000	$1,750,000	$0	$0	$0	$0	$0	$0	$0
81	Groundwater Way Facilities - Install Fiber Optic Line			$200,000	$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
91	EMD HVAC and Power Supply			$600,000	$0	$600,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
30	IT Server Physical Space Expansion and Enhancements			$100,000	$0	$0	$0	$0	$0	$100,000	$0	$0	$0	$0	$0
Total System Wide Capital Improvement Projects				$13,180,000		$1,800,000	$1,390,000	$2,890,000	$1,000,000	$1,100,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Total Water Capital Improvement Projects				$116,850,000		$16,470,000	$37,200,000	$6,950,000	$10,980,000	$9,200,000	$8,150,000	$9,750,000	$11,950,000	$3,250,000	$2,950,000
Total Wastewater Capital Improvement Projects				$265,742,119		$27,202,124	$36,039,995	$8,200,000	$6,450,000	$6,700,000	$10,350,000	$6,450,000	$6,450,000	$11,450,000	$146,450,000
Proposed Total Capital Improvement Projects				$395,772,119		$45,472,124	$74,629,995	$18,040,000	$18,430,000	$17,000,000	$19,500,000	$17,200,000	$19,400,000	$15,700,000	$150,400,000
Total Grant Funding Planned (Grant Portion Only)				$16,299,997		$1,629,999	$14,669,998								
Total CIP Minus Grant Funding Planned				$379,472,122		$43,842,125	$59,959,997	$18,040,000	$18,430,000	$17,000,000	$19,500,000	$17,200,000	$19,400,000	$15,700,000	$150,400,000

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According to the Strategic Plan the Authority seeks to protect the environment, ensure public health and safety, and provide the highest quality services to both new and existing customers while maintaining a stable financial position that balances rates and the organization's long-term capital and operating needs. Balancing these objectives presents a challenge. Long-term financial planning is a critical tool in developing strategies to ensure that this balance is maintained. Long-term financial planning is the process of aligning financial capacity with long-term service objectives. Financial planning uses forecasts to provide insight into future financial capacity so that strategies can be developed to achieve long-term sustainability considering service objectives and financial challenges.

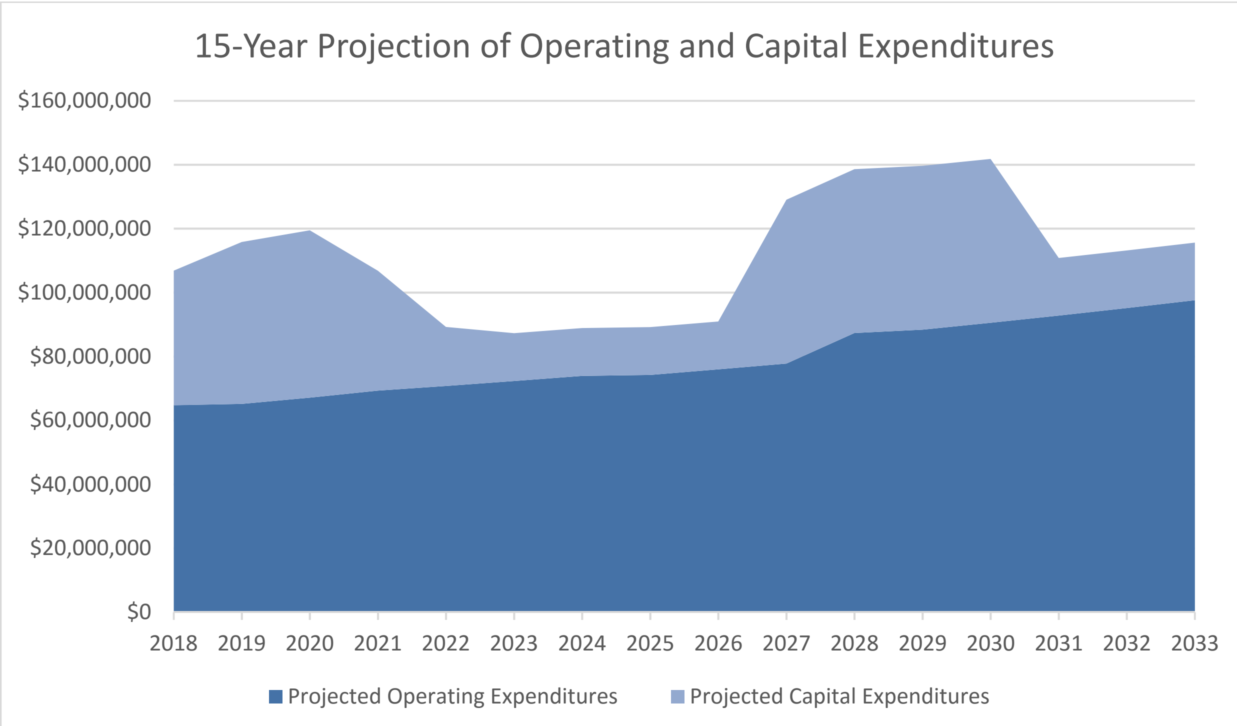
The development of the Authority's 15-year financial plan is an iterative, multi-departmental process and ultimately guided by the Authority's adopted policies and key benchmarks. The goal of this process is to ensure that the Authority remains both operationally and financially sustainable while minimizing the impact to ratepayers. With this goal in mind, the Authority's long-term financial plan seeks to optimize the balance among efficient and effective service delivery; strategic capital investment to address the riskiest infrastructure and facilitate growth and economic development; key financial metrics including debt service coverage and liquidity; and rate affordability.

Operational Sustainability

Operational sustainability means that high-quality service will continue to be delivered to customers over the long-term. This notion not only includes efforts to provide water and wastewater treatment, distribution, collection, customer service, engineering, and compliance services but also that the Authority makes sufficient, deliberate capital investments to minimize the risk of infrastructure failure and service disruption. The operating expenditure projections incorporated in the Authority's long-term financial plan were developed with the goal of fully funding operating and maintenance costs at current levels plus inflation; retaining and attracting high-quality staff through competitive salaries and benefits; and executing a capital program focused on rehabilitating and replacing aging, high-risk infrastructure and other major projects. The graph on the following page details the operating and capital expenditure projections incorporated in the Authority's long-term financial plan.

Operating expenditures, excluding debt service expenditures, were assumed to grow in accordance with inflationary assumptions. Salaries and benefits (other than health and dental benefits) are assumed to grow at 4% per year to accommodate growth in the workforce tied to customer and system growth and cost-of-living and merit-based increases. Health and dental benefits are assumed to grow at 8%, while all other operating costs are assumed to grow at 2% per year. Debt service expenditures are based on existing amortization schedules for outstanding debt. Debt service related to planned future debt issuance was based on the Authority's historical borrowing rate, maturities on existing debt, and amortized with level payments for principal and interest.

Capital expenditure projections are based on the Authority's Ten Year Capital Improvement Program, which is developed using risk-based analyses to plan the extent and timing of water and wastewater system improvements. Planned project appropriations included in the Ten Year Capital Improvements Program total $395.8 million with 87% of these appropriations focused on rehabilitation and replacement of existing infrastructure. Notable projects include the construction of a new surface water intake, extending water and wastewater up the Highway 421 corridor to facilitate industrial/commercial development of the area, and upgrading and expanding the Southside Wastewater Treatment Plant to accommodate our growing community.



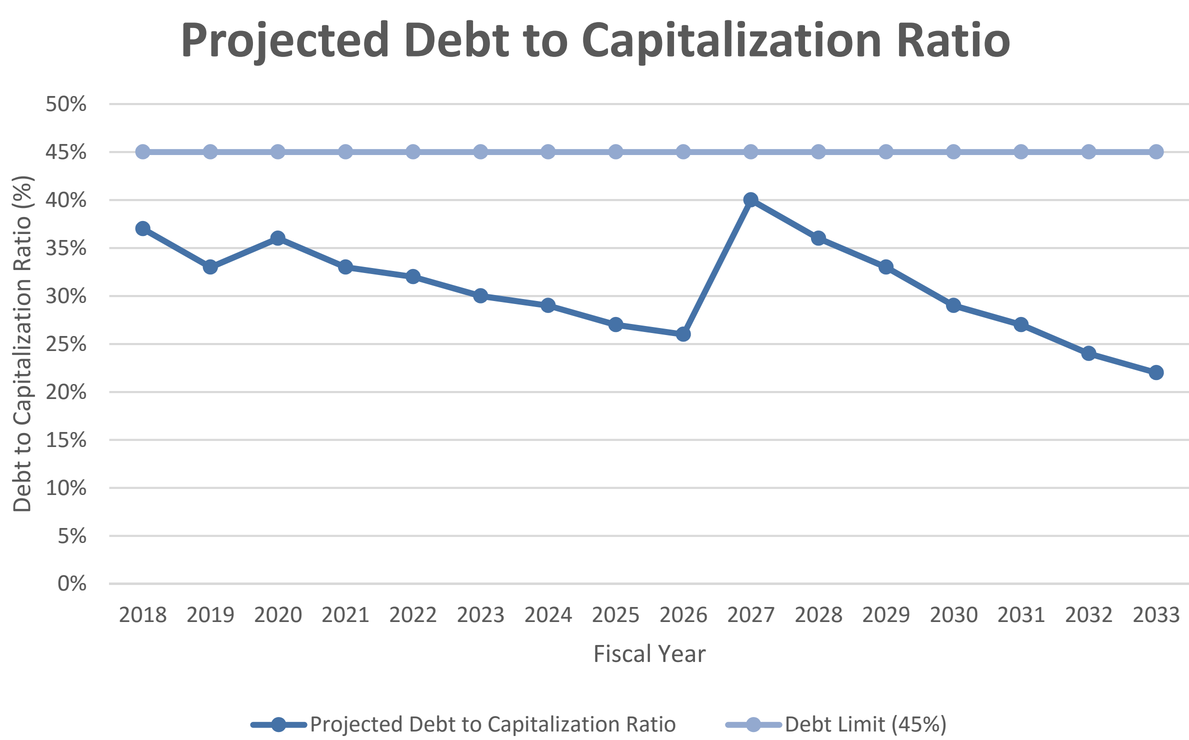
Financial Sustainability

In addition to delivering and executing these services and projects, the Authority's long-term financial plan is focused on achieving the budgetary flexibility resulting from high levels of debt service coverage and liquidity. Further, maintaining debt service coverage and liquidity at high levels is viewed positively by credit markets and helps to ensure that the Authority continues borrowing at low costs.

The Authority's long-term financial plan incorporates the Authority's policy debt limitations and cash reserve levels. In accordance with these policies, the long-term financial plan includes gradual increases to rates to a structure under which current year rate collections fully fund $18 million in annual recurring capital expenditures. The Authority is currently planning to complete this transition by FY 22-23. During the transition period the Authority will supplement transfers from the operating fund with available cash reserves to fund capital expenditures. These policies were adopted to produce a flexible financial structure by reducing the proportion of the annual operating budget reserved for mandatory debt service payments, "free up" future borrowing capacity, and achieve robust coverage levels demanded by credit rating agencies.

Debt is a critical capital financing mechanism that provides an immediate funding source and allows for the gradual pay-back of borrowed funds in the future. Debt, however, can be excessive when annual debt service requirements grow to levels that cause rates to increase to unaffordable levels or force cuts to services in the absence of rate increases. The Authority's debt management policy is focused on maintaining the balance between debt funding, rate affordability, and operational sustainability by placing limits on debt issuance.

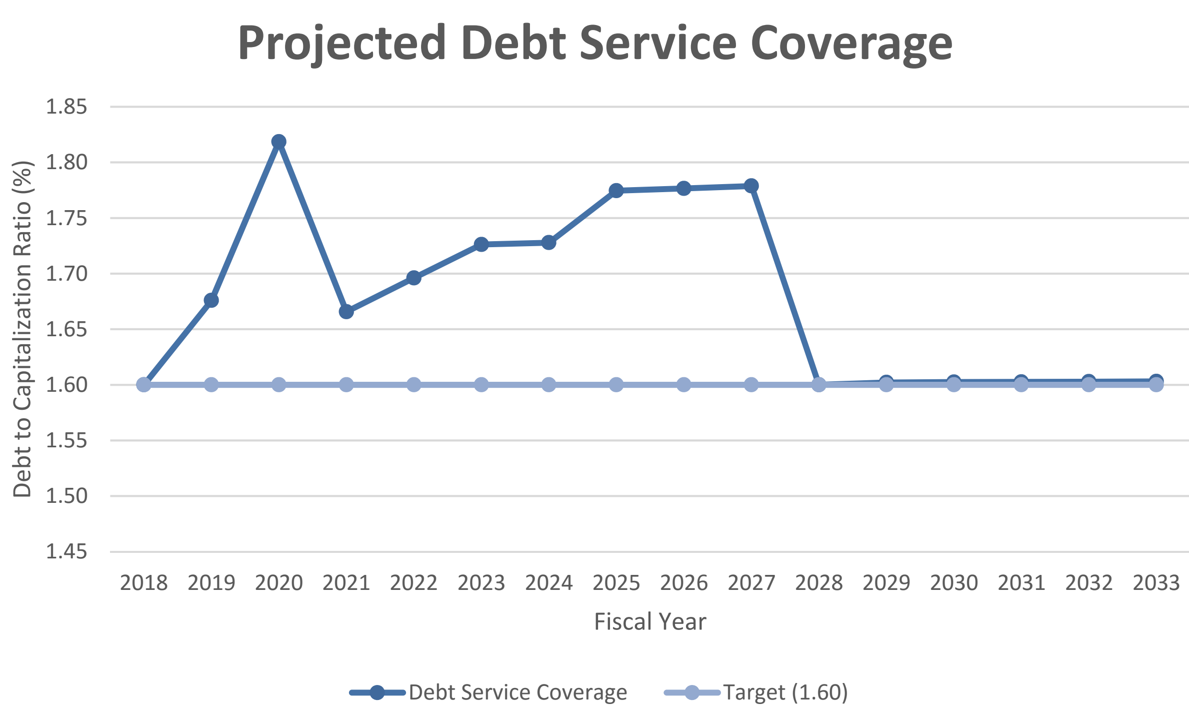
The Authority's debt management policy explicitly limits debt in two ways. First, the policy provides specific attributes that projects should generally have to be candidates for debt funding (e.g. for high-dollar projects where pay-go funding is impractical or for growth-oriented projects in which it makes sense for future rate payers to pay for those improvements). Second, the policy establishes a debt limit expressed in terms of the debt-to-capitalization ratio (debt outstanding as a percentage of the value of capital assets). The Authority may not issue debt if such issuance would cause the debt to capitalization ratio to exceed 45%. Measuring the Authority's debt load using the debt-to-capitalization is an appropriate way to quantify the Authority's debt load because the ratio reflects the Authority's long-term mix of debt and pay-as-you-go funding. The policy debt metric limit of 45% was derived considering the Authority's debt service coverage target and its expectation of long-term borrowing costs.



The debt-to-capitalization ratio is projected to decline from 37% to 26% in FY 25-26 despite the issuance in FY 19-20 of $26.6 million in revenue bonds to fund the raw water line replacement project and $12.7 million in Clean Water State Revolving Loans to fund various wastewater system rehabilitation projects. This decline is due to largely pay-as-you-go (fund balance and rate collections) funded capital investment that outpaces asset depreciation during this period. In FY 26-27, the debt-to-capitalization ratio is projected to increase substantially from FY 25-26 to 40% due to the projected issuance of revenue bonds to fund the Southside Wastewater Treatment Plant capacity expansion and upgrade in the amount of

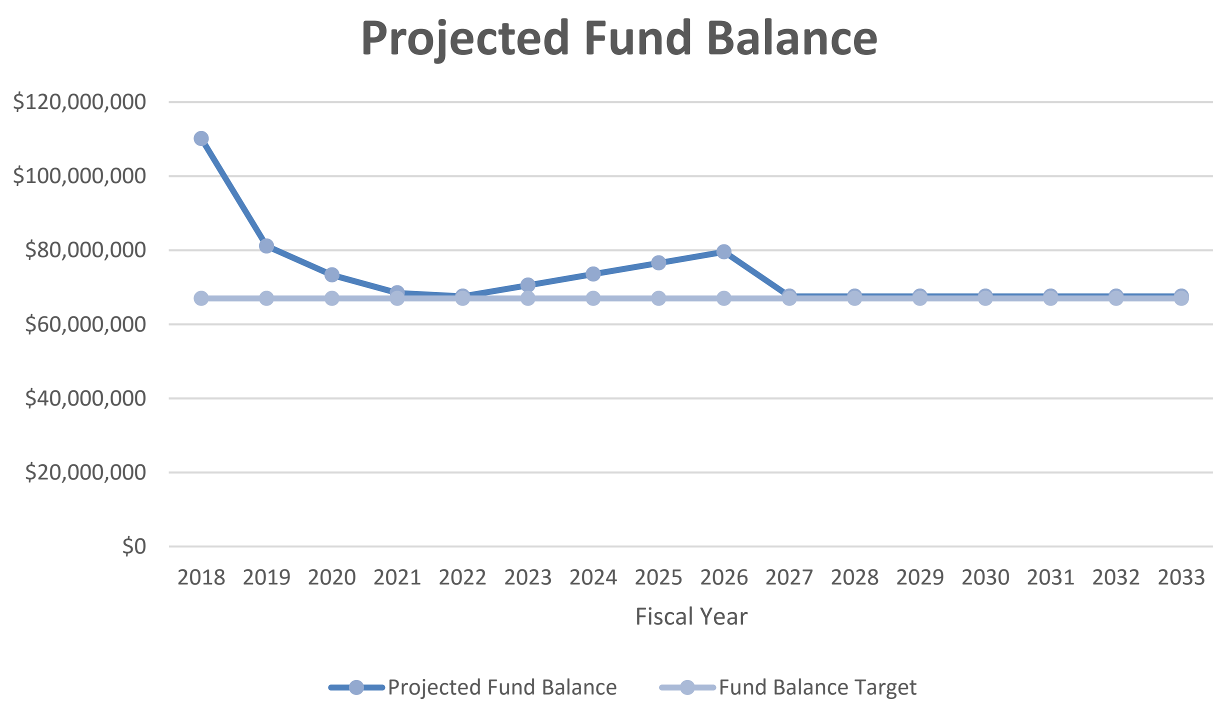
$122.2 million. The debt-to-capitalization ratio is projected to decline from FY 26-27 to the end of the plan's 15-year time horizon as no new debt is issued during this time.

Debt service coverage measures an entity's ability to pay principal and interest on its debt obligations with current year revenues. Debt service coverage more than 1.0 indicates that net operating revenues (revenues minus operating expenses) were greater than the principal and interest due during the period. Financial structures that provide for relatively high debt service coverage ratios are valued by credit markets – the higher the debt service coverage ratio, the more assurance that debt service requirements will be met. The Authority is required to structure its rates so that revenues in any given year are equal to at least 120% of the principal and interest due on its outstanding debt obligations. However, credit markets and raters generally prefer higher debt service coverage ratios. The Authority's debt service coverage target is 1.6.



The graph above indicates that coverage is projected to increase rapidly due to annual rate increases to fully fund annual recurring capital expenditures; sharply decrease due to projected increases in debt service from debt issuance to fund the raw water line replacement project in FY 20-21; then gradually increase due to decreasing debt service on existing debt; and decrease to the 1.6 target level due to increased debt service requirements related to debt issued to fund the Southside Wastewater Treatment Plant capacity expansion and upgrade in FY 27-28.

Available fund balance is another key indicator of financial health. The higher the available fund balance, the higher the capacity to absorb periods of declining revenues, unbudgeted expenditures, or both. At the same time, to minimize the impact to rate payers, it's critical that rates are developed and financial resources spent so that fund balance in excess of targeted levels is not accumulated. To ensure this balance, Authority policy requires that a risk-based reserve/fund balance target is periodically determined. The Authority's current reserve target is $67 million. As previously mentioned, the Authority plans to spend available fund balance to fund capital expenditures from FY 17-18 to FY 21-22 as rates are gradually increased to fund annual, recurring capital expenditures.

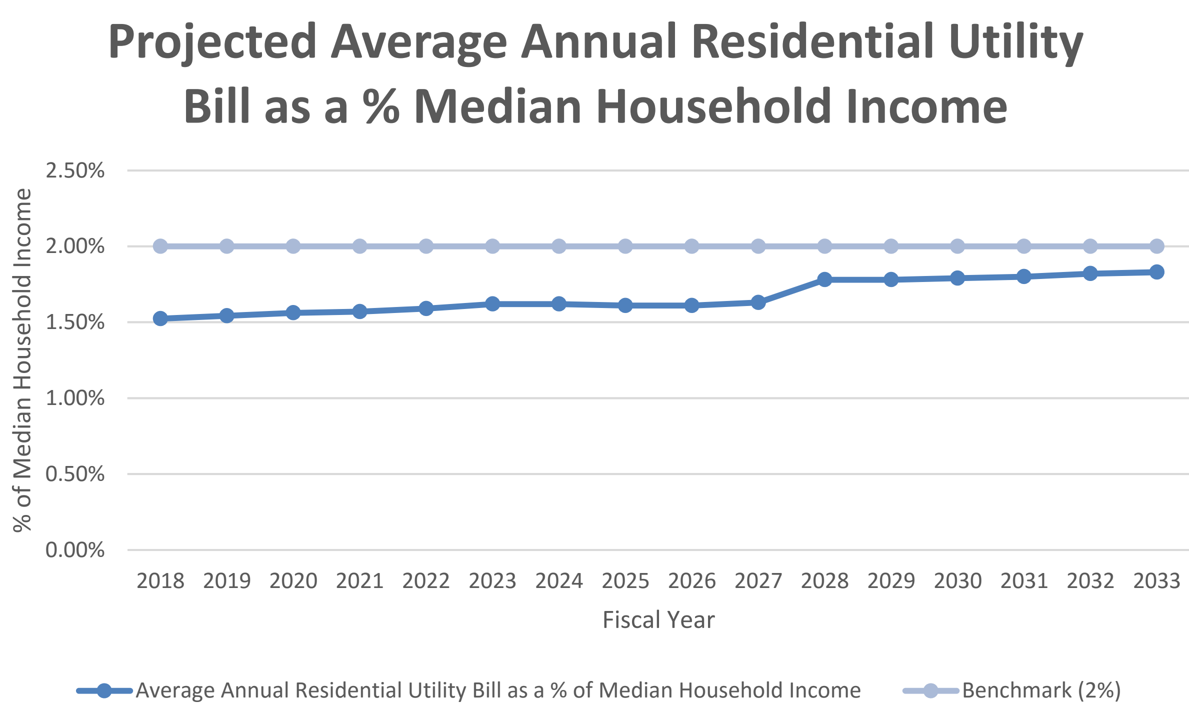


The graph above reflects the spend-down of fund balance to fund annual, recurring capital expenditures through FY 21-22. Three-million dollars is also planned to be accumulated and placed in a capital reserve each year from FY 22-23 though FY 25-26 to reduce the amount of debt issued for the Southside Wastewater Treatment Plant capacity expansion and upgrade in FY 26-27.

Rate Affordability

While there's no universal metric of affordability, one common metric is to quantify the average annual residential bill as a percentage of median household income for the service area. The Authority's long-term financial plan includes a projection of residential bimonthly combined water and wastewater bills based on consumption of 8,600 gallons per billing cycle with an assumed .5% increase per year in both consumption and equivalent residential units. Estimated median household income data for calendar year 2017 was used as a base year and is projected to grow by 1% per year.

Over the Authority's 15-year financial planning horizon, annual costs of residential water and wastewater service are projected to approach but remain below the target 2% of median household income for the service area. Overall, the projected trendline's upward sloping trajectory is attributable to the assumed inflation in operating expenditures outpacing the assumed growth in the median household income for the service area, consumption, and equivalent residential units. The annual residential utility bill is projected to increase from 1.52% in FY 17-18 to 1.62% in FY 22-23 as rates are projected to not only fund inflation in the operating budget but also generate additional revenues to fully fund annual recurring capital expenditures during that period. From FY 22-23 to FY 26-27 the annual residential utility bill as a percentage of median household income is projected to remain relatively flat as no new debt is projected to be issued during that period. In FY 27-28 residential utility bills are projected to increase as a percentage of median household income from 1.63% to 1.78% due to increased debt service requirements associated with the planned debt issuance for the Southside Wastewater Treatment Plant capacity expansion and upgrade. This increase is mitigated to some extent through the planned funding of a capital reserve through rate revenues starting in FY 22-23.



Source: U.S. Census Bureau

Conclusion

Ensuring that the Authority continues to provide high-quality water and wastewater service to its customers, remains in a strong financial position, and minimizes the impact to customers requires a careful balance. Long-term financial planning is an important tool that the Authority uses to maintain this balance in a proactive manner. Guided by financial policies, the Authority's long-term financial plan fully funds operations at current levels plus inflation and funds an aggressive capital program focused on rehabilitating and replacing aging infrastructure. At the same time, target levels of debt, debt service coverage, and liquidity are projected to be attained while keeping the cost of service affordable for customers.

Cape Fear Public Utility Authority
Demographic Statistics
Last Seven Fiscal Years

Fiscal Year Ended June 30	City of Wilmington Population (1)	New Hanover County Population (1)	Median Age (3)	Public School Enrollment (2)	Local Unemployment Rate % (3)	Personal Income (4)	Per Capita Income (4)
2016	**115,933**	**220,358**	**38**	**25,901**	**4.8%**	**N/A**	**N/A**
2015	113,657	216,298	38	26,241	5.6%	N/A	N/A
2014	112,067	213,267	38	25,470	6.1%	N/A	$40,076
2013	109,922	209,234	38	25,364	9.1%	N/A	$38,846
2012	108,297	206,189	37.5	25,253	9.3%	$50,890	$37,559
2011	106,476	202,667	36.7	23,934	10.1%	$45,890	$36,108
2010	102,207	194,054	38.5	23,643	9.4%	$46,129	$34,692
2009	101,526	192,235	38	23,614	9.0%	$44,719	$34,578

Note: Fiscal year 2009 was the first year of operations for the Authority.

(1) US Census Bureau.
(2) Provided by the NHC Schools Finance Department
(3) North Carolina Department of Commerce
(4) Provided by www.ncworks.gov; data provided for as many years as available.

Cape Fear Public Utility Authority
Principal Water Customers
Current Fiscal Year and Eight Years Ago

	2016			
Ten Largest Users of the Water System Annual Consumption	**Thousands of Gallons**	**% of System**	**Revenues ($)**	**% of Revenues**
1 UNC Wilmington	135,543	2.58%	$ 549,250	1.68%
2 New Hanover Regional Medical Center	53,261	1.02%	238,777	0.73%
3 Wilmington Housing Authority	43,835	0.84%	196,117	0.60%
4 New Hanover County Schools	41,014	0.78%	251,752	0.77%
5 LSREF3 Bravo, LLC (Multi-family Complexes)	40,526	0.77%	217,472	0.66%
6 New Hanover County	33,675	0.64%	190,474	0.58%
7 Mayfaire Complex	29,110	0.55%	208,035	0.64%
8 Lake Forest Apartments	24,645	0.47%	105,236	0.32%
9 Elementix	23,296	0.44%	89,368	0.27%
10 City of Wilmington	21,945	0.42%	183,307	0.56%
Total Net Consumption / Net Revenue	**446,852**	**8.52%**	**$ 2,229,789**	**6.81%**
Total Annual System Net Consumption / Net Revenue	**5,246,790**		**$ 32,748,943**	

	2009 (1)			
Ten Largest Users of the Water System Annual Consumption	**Thousands of Gallons**	**% of System**	**Revenues ($)**	**% of Revenues**
1 UNC Wilmington	136,483	2.34%	$ 430,613	1.89%
2 New Hanover County	63,232	1.08%	232,431	1.02%
3 New Hanover Regional Medical Center	61,473	1.05%	211,318	0.93%
4 New Hanover County Schools	47,862	0.82%	208,756	0.92%
5 Wilmington Housing Authority	40,956	0.70%	137,433	0.60%
6 Lake Forest Apartments	30,088	0.52%	97,305	0.43%
7 College Manor Apartments	23,411	0.40%	80,985	0.36%
8 Mayfaire Complex	22,955	0.39%	119,091	0.52%
9 Tribute Properties	21,463	0.37%	114,526	0.50%
10 Elementis Chromium	18,971	0.33%	58,243	0.26%
Total Net Consumption / Net Revenue	**466,893**	**8.00%**	**$ 1,690,699**	**7.42%**
Total Annual System Net Consumption / Net Revenue	**5,834,129**		**$ 22,781,177**	

Note: Fiscal year 2009 was the first year of operations for the Authority.

(1) Restated 2009 Top 10 Users to reflect "Net Consumption" and "Net Revenue"

Source: Cape Fear Public Utility Authority Customer Service Department.

Cape Fear Public Utility Authority
Principal Wastewater Customers
Current Fiscal Year and Seven Years Ago

2016

Ten Largest Users of the Wastewater System Annual Consumption	Thousands of Gallons	% of System	Revenues ($)	% of Revenues
1 Town of Wrightsville Beach	227,370	4.66%	$ 673,043	1.81%
2 UNC Wilmington	76,515	1.57%	421,456	1.13%
3 New Hanover Regional Medical Center	51,144	1.05%	282,025	0.76%
4 Wilmington Housing Authority	43,639	0.89%	237,682	0.64%
5 LSREF3 Bravo, LLC (Multi-family Complexes)	40,194	0.82%	254,390	0.68%
6 New Hanover County Schools	39,218	0.80%	289,883	0.78%
7 New Hanover County	30,530	0.63%	211,110	0.57%
8 Mayfaire Complex	27,819	0.57%	236,973	0.64%
9 Lake Forest Apartments	24,645	0.50%	129,055	0.35%
10 College Manor Apartments	21,791	0.45%	135,598	0.36%
Total Net Consumption / Net Revenue	**582,867**	**11.94%**	**$ 2,871,216**	**7.72%**
Total Annual System Net Consumption / Net Revenue	**4,880,306**		**$ 37,179,637**	

2009 (1)

Ten Largest Users of the Wastewater System Annual Consumption	Thousands of Gallons	% of System	Revenues ($)	% of Revenues
1 Town of Wrightsville Beach	214,743	4.42%	$ 442,639	2.00%
2 UNC Wilmington	87,800	1.81%	269,249	1.22%
3 New Hanover Regional Medical Center	54,042	1.11%	176,741	0.80%
4 New Hanover County Schools	45,665	0.94%	199,592	0.90%
5 Wilmington Housing Authority	40,652	0.84%	129,175	0.58%
6 New Hanover County	34,744	0.72%	132,783	0.60%
7 Lake Forest Apartments	30,080	0.62%	92,040	0.42%
8 Mayfaire Complex	25,303	0.52%	125,124	0.57%
9 Tribute Properties	24,536	0.51%	154,676	0.70%
10 College Manor Apartments	23,411	0.48%	77,352	0.35%
Total Net Consumption / Net Revenue	**580,975**	**11.96%**	**$ 1,799,371**	**8.15%**
Total Annual System Net Consumption / Net Revenue	**4,856,146**		**$ 22,089,335**	

Note: Fiscal year 2009 was the first year of operations for the Authority.

(1) Restated 2009 Top 10 Users to reflect "Net Consumption" and "Net Revenue"

Source: Cape Fear Public Utility Authority Customer Service Department.

Cape Fear Public Utility Authority
Principal Employers
Current Fiscal Year and Seven Years Ago

2016				2009			
Employers	**Employees (1)**	**Rank**	**Percentage of Total County Employment**	**Employers**	**Employees (3)**	**Rank**	**Percentage of Total County Employment**
New Hanover Regional Medical Center	6,462	1	6.20%	New Hanover Regional Medical Center	4,890	1	5.10%
New Hanover County Schools	3,700	2	3.55%	New Hanover County Schools	4,130	2	4.30%
GE Wilmington	3,000	3	2.88%	GE Wilmington	3,000	3	3.13%
Wal-Mart Stores	2,306	4	2.21%	University of North Carolina at Wilmington	1,810	4	1.89%
University of North Carolina Wilmington	1,891	5	1.82%	New Hanover County	1,670	5	1.74%
New Hanover County	1,609	6	1.54%	PPD, Inc.	1,420	6	1.48%
Verizon Wireless	1,514	7	1.45%	Cape Fear Community College	1,260	7	1.31%
PPD	1,500	8	1.44%	City of Wilmington	1,200	8	1.25%
Cape Fear Community College (4)	1,000	9	0.96%	Verizon Wireless	1,200	9	1.25%
City of Wilmington	1,007	10	0.97%	Corning, Inc.	1,000	10	1.04%
			23.03%				**22.49%**
Total # Employed at June 30 of the respective FY (2)			**110,163**	**Total # Employed at June 30 of the respective FY (2)**			**95,964**

Note: Fiscal year 2009 was the first year of operations for the Authority.

(1) Source: 2016 Book on Business; www.wilmingtonbiz.com
(2) Source: North Carolina Employment Security Commission (2009) and www.ncworks.gov (2016)
(3) Source: New Hanover County CAFR for Fiscal Year Ended June 30, 2009 using the Wilmington Industrial Development, Inc. and NC State Demographics Website.
(4) Source: NC Commerce, Labor and Economic Analysis Division, Top 25 Employers by NC County (4th Qtr 2015)

Cape Fear Public Utility Authority
Operating Statistics
Last Seven Fiscal Years

	Fiscal Year							
	2016	2015	2014	2013	2012	2011	2010	2009
Water System								
Number of available service connections[1]	71,439	70,356	68,794	68,033	67,067	64,602	63,683	62,551
Number of treatment plants - surface water system	1	1	1	1	1	1	1	1
Treatment capacity (mgd) - surface water	35.00	35.00	35.00	35.00	35.00	27.50	27.50	27.50
Average production (mgd) - surface water	14.35	13.56	13.44	13.20	13.50	13.70	13.30	14.30
Number of groundwater systems	3	3	3	3	3	3	3	3
Number of treatment plants - groundwater system	1	1	1	1	1	1	1	-
Number of wells - groundwater system	34	36	36	36	36	36	36	36
Treatment capacity (mgd) - groundwater plant	6	6	6	6	6	6	6	-
Treatment capacity (mgd) - other groundwater systems	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Average production (mgd) - groundwater	3.04	2.94	2.48	2.95	2.95	3.20	3.30	3.10
Miles of water mains	1,114	1,089	1,041 [2]	1,078	1,072	1,070 [2]	1,129	1,103
Wastewater System								
Number of available service connections[1]	69,222	68,246	66,829	66,059	64,529	64,330	63,793	62,296
Number of treatment plants	3	3	3	3	3	3	3	3
WPC plant permit (mgd)	28.10	28.10	22.10	22.10	22.10	22.10	22.10	22.10
Average annual daily flow (mgd)	18.76	17.48	16.45	16.17	15.10	15.80	16.80	15.60
Number of lift stations	142	143	141	141	141	141	142	142
Miles of wastwater gravity mains[2]	848	844	827[2]	850	840	840[2]	881	877
Miles of wastewater force mains	131	131	112	110	104	104	100	100
Number of manholes	21,221	21,049	20,918	20,300	20,300	20,300	N/A	N/A

Note: Fiscal year 2009 was the first year of operations for the Authority.

Source: Cape Fear Public Utility Authority Records

(1) Data restated to remove irrigation meters associated with domestic meters for the same location.
(2) Based on more accurate information as a result of implementating and improving the accuracy of an asset management system.

Cape Fear Public Utility Authority
Consumption by Customer Group
Last Eight Fiscal Years

	2016		2015		2014		2013		2012		2011		2010 (1)		2009 (1)	
	Thousand Gallons	**% of Consumption**	Thousand Gallons	% of Consumption	Thousand Gallons	% of Consumption	Thousand Gallons	% of Consumption	Thousand Gallons	% of Consumption	Thousand Gallons	% of Consumption	Thousand Gallons	% of Consumption	Thousand Gallons	% of Consumption
Water Customers																
Residential	**3,630,541**	**69.20%**	3,461,812	68.80%	3,415,831	69.87%	3,522,531	69.85%	3,806,074	70.45%	3,887,894	70.88%	3,652,988	70.13%	4,152,536	71.18%
Commercial	**1,128,569**	**21.51%**	1,053,502	20.94%	1,006,253	20.58%	1,026,039	20.35%	1,059,983	19.62%	1,075,703	19.61%	1,032,322	19.82%	1,094,936	18.77%
Industrial	**74,645**	**1.42%**	65,334	1.30%	63,349	1.30%	59,116	1.17%	62,267	1.15%	62,278	1.14%	57,719	1.11%	102,707	1.76%
Institutional and Government	**413,036**	**7.87%**	451,090	8.96%	403,523	8.25%	435,048	8.63%	474,130	8.78%	459,656	8.38%	465,940	8.94%	483,950	8.30%
Total	**5,246,790**	**100.00%**	5,031,738	100.00%	4,888,957	100.00%	5,042,733	100.00%	5,402,454	100.00%	5,485,531	100.00%	5,208,969	100.00%	5,834,129	100.00%
Wastewater Customers																
Residential	**3,287,280**	**67.36%**	3,171,068	67.33%	3,184,447	68.27%	3,246,521	68.52%	3,424,127	68.94%	3,497,483	68.98%	3,329,608	69.30%	3,543,624	72.97%
Commercial	**1,019,892**	**20.90%**	956,150	20.30%	922,045	19.77%	923,952	19.50%	941,927	18.96%	957,062	18.88%	842,782	17.54%	869,266	17.90%
Town of Wrightsville Beach	**227,370**	**4.66%**	207,905	4.41%	210,681	4.52%	203,370	4.29%	207,561	4.18%	214,479	4.23%	234,303	4.88%	214,743	4.42%
Pender County	**10,562**	**0.22%**	10,033	0.21%	9,008	0.19%	10,473	0.22%	11,550	0.23%	16,224	0.32%	13,550	0.28%	14,139	0.29%
Industrial	**18,257**	**0.37%**	21,027	0.45%	19,468	0.42%	16,296	0.34%	16,197	0.33%	18,219	0.36%	23,060	0.48%	24,964	0.51%
Institutional and Government	**316,946**	**6.49%**	343,878	7.30%	318,809	6.83%	337,107	7.12%	365,297	7.35%	366,618	7.23%	361,467	7.52%	189,410	3.90%
Total (2)	**4,880,306**	**100.00%**	4,710,062	100.00%	4,664,457	100.00%	4,737,719	100.00%	4,966,659	100.00%	5,070,085	100.00%	4,804,770	100.00%	4,856,146	100.00%

Note: Fiscal year 2009 was the first year of operations for the Authority.

Source: Cape Fear Public Utility Authority Customer Service Department.

(1) Prior year data has been updated to reflect adjustments made in the current year.
Water includes domestic and irrigation connections
(2) The Total value for Thousand Gallons listed for Wastewater Customers does not include an estimation for the volumetric value of the Flat Wastewater customer class.
For billing purposes, the calculation of Flat Wastewater charges is based on 24,000 gallons discharged bimonthly. There were an average of approximately 1,530 Flat Wastewater customers in 2015.

CAPE FEAR PUBLIC UTILITY AUTHORITY
ACRONYMS

TERM	STANDS FOR
AMR	Automatic Meter Reading
APWA	American Public Works Association
ARRA	American Recovery and Reinvestment Act
ASR	Aquifer Storage and Recovery
AWOP	Area Wide Optimization Program
AWWA	American Water Works Association
BOD	Biochemical Oxygen Demand
CAFR	Comprehensive Annual Financial Report
CAMA	Coastal Area Management Act
CBOD	Carbonaceous Biochemical Oxygen Demand
CFPUA	Cape Fear Public Utility Authority
CIP	Capital Improvement Program
CMMS	Computer Maintenance Management System
CMOM	Capacity Management, Operations & Maintenance
COD	Chemical Oxygen Demand
COPS	Certificates of Participation
COW	City of Wilmington
C-PAR	Corrective/Preventative Action Report
CWM	Clean Water Management
CWSRF	Clean Water State Revolving Funds
CY	Calendar Year
DART	Days Away Restricted Transferred
DBP	Disinfection Byproduct
DHS	Department of Homeland Security
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
DR	Disaster Recovery
DWQ	Division of Water Quality
EDC	Endocrine Disrupting Compound
EDMR	Electronic Discharge Monitoring Report
EEOC	Equal Employment Opportunity Commission
EMS	Environmental Management System
EOC	Emergency Operations Center
EFT	Electronic Funds Transfer
EPA	Environmental Protection Agency
ERT	Encoder Receiver Transmitter

TERM	STANDS FOR
ERP	Enterprise Resource Planning
FEMA	Federal Emergency Management Agency
FOG	Fats, Oils and Grease
FSE	Food Service Establishment
FTE	Full Time Equivalent Positions
FY	Fiscal Year
GAAP	Generally Accepted Accounting Principles
GASB	Government Accounting Standards Board
GC	Gas Chromatograph
GFOA	Government Finance Officers Association
GIS	Geographic Information Systems
GPD	Gallons per day
GPS	Global Positioning System
GS	General Statute
HAZMAT	Hazardous Material
HMI	Human Machine Interface
HVAC	Heating, Ventilation and Air Conditioning
I/I	Infiltration and Inflow
ICP-MS	Inductively Coupled Plasma-Mass Spectrometry
ICS	Incident Command System
ILA	Interlocal Agreement
IRR	Irrigation
ISO	International Organization for Standardization (Greek)
IT	Information Technology
IU	Industrial User
IVR	Interactive Voice Response
KPI	Key Performance Indicator
LCFWSA	Lower Cape Fear Water & Sewer Authority
LCS	Lab Control Samples
LIMS	Laboratory Information Management System
LWSP	Local Water Supply Plan
MDD	Maximum Daily Demand
MDF	Maximum Daily Flow
MGD	Million gallons per day
MOU	Memorandum of Understanding
MSDS	Material Safety Data Sheet

CAPE FEAR PUBLIC UTILITY AUTHORITY
ACRONYMS

TERM	STANDS FOR
NACWA	National Association of Clean Water Agencies
NCDENR	North Carolina Department of Environment & Natural Resources
NCDWQ	North Carolina Division of Water Quality
NCRWA	North Carolina Rural Water Association
NEI	Northeast Interceptor
NHC	New Hanover County
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NTU	Nephlometric Turbidity Units
O & M	Operational & Maintenance
ORC	Operator in Responsible Charge
OSHA	Occupational Safety and Health Administration
PER	Preliminary Engineering Report
pH	Potential of Hydrogen
POSM	Pipeline Observation System Management
POTW	Public Owned Treatment Works
PPCP	Pharmaceuticals and Personal Care Products
PPM	Parts per million
PS	Pump Station
PSA	Protective Security Advisor
PWS	Public Water Supply
QA	Quality Assurance
QC	Quality Control
RFP	Request for Proposal
SBR	Sequencing Batch Reactor
SCADA	Supervisory Control and Data Acquisition
SDC	System Development Charge
SIU	Significant Industrial User
SKN	Soluble Kjeldahl Nitrogen
SNC	Significant Non-Compliant
SOI	Standard Operating Instructions
SOP	Standard Operating Procedures

TERM	STANDS FOR
SSO	Sanitary Sewer Overflow
SUO	Sewer Use Ordinance
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Loads
TOC	Total Organic Carbon
TRC	Technical Review Committee
TSS	Total Suspended Solids
TTHM	Total Trihalomethanes
UNCW	University of North Carolina at Wilmington
USACE	United States Army Corp. of Engineers
USEPA	United States Environmental Protection Agency
VPN	Virtual Private Network
WEA	Water Environment Association
WEF	Water Environment Federation
WERF	Water Environment Research Foundation
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

CAPE FEAR PUBLIC UTILITY AUTHORITY
GLOSSARY

WORD/CONCEPT	DEFINITION
Account	A basic component of the accounting ledger used to classify financial transactions that are similar in terms of a given frame of reference; such as purpose, object or source.
Accrual Basis	A basis of accounting in which transactions are recognized at the time they are incurred as opposed to when case is received or spent.
Adopted Budget	The budget document formally approved by the Authority Board. This document sets forth authorized expenditures and the means of financing those expenditures; used interchangeably with the term “Final Budget”.
Annualized	Taking charges that occurred mid-year and calculating their cost for a full year for the purpose of preparing an annual budget.
Appropriation	A legal authorization to incur obligations and to make expenditures for specific purposes.
Aquifer	A wet underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand or silt) from which groundwater can be usefully extracted using a water well.
Asset	Resources owed that has monetary value.
Asset Management	A systematic process of operating, maintaining and upgrading assets cost-effectively.
Audit	An examination of some or all of the following items: documents, records, reports, systems of internal control, accounting procedures, and other evidence, or one or more of the following purposes: (a) determining the propriety, legality and mathematical accuracy of proposed or completed transactions; (b) ascertaining whether all transactions have been recorded; and (c) determining whether transactions are accurately recorded in the accounts and in the statements drawn from in accordance with accepted accounting practices.
Authorized Positions	Employee positions that are authorized in the adopted budget to be filled during the year.
Backflow	A term in plumbing for an unwanted flow of water in the reverse direction. It can be a serious health risk for the contamination of potable water supplies with foul water.
Backflow Prevention Device	A device used to protect water supplies from contamination or pollution.
Balance Sheet	A formal statement of assets, liabilities and fund balance as of a specific date.
Balanced Budget	Refers to a budget in which revenues are equal to expenditures. Thus, neither a budget deficit nor a budget surplus exists.
Benchmarking	The process of comparing one’s business processes and performance metrics to industry bests and/or best practices from other industries; often treated as a continuous process in which organizations continually seek to improve their practices.
Collateral	Property acceptable as a security for a loan or other obligation; guaranteed by a security pledged against the performance of an obligation.
Collaterize	To secure (a loan) through the use of collateral.
Compensated Absences	Refers to employees’ time off with pay for vacations, holidays and sick days.

CAPE FEAR PUBLIC UTILITY AUTHORITY
GLOSSARY

WORD/CONCEPT	DEFINITION
Comprehensive Annual Financial Report (CAFR)	The official annual financial report of the Authority; summarizes and discloses the financial activity of the Authority.
Computer Maintenance	A CMMS software package maintains a computer database of information.
Contingency	A budgetary reserve set aside for emergencies or unforeseen expenditures not otherwise budgeted.
Corporate Governance	Processes, customers, policies, laws and institutions affecting the way a corporation is directed, administered or controlled.
Debt Coverage Ratio	The ratio of cash available for debt servicing to interest, principal and lease payments. It is a popular benchmark used in the measurement of an entity's ability to produce enough cash to cover its debt payments. The higher this ratio is, the easier it is to obtain a loan.
Debt Management	A formal agreement between the Authority and its' creditors.
Debt Service	The cost of paying principal and interest on borrowed money according to a pre-determined payment schedule.
Department	A basic organizational unit that is functionally unique in its delivery of services; each department can be subdivided into divisions.
Depreciation	Drop in value; a method of allocating the cost of a tangible asset over its useful life.
Disbursement	The expenditure of monies from an account.
Distinguished Budget	A voluntary awards program administered by the Government of Finance.
Effluent	An outflowing of water or gas from a natural body of water, or from a human-made structure.
Encoder Receiver Transmitter (ERT)	Communications modules that fit on electric, gas or water meters. ERT's encode consumption and tamper information from the meters and communicates the data to Itron data collection systems including handheld devices, mobile automatic reading devices and networks.
Encumbrance	A commitment of appropriated funds to purchase an item or service. To encumber funds means to set aside or commit funds for a specified future expenditure.
Enterprise Fund	A government owned fund that sells goods and services to the general public; are common in local government.
Environmental Management System (EMS)	Refers to the management of an organization's environmental programs in a comprehensive, systematic, planned and documented manner. It includes the organizational structure, planning and resources for developing, implementing and maintaining policy for environmental protection.
Environmental Protection Agency (EPA)	The agency of the federal government of the United States charged with protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.
Expenditure	The payment of funds against appropriations that reduce cash balance; are made for the purpose of acquiring an asset, service or settling a loss.
Feasibility Report	An evaluation and analysis of the potential of a proposed project which is based on extensive investigation and research to support the process of decision making.

CAPE FEAR PUBLIC UTILITY AUTHORITY
GLOSSARY

WORD/CONCEPT	DEFINITION
Fiscal Year	A 12-month period designated as the operating year for accounting and budgeting purposes in an organization.
Fixed Assets	Assets of long-term character that are intended to continue to be held or used; includes land, buildings, machinery, furniture and other equipment.
Full time Equivalent	A position converted to the decimal equivalent of a full-time position .
Fund Accounting	System used by non-profit organizations, particularly governments.
Fund Balance	Difference between assets and liabilities reported in a governmental fund on the modified accrual basis of accounting.
Generally Accepted Accounting Principles (GAAP)	Uniform minimum standards for financial accounting and recording, encompassing the conventions, rules and procedures that define accepted accounting principles.
Goal	A statement of broad direction, purpose or intent; general and timeless.
Government Accounting Standards Board	The accepted standard setting body for establishing accounting and financial reporting principles.
Ground Water	Water located beneath the ground surface in soil pore spaces and in the fractures of rock formations.
Infrastructure	The basis physical and organizational structures needed for the operation of a society of enterprise (1), or the services the facilities necessary for an economy to function (2). It can be generally defined as the set of interconnected structural elements that provide the framework supporting an entire structure of development.
Interest	Cost of using money.
Interest Earnings	Interest earned on cash held in interest bearing deposits and accounts.
National Incident Management System (NIMS)	An emergency management doctrine used nationwide to coordinate emergency preparedness and incident management and response among the public and private sectors.
National Pollutant Discharge Elimination System (NPDES)	Controls water pollution by regulating point sources that discharge pollutants into waters of the United States.
Non-Departmental Accounts	Items of expenditure essential to the operation of the Authority that do not fall within the function of any department.
Operating Budget	The annual budget of an activity stated in terms of Budget Classification Code, functional/sub functional categories and cost accounts. It contains estimates of the total value of resources required for the performance of the operation; used to keep track of maintenance operations, salaries and interest payments.
Operating Expenses	The cost for personnel, materials and equipment required for a department to function.
Operating Revenue	Funds received to pay for on-going operations. It includes rates and fees; used to pay for day-to-day services.
Ordinance	A law made by a municipality or other local authority.
Outfall	The discharge point of a waste stream into a body of water; alternatively it may be the outlet of a river, drain or a sewer where it discharges into the sea, a lake, etc. A wastewater treatment system discharges treated effluent to a water body from an outfall.

CAPE FEAR PUBLIC UTILITY AUTHORITY
GLOSSARY

WORD/CONCEPT	DEFINITION
Pay-As-You-Go Basis	AKA "Pay-Go"; a term used to describe a financial policy by which capital outlays or capital projects are financed from current revenues rather than from borrowing.
Performance Measure	Defines data that documents how effectively or efficiently a program is achieving its objectives.
Potable Water	Drinking water.
Procurement	The acquisition of goods or services. It is favorable that the goods or services are appropriate and that they are procured at the best possible cost to meet the needs of the purchaser in terms of quality and quantity, time and location.
Proprietary Fund	An account in which certain (government) transactions are handled. Services that fit into a proprietary fund are grouped by similarities to evaluate their performance.
Revenues	Sources of income financing the operations of the Authority.
Risk Management	The process of identifying, assessing and controlling risks arising from operational factors and making decisions that balance risk costs with mission benefits.
SCADA (Supervisory Control & Data Acquisition)	A computer system that monitors and controls industrial, infrastructure or facility-based processes.
Septage	The material pumped out of a septage tank or onsite sewage facility.
Service	Helping others with a specific need or want.
Stewardship	An ethic that embodies responsible planning and management of resources.
Strategic Plan	A process for determining where an organization is going over the next year or, more typically, 3 to 5 years (long term); some extend their vision to 20 years.
Strategic Vision	Outlines what the organization wants to be, or how it wants the world in which it operates to be. This is a long-term view and concentrates on the future.
Surface Water	Water collecting on the ground or in a stream, river, lake, wetland or ocean; it is related to water collecting as groundwater or atmospheric water.
Sustainability	The long-term maintenance of responsibility, which has environmental, economic and social dimensions, and encompasses the concept of stewardship, the responsible management of resource use.
System Development Charges	Calculated charges to cover the cost of capacity in the Authority's existing water and wastewater plants and transmission facilities, and the estimated cost of capacity in future treatment plants and facilities that are covered in the 10-year Capital Improvement Plan.

			Rates and Fees Effective 7/1/16	Rates and Fees Effective 7/1/17	Ordinance Reference
1	**WATER RATES & FEES**				
	Water rates include both a fixed meter charge based on meter size and consumption charge based on metered consumption, billed bi-monthly (every two months).				
A.	**Fixed Meter Charge by Meter Size***		**Bi-Monthly**	**Bi-Monthly**	
		5/8"	$ 25.81	$ 26.67	Sec. 1-97 (1) f
		1" (Single-Family Residential with fire sprinkler system)	$ 25.81	$ 26.67	Sec. 1-97 (1) f
		1"	$ 64.53	$ 66.68	Sec. 1-97 (1) f
		1 1/2"	$ 129.05	$ 133.35	Sec. 1-97 (1) f
		2"	$ 206.48	$ 213.36	Sec. 1-97 (1) f
		3"	$ 387.15	$ 400.05	Sec. 1-97 (1) f
		4"	$ 645.25	$ 666.75	Sec. 1-97 (1) f
		6"	$ 1,290.50	$ 1,333.50	Sec. 1-97 (1) f
		8"	$ 2,064.80	$ 2,133.60	Sec. 1-97 (1) f
		10"	$ 3,226.25	$ 3,333.75	Sec. 1-97 (1) f
		12"	$ 3,871.50	$ 4,000.50	Sec. 1-97 (1) f
	* Fixed Meter Charge is not applied to Irrigation Meters if a separate Water Meter exists.				
B.	**Consumption Charge (per 1,000 gallons)****		$ 3.67	$ 3.85	Sec. 1-97 (1) c
	** Single-Family Residential is serviced by one domestic meter				
			Bi-Monthly	**Bi-Monthly**	
C.	**Availability Charge for unconnected 5/8" water service; Availability Charge for larger meters based on meter size**		$ 25.81	$ 26.67	Sec. 1-97 (1) a
D.	**Bulk Water Rates**				
	Bulk Water Resale Rate (per 1,000 gallons)		$ 2.95	$ 3.09	Sec. 1-97 (1) b
	Bulk Reclaimed Water In-Service Area Rate (per 1,000 gallons)		$ 2.45	$ 2.55	Sec. 1-97 (1) b
	Bulk Reclaimed Water Deposit In-Service Area Rate ***		$100 minimum	$100 minimum	Sec. 1-97 (1) b
	Bulk Reclaimed Water Out-of-Service Area Rate (per 1,000 gallons)		$ 3.06	$ 3.19	Sec. 1-97 (1) b
	Bulk Reclaimed Water Deposit Out-of-Service Area Rate***		$125 minimum	$125 minimum	Sec. 1-97 (1) b
	*** Greater of 3 months estimated usage or the minimum				
E.	**Water Service Connection Fee***				
	Service Line Connection Fee by Service Size				
		1" Service	$ 2,100.00	$ 2,100.00	Sec. 1-97 (2) a; Sec. 1-5 c
		2" Service	$ 4,100.00	$ 4,100.00	Sec. 1-97 (2) a; Sec. 1-5 c
		Connection Fee includes meter set			
	Inspection Fee for Developer-Installed Connection		$ 55.00	$ 55.00	Sec. 1-97 (2) b; Sec. 1-6 a
	Inspection Fee for Developer-Installed Connection (After hours - Minimum of 2 hours)		$75/hour	$75/hour	Sec. 1-97 (2) b; Sec. 1-6 a
F.	**Meter Set Fee by Meter Size (includes labor and materials)**				
		5/8"	$ 250.00	$ 250.00	Sec. 1-97 (2) c; Sec. 1-5 c
		5/8" Split Service	$ 375.00	$ 375.00	Sec. 1-97 (2) c; Sec. 1-5 c
		1"	$ 350.00	$ 350.00	Sec. 1-97 (2) c; Sec. 1-5 c
		1 1/2"	$ 1,600.00	$ 1,600.00	Sec. 1-97 (2) c; Sec. 1-5 c
		2"	$ 1,800.00	$ 1,800.00	Sec. 1-97 (2) c; Sec. 1-5 c
G.	**System Development Charges**				
	Water by Meter Size				Sec. 4-27 (a)
		5/8" (no Water SDC due on a 5/8" irrigation meter)	$ 1,510.00	$ 1,590.00	Sec. 1-97 (2) d
		1" (Single-Family Residential with fire sprinkler system)	$ 1,510.00	$ 1,590.00	Sec. 1-97 (2) d
		1"	$ 3,775.00	$ 3,975.00	Sec. 1-97 (2) d
		1 1/2"	$ 7,550.00	$ 7,950.00	Sec. 1-97 (2) d
		2"	$ 12,080.00	$ 12,720.00	Sec. 1-97 (2) d
		3"	$ 22,650.00	$ 23,850.00	Sec. 1-97 (2) d
		4"	$ 37,750.00	$ 39,750.00	Sec. 1-97 (2) d
		6"	$ 75,500.00	$ 79,500.00	Sec. 1-97 (2) d
		8"	$ 120,800.00	$ 127,200.00	Sec. 1-97 (2) d
		10"	$ 188,750.00	$ 198,750.00	Sec. 1-97 (2) d
	Shell Buildings Alternative Fee Calculation - former NHC Water & Sewer District. Fees base on class of use & 15A NCAC O2T.0114 - Design Flow Rates				
		Water Development Charge (minimum $1,348.00 = 400 gallons)	$3.37 per gallon	$3.37 per gallon	Sec. 1-97 (2) d
H.	**Special Use of Water**				
	Water Rates include both a fixed meter charge as referenced in Section A based on meter size or backflow preventer size, whichever is less, plus consumption charge based on metered consumption as referenced in Section B, billed bi-monthly (every two months).				
	Fixed Meter Charge by Size		**Initial Fee**	**Initial Fee**	
		5/8"	$ 31.00	$ 31.00	Sec. 1-97 (3) g
		3/4"	$ 35.00	$ 35.00	Sec. 1-97 (3) g
		1"	$ 45.00	$ 45.00	Sec. 1-97 (3) g
		1 1/2"	$ 56.00	$ 56.00	Sec. 1-97 (3) g
		2"	$ 96.00	$ 96.00	Sec. 1-97 (3) g
		3"	$ 165.00	$ 165.00	Sec. 1-97 (3) g
		4"	$ 254.00	$ 254.00	Sec. 1-97 (3) g
		Lost or stolen special use sign	$ 50.00	$ 50.00	Sec. 1-97 (3) g
I.	**Water Quality Fees**				
	Inspection Fees Backflow Assembly				

			Rates and Fees Effective 7/1/16	Rates and Fees Effective 7/1/17	Ordinance Reference
		Initial inspection	No Charge	No Charge	Sec. 1-97 (2) b
		Subsequent inspections	$ 55.00	$ 55.00	Sec. 1-97 (2) b
J.	**Fire Line Service**				
	Fixed Fire Line Charge by Size		**Bi-Monthly**	**Bi-Monthly**	
		2"	$ 20.00	$ 20.00	Sec. 1-97 (1) e
		4"	$ 40.00	$ 40.00	Sec. 1-97 (1) e
		6"	$ 80.00	$ 80.00	Sec. 1-97 (1) e
		8"	$ 140.00	$ 140.00	Sec. 1-97 (1) e
		10"	$ 220.00	$ 220.00	Sec. 1-97 (1) e
		12"	$ 320.00	$ 320.00	Sec. 1-97 (1) e
2	**SEWER RATES & FEES**				
	Sewer rates include both a fixed meter charge based on meter size and consumption charge based on metered consumption, billed bi-monthly (every two months).				
A.	**Fixed Meter Charge by Meter Size**		**Bi-Monthly**	**Bi-Monthly**	
		5/8"	$ 29.10	$ 29.10	Sec. 1-97 (1) f; Sec. 1-75
		1" (Single-Family Residential with fire sprinkler system)	$ 29.10	$ 29.10	Sec. 1-97 (1) f; Sec. 1-75
		1"	$ 72.75	$ 72.75	Sec. 1-97 (1) f; Sec. 1-75
		1 1/2"	$ 145.50	$ 145.50	Sec. 1-97 (1) f; Sec. 1-75
		2"	$ 232.80	$ 232.80	Sec. 1-97 (1) f; Sec. 1-75
		3"	$ 436.50	$ 436.50	Sec. 1-97 (1) f; Sec. 1-75
		4"	$ 727.50	$ 727.50	Sec. 1-97 (1) f; Sec. 1-75
		6"	$ 1,455.00	$ 1,455.00	Sec. 1-97 (1) f; Sec. 1-75
		8"	$ 2,328.00	$ 2,328.00	Sec. 1-97 (1) f; Sec. 1-75
		10"	$ 3,637.50	$ 3,637.50	Sec. 1-97 (1) f; Sec. 1-75
		12"	$ 4,365.00	$ 4,365.00	Sec. 1-97 (1) f; Sec. 1-75
B.	**Consumption Charge (per 1,000 gallons) See Notes 1,2,3,4**		$ 4.56	$ 4.58	Sec. 1-97 (1) c; Sec. 1-75
	Note 1	Single-Family Residential metered consumption capped at 30,000 gallons per bi-monthly billing			Sec. 1-97 (1) c; Sec. 1-75
	Note 2	Single-Family Residential non-metered consumption capped at 24,000 gallons per bi-monthly billing			Sec. 1-97 (1) g; Sec. 1-75
	Note 3	No cap for non-residential metered consumption			Sec. 1-97 (1) c; Sec. 1-75
	Note 4	Single-Family Residential is serviced by one domestic meter			
			Bi-Monthly	**Bi-Monthly**	
C.	**Availability Charge for unconnected 5/8" sewer service; Availability Charge for larger meters based on meter size**		$ 29.10	$ 29.10	Sec. 1-97 (1) a
D.	**Wholesale or Bulk rates will be individually determined in accordance with applicable interlocal agreement**		Individually Determined	Individually Determined	Sec. 1-97 (1) b
E.	**Sewer Service Connection Fee**				
	Installation Fee by Service Size				
		4" Service	$ 2,200.00	$ 2,200.00	Sec. 1-97 (2) a; Sec. 1-5 c
		6" Service	$ 2,800.00	$ 2,800.00	Sec. 1-97 (2) a; Sec. 1-5 c
	Inspection Fee for Developer-Installed Connection		$ 55.00	$ 55.00	Sec. 1-97 (2) b; Sec. 1-6 a
	Inspection Fee for Developer-Installed Connection (After hours - Minimum of 2 hours)		$75/hour	$75/hour	Sec. 1-97 (2) b; Sec. 1-6 a
F.	**System Development Charges**				
	Sewer by Meter Size				Sec. 4-47 (a)
		5/8"	$ 2,030.00	$ 2,130.00	Sec. 1-97 (2) d
		1" (Single-Family Residential with fire sprinkler system)	$ 2,030.00	$ 2,130.00	Sec. 1-97 (2) d
		1"	$ 5,075.00	$ 5,325.00	Sec. 1-97 (2) d
		1 1/2"	$ 10,150.00	$ 10,650.00	Sec. 1-97 (2) d
		2"	$ 16,240.00	$ 17,040.00	Sec. 1-97 (2) d
		3"	$ 30,450.00	$ 31,950.00	Sec. 1-97 (2) d
		4"	$ 50,750.00	$ 53,250.00	Sec. 1-97 (2) d
		6"	$ 101,500.00	$ 106,500.00	Sec. 1-97 (2) d
		8"	$ 162,400.00	$ 170,400.00	Sec. 1-97 (2) d
		10"	$ 253,750.00	$ 266,250.00	Sec. 1-97 (2) d
		Unmetered service (sewer only)	$10/gallon projected flow	$10/gallon projected flow	Sec. 1-97 (2) d
	Shell Buildings Alternative Fee Calculation - former NHC Water & Sewer District. Fees base on class of use & 15A NCAC O2T.0114 - Design Flow Rates				
		Sewer Impact Fee (minimum $2,103.90 = 300 gallons)	$7.013 per gallon	$7.013 per gallon	Sec. 1-97 (2) d
		Sewer Development Charge	$1.50 per gallon	$1.50 per gallon	Sec. 1-97 (2) d
G.	**Development Capacity Fees**				
	Chair Road Associates - Regional Lift Station (PS #157) and Northwest Forcemain Improvements		$4.84 per gpd	$5.04 per gpd	Per Contract
	Chair Road Associates - Northwest Forcemain Improvements Only		$3.61 per gpd	$3.76 per gpd	Per Contract
	Kirkland Sewer Project Capacity Fee		$2.71 per gpd	$2.71 per gpd	Per Contract
3	**Wastewater Pretreatment**				
A.	**Discharge Permit Applications and Annual Fees:**				
	Significant Industrial Users, Industrial Users flow > 15,000 gallons/day				
		Initial and Annual Permit	$ 750.00	$ 750.00	Sec. 5-58: Sec. 5-91 (b)
		Modification of Permit (each occurrence)	$ 200.00	$ 200.00	Sec. 5-58: Sec. 5-91 (b)

		Rates and Fees Effective 7/1/16	Rates and Fees Effective 7/1/17	Ordinance Reference
	Restoration of Revoked Permit (each occurrence)	$ 1,500.00	$ 1,500.00	Sec. 5-58: Sec. 5-91 (b)
	Monitoring Fee	Individually determined	Individually determined	Sec. 5-58
	Enforcement Cost Recovery	Individually determined	Individually determined	Sec. 1-97 (3) j; Sec. 5-58
B.	**Other Wastewater Permits**			
	Flow Less than 1,000 gallons/day (initial and annual)	$ 100.00	$ 100.00	Sec. 5-58: Sec. 5-91 (a)
	Flow Between 1,000 and 7,500 gallons/day (initial and annual)	$ 200.00	$ 200.00	Sec. 5-58: Sec. 5-91 (a)
	Flow Between 7,501 and 15,000 gallons/day (initial and annual)	$ 300.00	$ 300.00	Sec. 5-58: Sec. 5-91 (a)
	Monitoring Fee	Individually determined	Individually determined	Sec. 5-58
	Food Service Establishment Permit and Annual Inspection Fee (per location)	$ 100.00	$ 100.00	Sec. 5-58: Sec. 5-91 (a)
	Grease Interceptor Pumping Variance (each occurrence)	$ 220.00	$ 220.00	Sec. 5-58
	Enforcement Cost Recovery	Individually determined	Individually determined	Sec. 1-97 (3) j; Sec. 5-58
	Restoration Fee of Revoked Other Wastewater Permit (each occurrence)	2x permit fee	2x permit fee	Sec. 1-97 (1) d; Sec. 5-58
	Residuals permit application fee (initial and renewals)	$ 100.00	$ 100.00	Sec. 5-58
C.	**Pretreatment Wastewater Treatment Surcharges**	**Monthly**	**Monthly**	
	Surcharge for BOD (per 100 lbs; when BOD>200mg/L and COD < 3x BOD)****	$ 36.00	$ 36.00	Sec. 1-97 (1) d; Sec. 5-57
	Surcharge for COD (per 100 lbs; when COD>600mg/L and >/=3xBOD)****	$ 36.00	$ 36.00	Sec. 1-97 (1) d; Sec. 5-57
	Surcharge for TSS (per 100 lbs; when TSS >200mg/l)	$ 21.00	$ 21.00	Sec. 1-97 (1) d; Sec. 5-57
	**** Surcharge is assessed for either BOD or COD, but not both.			
D.	**Charges for Septage Haulers**	**Monthly**	**Monthly**	
	In-Service Area Rate (per gallon)	$ 0.1375	$ 0.1378	Sec. 1-97 (1) b; Sec. 5-33
	Out-of-Service Area Rate (per gallon)	$ 0.1719	$ 0.1723	Sec. 1-97 (1) b; Sec. 5-33
	Utility Deposit	$ 500.00	$ 500.00	Sec. 1-6
E.	**Charges for Miscellaneous Hauled Wastewater Fees (subject to applicable surcharges)**			
	Short-Term Permit	**Monthly**	**Monthly**	
	Per gallon Within Service Area	$ 0.030	$ 0.030	Sec. 1-97 (1) b; Sec. 5-33
	Per gallon Out-of-Service Area	$ 0.060	$ 0.060	Sec. 1-97 (1) b; Sec. 5-33
	Long-Term Permit			
	One Time System Development Charge In accordance with Fee Schedule and specified in permit.			Sec. 1-97 (2)d; Sec. 5-58
		Monthly	**Monthly**	
	Long-Term Permit Monthly Consumption Charge (per 1,000 gallons)	$ 4.56	$ 4.56	Sec. 1-97 (1) c; Sec. 5-58
	Long-Term Permit Monthly Fixed Meter Charge by Meter Size/Flow:			
	5/8" (Flow between 0-28,800 gpd)	$ 29.10	$ 29.10	Sec. 1-97 (1) f; Sec. 5-58
	1" (Flow between 28,801-72,000 gpd)	$ 72.75	$ 72.75	Sec. 1-97 (1) f; Sec. 5-58
	1 1/2" (Flow between 72,001-144,000 gpd)	$ 145.50	$ 145.50	Sec. 1-97 (1) f; Sec. 5-58
	2" (Flow between 144,001-230,400 gpd)	$ 232.80	$ 232.80	Sec. 1-97 (1) f; Sec. 5-58
	3" (Flow between 230,401-460,800 gpd)	$ 436.50	$ 436.50	Sec. 1-97 (1) f; Sec. 5-58
	4" (Flow between 460,801-720,000 gpd)	$ 727.50	$ 727.50	Sec. 1-97 (1) f; Sec. 5-58
	6" (Flow between 720,001-1,440,000 gpd)	$ 1,455.00	$ 1,455.00	Sec. 1-97 (1) f; Sec. 5-58
	8" (Flow between 1,440,001-2,304,000 gpd)	$ 2,328.00	$ 2,328.00	Sec. 1-97 (1) f; Sec. 5-58
	10" (Flow between 2,304,001-3,312,000 gpd)	$ 3,637.50	$ 3,637.50	Sec. 1-97 (1) f; Sec. 5-58
	12" (Flow > 3,312,001 gpd)	$ 4,365.00	$ 4,365.00	Sec. 1-97 (1) f; Sec. 5-58
F.	**Processing Charge for Haulers of Non-Hazardous Wastewater Treatment Plant (WWTP) Residuals as delivered to a designated CFPUA WWTP (Per Pound Total Solids Dry Weight Basis as Delivered/Received)**	**Monthly**	**Monthly**	
	Unstabilized/Less Than Class B Residuals In-Service Area Rate	$ 0.80	$ 0.8020	Sec. 1-97 (1) b; Sec. 5-33
	Stabilized/Equal to or Better Than Class B Residuals In-Service Area Rate	$ 0.60	$ 0.6015	Sec. 1-97 (1) b; Sec. 5-33
	Unstabilized/Less Than Class B Residuals Out-of-Service Area Rate	$ 1.00	$ 1.0025	Sec. 1-97 (1) b; Sec. 5-33
	Stabilized/Equal to or Better Than Class B Residuals Out-of-Service Area Rate	$ 0.75	$ 0.7519	Sec. 1-97 (1) b; Sec. 5-33
4	**Penalties**			
A.	**Tampering Violations**			
	Unauthorized non-metered use of water (greater of 30,000 gallons consumption or the highest billed consumption in the past 24 months)	$110.10 minimum	$110.10 minimum	Sec. 1-97 (3) m; Sec 1-166 (c)
	Unauthorized non-metered use of sewer (capped at 30,000 gallons consumption)	$136.80	$136.80	Sec. 1-97 (3) m; Sec 1-166 (c)
	Cut Lock Fee	$75.00	$75.00	Sec. 1-97 (3) f; Sec. 1-166 (c)
	Unauthorized turn on or turn off water supplied by Authority	$50.00	$50.00	Sec. 1-9 (g); Sec. 1-9(h)
	Meter Obstruction Fee	$55.00	$55.00	Sec. 1-97 (3) q
	System Tampering Civil Action Violation, in accordance with N.C.G.S. 14-151(e)	Triple the amount of losses and damages sustained by the Authority or $5000, whichever is greater	Triple the amount of losses and damages sustained by the Authority or $5000, whichever is greater	Sec. 1-97 (3) r
	Violation of Cross Connection Control Ordinance	Up to $1,000/day	Up to $1,000/day	Sec. 2-10 (j)
B.	**Backflow Preventer Violations**			
	Commercial failure to submit required backflow preventer test report	$200.00	$200.00	Sec. 2-10 (d)
	Residential failure to submit required backflow preventer test report	$100.00	$100.00	Sec. 2-10 (d)
	Submission of falsified backflow preventer test report	$200.00	$200.00	Sec. 2-10 (d)
	First violation of backflow installation requirements	$250.00	$250.00	Sec. 2-10 (b)
	Subsequent violation of backflow installation requirements	$1,000.00	$1,000.00	Sec. 2-10 (b)

			Rates and Fees Effective 7/1/16	Rates and Fees Effective 7/1/17	Ordinance Reference
C.	Pretreatment Violations				
		Violation of Wastewater Discharge Permit	Up to $25,000	Up to $25,000	Sec. 5-189
		Violation of Sewer Use Ordinance	Up to $25,000	Up to $25,000	Sec. 5-189
D.	Water Emergency Management Ordinance				
		Violation of Water Emergency Management Regulations	Up to $500/day	Up to $500/day	Sec. 3-13 (d)
5	Miscellaneous and Other				
A.	Service/repair costs				
		Contracted services at actual cost plus 10% administrative fee	Individually determined	Individually determined	Sec. 1-9 (e)
		CFPUA staff and equipment at FEMA reimbursable cost	Individually determined	Individually determined	Sec. 1-9 (e)
B.	Other Fees				
		After Hours Fee	Individually determined	Individually determined	Sec. 1-97 (3) a
		Emergency Reconnect Fee	$ 110.00	$ 110.00	Sec. 1-97 (3) c
		Late Day Reconnect Fee	$ 55.00	$ 55.00	Sec. 1-97 (3) b
		Late Fee	10% of balance; $25 maximum on Single-Family Residential services	10% of balance; $25 maximum on Single-Family Residential services	Sec. 1-97 (3) h
		Loan Processing Fee	Actual Cost to File	Actual Cost to File	Sec. 1-97 (3) k
		Meter Test	$ 55.00	$ 55.00	Sec. 1-97 (3) l; Sec. 1-36; Sec. 1-161
		Large Meter Test (requested by Customer) (Meters 3" and larger)	$ 150.00	$ 150.00	Sec. 1-36; Sec. 1-161
		New Service Charge	$ 55.00	$ 55.00	Sec. 1-97 (3) d; Sec. 1-6 (a)
		Premise Visit Fee	$ 55.00	$ 55.00	Sec. 1-97 (3) p; Sec. 1-15
		Reconnect/Delinquency Fee	$ 55.00	$ 55.00	Sec. 1-97 (3)m; Sec. 1-166 (a)
		Reread Fee (requested by Customer)			
		Correct Read	$ 55.00	$ 55.00	Sec. 1-97 (3) o
		Incorrect Read (CFPUA error)	No Cost	No Cost	Sec. 1-97 (3) o
		Turn-On Fee (after disconnect)	$ 55.00	$ 55.00	Sec. 1-97 (3) n
		Utility Deposit Single-Family Residential (may be adjusted by Customer Service Director based on services provided and prior payment history)	Up to $200	Up to $200	Sec. 1-6
		Utility Deposit Commercial	Determined by Policy	Determined by Policy	Sec. 1-6
		Hydrant Meter Deposit for festivals (up to 1 1/2" meter size)	$ 500.00	$ 500.00	Sec. 1-97 (3) g
		Hydrant Meter Deposit for festivals (2" and higher meter size)	Actual Cost	Actual Cost	Sec. 1-97 (3) g
		Hydrant Meter Installation & Removal for festivals (per meter)	$ 55.00	$ 55.00	Sec. 1-97 (3) g
		Plan Review Fees:			
		Minor Subdivisions - no required NCDEQ water or sewer permits	$ 120.00	$ 120.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Commercial Plans (multi-family residential/commercial) - no required NCDEQ water and sewer permits	$ 120.00	$ 120.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Main Extensions/Utility relocation/ROW widening less than 500 Linear Feet	$ 240.00	$ 240.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Main Extensions/Utility relocation/ROW widening 500-999 Linear Feet	$ 300.00	$ 300.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Main Extensions/Utility relocation/ROW widening 1,000-4,999 linear feet	$ 600.00	$ 600.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Main Extensions/Utility relocation/ROW widening 5,000-9,999 linear feet	$ 850.00	$ 850.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Main Extensions/Utility relocation/ROW widening 10,000 linear feet and greater	$ 1,400.00	$ 1,400.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Pump Station Review (plus the main extensions fee above)	$ 350.00	$ 350.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Re-review Fee	$ 50.00	$ 50.00	Sec. 1-97 (3) l; Sec. 4-3 (a)
		Water/Sewer Line Acceptance Testing Reinspection	$55/hour	$55/hour	Sec. 4-3 (c)
		Water/Sewer Line Acceptance Testing Reinspection - After Hours Fee	$75/hour	$75/hour	Sec. 4-3 (c)
		Inspection Fee for Developer-Installed Main Lines (After hours - Minimum of 2 hours)	$75/hour	$75/hour	Sec. 1-97 (2) b; Sec. 1-6 (a)
		Demolition Inspection Fee	$ 55.00	$ 55.00	Sec. 1-97 (3) s; Sec. 1-6 (a)
		Violation of Extension Policy	$100, $200, $500	$100, $200, $500	Sec. 4-103
		Copy and Printing Fees, including Public Records Request	Actual cost	Actual cost	
		Tank Mounted Equipment Structural Analysis Review Fee	$ 1,000.00	$ 1,250.00	Sec. 1-97 (3) t
		Water Tower Lease	Individually determined; $2,500 minimum	Individually determined; $2,500 minimum	Set by contract
		Additional Antenna Fee - per antenna exceeding nine antennas		$ 300.00	
		Ground Space Fee - Additional ground space above 400 square feet		$5.92/square foot	
C.	Miscellaneous Administrative Fees				
		Returned Check Fee (Per event; Closed Account, NSF, Stop Payment of Customer/Vendor issued Check)	$ 25.00	$ 25.00	Sec. 1-97 (3) j
		Convenience Fee per transaction; maximum payment amount up to $500 per transaction.	$ 3.75	$ 3.75	
		Dishonored Bank Draft Fee (Per event; Closed Account, NSF, Stop Payment of Customer/Vendor Draft)	$ 25.00	$ 25.00	Sec. 1-97 (3) j
		Check Stop Payment Fee (Stop Payment of CFPUA issued Check requested by Customer/Vendor)	$ 5.00	$ 5.00	Sec. 1-97 (3) j

Cape Fear Public Utility Authority
Stewardship. Sustainability. Service.

Budget Ordinance

Ordinance Making Appropriations
For the Fiscal Year Beginning July 1, 2017

LEGISLATIVE INTENT/PURPOSE:
Appropriations and estimated revenues for the Fiscal Year Beginning July 1, 2017.

THEREFORE, BE IT ORDAINED by the Board of the Cape Fear Public Utility Authority:

SECTION I: The following appropriations are hereby made. The following revenues are estimated to be available during the fiscal year to meet these appropriations.

Appropriations	
Operating Expenditures	$37,152,403
Non-Departmental	2,491,903
Contingency - Operating	675,000
Debt Service	24,292,749
Transfers to Capital Projects Funds	14,906,616
Total Appropriations	**$79,518,671**
Revenues	
Wastewater Revenues	$35,986,641
Water Revenues	33,791,230
Appropriated Fund Balance	540,000
Investment Earnings	700,000
Other Charges for Service	4,500,800
System Development Charges	4,000,000
Total Revenues	**$79,518,671**

SECTION II: That appropriations herein authorized shall have the amount of outstanding purchase orders as of June 30, 2017 added to each appropriation as it appears in order to account for the payment against the fiscal year in which it is paid.

SECTION III: Pursuant to NCGS 159-15, the Executive Director is hereby authorized to transfer moneys among appropriations in SECTION I above. Such transfers shall be reported to the Board at the next regular meeting after such transfer has occurred. The transfers shall be entered in the minutes.

SECTION IV: Pursuant to NCGS 159-13.2, the following appropriations are hereby made. Expenditures authorized by these appropriations may occur over multiple fiscal years. The following revenues are estimated to be available in the fiscal year the expenditures occur.

Appropriations	
System-Wide Capital Improvement Projects	$2,249,428
Water Capital Improvement Projects	16,369,086
Wastewater Capital Improvement Projects	26,100,810
Total Appropriations	**$44,719,324**

Revenues	
Transfers from Operating Fund	$32,043,842
Interest Earnings	228,357
Contributions	1,575,000
NC Connect Grant	1,630,000
Clean Water State Revolving Loans	9,242,125
Total Revenues	**$44,719,324**

SECTION V: Pursuant to NCGS 159-15, the Executive Director is hereby authorized to transfer moneys among available appropriations authorized in this and prior project ordinances. Such transfers shall be reported to the Board at the next regular meeting after such transfer has occurred. The transfers shall be entered in the minutes.

Adopted at a regular meeting
On June 14, 2017

Michael C. Brown, Chairman

ATTEST:

Donna S. Pope, Clerk to the Board