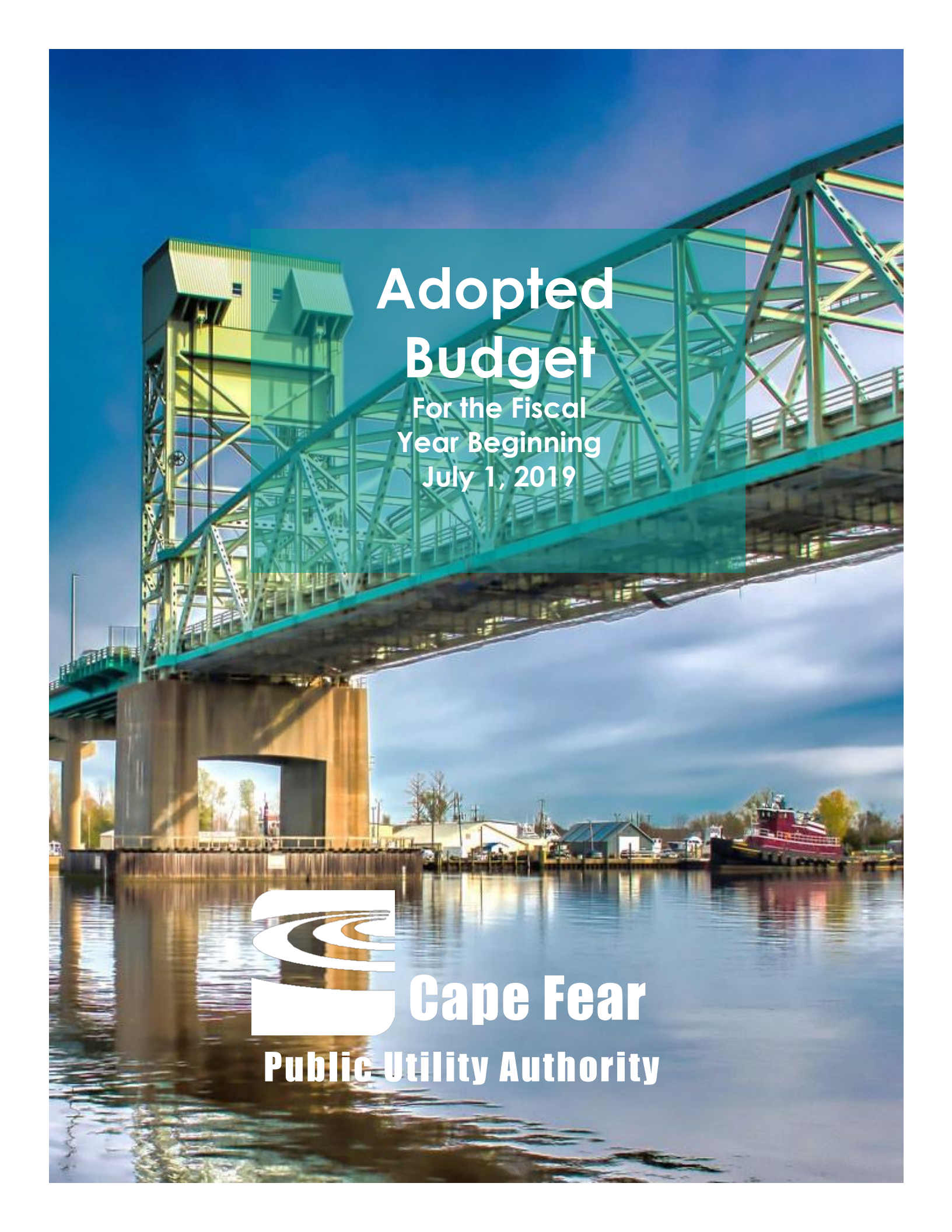




Adopted Budget

For the Fiscal
Year Beginning
July 1, 2019



Cape Fear
Public Utility Authority



**CAPE FEAR PUBLIC UTILITY AUTHORITY
RECOMMENDED BUDGET
FISCAL YEAR 2019 - 2020**

Board Members

William A. Norris, Chair

Wesley P. Corder, Vice Chair

Jennifer Adams, Secretary

Michael C. Brown, III, Treasurer

Jessica Cannon, M.D.

Deans Hackney

Patricia O. Kusek, New Hanover County Commissioner

Kevin O'Grady, City of Wilmington Councilman

Charles Rivenbark, City of Wilmington Councilman

Larry Sneed

Rob Zapple, New Hanover County Commissioner

James R. Flechtner, PE, Executive Director

John B. McLean, CPA, Chief Financial Officer

235 Government Center Drive

Wilmington, NC 28403

www.cfpua.org

Board Members



William A. Norris

Chairman

Appointed by the City of Wilmington

Seated in 2013

Term ends in 2018

Committees: Executive & Finance



Wesley P. Corder

Vice-Chair

Jointly appointed by City of Wilmington
and New Hanover County

Seated in 2017

Term ends 2020

Committee: Executive, Finance &
Communications



Jennifer Adams

Secretary

Appointed by New Hanover County

Seated in 2016

Term ends 2019

Committee: Executive & Finance



Patricia O. Kusek

Commissioner

Appointed by New Hanover County

Seated in 2011

Term ends 2018

Committees: Communications &
Human Resources



Kevin O'Grady

Councilman

Appointed by City of Wilmington

Seated in 2014

Term ends 2019

Committee: Human Resources &
Communications



Charles Rivenbark

Councilman

Appointed by City of Wilmington

Seated in 2010

Term ends in 2018

Committees: Long Range
Planning



Michael C. Brown, III

Treasurer

Appointed by New Hanover County

Seated in 2010

Term ends in 2019

Committees: Executive &
Finance



Jessica Cannon, M. D.

Member

Appointed by City of Wilmington

Seated in 2019

Term ends 2020

Committees: Long Range Planning



Deans Hackney

Member

Appointed by City of Wilmington

Seated in 2018

Term ends in 2019

Committees: Long Range Planning &
Human Resources



Larry Sneedeen

Member

Appointed by New Hanover County

Seated in 2012

Term ends in 2020

Committees: Long Range Planning



Rob Zapple

Commissioner

Appointed by New Hanover County

Seated in 2015

Term ends in 2019

Committees: Finance & Long Range
Planning



Donna S. Pope

Clerk to the Board



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**Cape Fear Public Utility Authority
North Carolina**

For the Fiscal Year Beginning

July 1, 2018

Christopher P. Morrill

Executive Director

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BUDGET GUIDE

This document contains Cape Fear Public Utility Authority's Fiscal Year 2019-2020 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 2019-2020 annual operating budget including information on total budgeted expenditures, revenues, and net position. This section also presents information for each of the Authority's departments.

Capital Budget – This section details the Authority's FY 2019-2020 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 2019-2020 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

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 2019-2020 budget. 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 eleventh year of serving over 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 us 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 customer service, public health, environmental stewardship, 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.

The following factors influenced the decisions made in developing the budgets for FY 19-20:

- The rehabilitation and replacement of aging infrastructure - 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.
- Commitment to sustainable capital funding – CFPUA's financial policies imply that CFPUA's \$18 million minimum level of annual capital investment will be funded through current year water and wastewater rate revenue collections. Over the past two fiscal years the Board has adopted increases to water and wastewater rates to achieve this funding level. Due to higher-than-expected customer growth, CFPUA would have been able to fund the \$18 million pay-as-you-go capital funding target in FY 19-20 without an increase to rates. However, due to the presence of PFAS in residual biosolids, CFPUA will transport this material to a land fill instead of applying it to farmland in the surrounding counties. Landfilling costs approximately \$1.5 million more than land application. In FY 19-20 this additional cost is funded through a reduction in budgeted pay-go transfers from the \$18 million target to \$16.5 million. This temporary approach was preferable to increasing wastewater rates and will allow additional time to explore other lower cost options.

BUDGET MESSAGE

- In June 2017, the issue of water quality became the focus of our community when emerging contaminants were discovered in the drinking water and in the Cape Fear River—the largest source of drinking water for our region. Cape Fear Public Utility Authority has taken legal action, continued to monitor and track levels of these compounds, and begun testing new treatment technologies that have the potential to remove them from the drinking water. As of May 31, 2019, the Authority has spent \$7.4 million related to emerging contaminants. These costs include \$320,500 for water and wastewater treatment costs related to water removed from the Authority’s contaminated aquifer storage and recovery well. Except for \$635,000 in state grants, all of these costs were funded with rate revenues.

OPERATING BUDGET

The total Fiscal Year 2019-2020 operating budget is approximately \$85.6 million. As a foundation for the FY 19-20 budget process, key goals and assumptions are identified and highlighted below:

- Fiscal Year 2019-2020 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 operating expenditures for FY 19-20 are approximately \$3.2 million greater than operating expenditures in the adopted FY 18-19 budget. Approximately \$2.2 million of this increase is attributable to forecasted legal, sampling, and other costs directly attributable to PFAS, including costs related to litigation, sampling, and biosolids disposal.
- Budgeted salaries include 4 additional full-time equivalent (FTE) positions including, one FTE in Administration, one FTE in Operations – Water Treatment, one FTE in Operations – Utility Services, and one FTE in Environmental Management. Budgeted salaries also include equity adjustments for various positions, a 1.5% cost-of-living adjustment, and 2.5% merit increases.
- Benefits were budgeted with a composite 4% in health premiums, respectively, effective January 1, 2020 and an increase in the Local Government Employee Retirement System employer contribution rate from 7.75% to 8.95% of covered payroll.
- Transfers to the capital projects funds remain relatively constant as compared to the FY18-19 adopted budget at \$16.5 million. This amount is part of the Authority’s plan to transition to a point where normal, recurring annual capital expenditures are fully funded through rates pursuant to the Authority’s debt management policy.
- Debt service requirements (principal and interest on outstanding debt) in FY 19-20 are \$22.4 million.

CAPITAL BUDGET

The total of the 10-Year Capital Improvements Program (CIP) is \$257.5 million. New projects appropriated in FY 19-20 total \$84.9 million with \$43.3 million appropriated for enhancements to the Sweeney Water Treatment Plan for the removal of PFAS and other emerging, unregulated contaminants from finished drinking water; \$25 million for CFPUA’s share of costs to replace the main that transmits raw surface water

BUDGET MESSAGE

to the Sweeney Water Treatment Plant; and the remaining \$15.6 for various projects to rehabilitate or replace aging water and wastewater 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 and likelihood of failure. All projects were also prioritized 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 or future flows.
- Growth in the number of customers served.

Once projects are prioritized, the 10-Year CIP is incorporated into the Authority's long-term financial plan prepared within the constraints established in policy to determine the financial impact on debt and debt service coverage, fund balance, and rates. This process is iterative in which the goal is to optimize system investment while being responsible to our rate payers and ensuring the financial sustainability of the organization.

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, 2018. The Authority has received this prestigious award for seven 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 19-20 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 19-20.

Respectfully submitted,

James R. Flechtner, P.E.
Executive Director

CAPE FEAR PUBLIC UTILITY AUTHORITY PROFILE

Organizational Overview

Cape Fear Public Utility Authority was formed by the City of Wilmington and New Hanover County to combine the water and wastewater operations, and began operations on July 1, 2008. The Authority was established pursuant to the Chapter 162A, Article 1 of the North Carolina General Statutes, known as the North Carolina Water and Sewer Authorities Act. The Authority's service area consists of the City of Wilmington and areas of New Hanover County previously served by the New Hanover County Water and Sewer District (District). It does not include the municipalities of Carolina Beach, Kure Beach, and Wrightsville Beach; although by agreement, wastewater flows from Wrightsville Beach and a portion of Pender County are conveyed to and treated by the Authority. Recently, the Authority entered into a three-year bulk purchase agreement that provides the Town of Wrightsville Beach additional available drinking water during tourist season up to 45 million gallons per year. New Hanover County's population is approximately 230,000 in an area encompassing approximately 220 square miles. Of this total, 21 square miles consist of water and wetlands. New Hanover County is the second smallest county in North Carolina by land area and is also the second most densely populated of the 100 counties. The County's beaches provide miles of unspoiled natural beauty and are the area's most popular tourist attractions. The County is the eastern terminus of Interstate Highway 40, a transcontinental route ending in Barstow, California.

An eleven-member board governs the Authority. The City and County appoint five members each, with four of those appointments (two each) coming from their respective governing boards. The eleventh member is jointly appointed. The Authority board is responsible for the adoption of the annual budget, setting water and wastewater rates, making policy decisions, and managing the Executive Director and Legal Counsel.

The Water System

The water system is composed of a surface water system and two groundwater systems. There are 69,634 customer accounts, an increase of 1,022 compared to the previous year. Also, an additional 5,066 locations have services available (vacant lots). The Authority recently entered into a three-year bulk purchase agreement providing the Town of Wrightsville Beach additional drinking water during tourist season. The water system has 1,131 miles of distribution lines at June 30, 2018. The Authority also keeps eight wells on standby to supplement the water supply during emergencies or peak demand periods. Metered water consumption for the fiscal year June 30, 2018 increased .25% from the previous year.

The Authority has a needs-based contract to purchase up to 23.0 MGD of raw water from the Lower Cape Fear Water and Sewer Authority (LCFWSA) with a term ending in 2030. Raw surface water is either drawn from the Cape Fear River through the Authority's 10 million gallon per day (MGD) raw water intake at King's Bluff or purchased through a connection with the LCFWSA at U.S. Highway 421. The raw surface water is pumped to the Sweeney Water Treatment Plant (SWTP), which provides potable water to most of the Authority's service area. The SWTP has a rated capacity of 35 MGD. Average production during the fiscal year ended June 30, 2018 was 14.49 MGD. The surface water distribution system has been providing water service for more than 100 years and includes 16.0 million gallons of covered finished water storage and 5.6 million gallons of storage in five elevated tanks. The LCFWSA and CFPWA equally share in the 106 MGD (combined) allocation of raw water from the Cape Fear River withdrawn at the Kings Bluff Raw Water Facilities.

CAPE FEAR PUBLIC UTILITY AUTHORITY PROFILE

In October 2009, the Authority placed a Nano-Filtration Groundwater Membrane Plant (the Richardson Plant) into operation to serve the northeast section of the distribution system. The source of raw water is from 25 wells drawing from two different aquifers. The plant softens the groundwater and removes organic and inorganic contaminants to produce a blended groundwater that is followed by disinfection, fluoridation, corrosion control, and pH adjustment. The Richardson Plant has a rated capacity of 6.0 MGD. The Richardson Plant had a daily average production during the fiscal year ended June 30, 2018 of 2.49 MGD. The distribution system provides water service to customers and includes 2.8 million gallons of covered ground storage and 2.35 million gallons of elevated storage in five elevated tanks. In addition, the Authority operates one smaller groundwater system, Monterey Heights, providing groundwater directly to customers from five wells and a single 0.5 million gallon elevated storage tank. The groundwater receives disinfection and pH adjustment before being pumped to the distribution system and the storage tank. Average production of the Monterey Heights system during the fiscal year ended June 30, 2018 was 0.693 MGD.

The Wastewater System

There are 69,135 wastewater accounts, an increase of 1,512 compared to the previous year. Also, an additional 3,908 locations have services available (vacant lots). The Authority also provides wholesale wastewater treatment services to the Town of Wrightsville Beach and provides wastewater services to a portion of Pender County. The Authority's collection system consists of approximately 890 miles of gravity lines, 22,100 manholes, approximately 150 pump stations and 150 miles of pressurized sewage force main. Wastewater consumption, based on metered water (excluding irrigation) for the fiscal year June 30, 2018 increased 1.61% from the previous year.

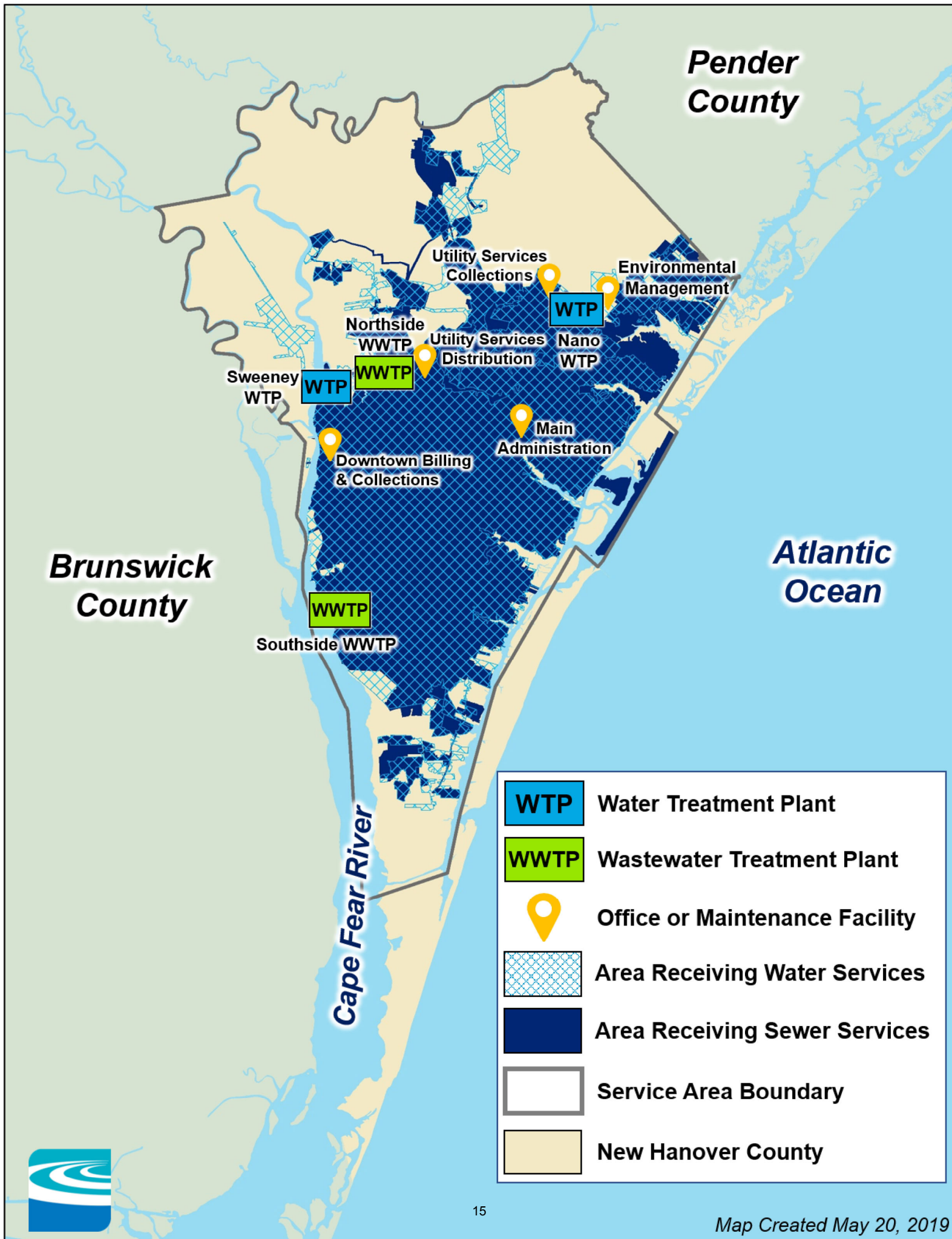
The Authority currently owns and operates the James A. Loughlin, or Northside Wastewater Treatment Plant (NSWWTP) and the M'Kean Maffitt, or Southside Wastewater Treatment Plant (SSWWTP). The NSWWTP is permitted to treat up to 16.0 MGD. The SSWWTP is permitted to treat up to 12.0 MGD. For the fiscal year ended June 30, 2018, the combined average daily flows were 16.9 MGD of the combined 28.0 MGD permitted. The NSWWTP and SSWWTP both use physical, chemical and biological processes to clean the wastewater. After the wastewater flows are collected and treated, the treated effluent from the SSWWTP and the NSWWTP is discharged into the Cape Fear River. The Authority also has a hauled waste program receiving septage and other non-hazardous wastes to NSWWTP for processing.

The Authority has a sewer use ordinance that is administered under the pretreatment program. Ordinance revisions were approved by the Board on October 10, 2012, to ensure compliance with state and federal requirements and incorporate federal streamlining revisions. The pretreatment program monitors and regulates significant wastewater dischargers that are either connected to the Authority's wastewater collection system or hauled to the wastewater treatment plants. Currently, six significant industrial users (SIU) are permitted under the program. SIU permits contain discharge limits for pollutants such as biochemical oxygen demand (BOD), total suspended solids (TSS), chemical oxygen demand (COD), oil and grease, chlorides, ammonia, total kjeldahl nitrogen (TKN), fluoride, certain metals, and organics. All SIUs pre-treat wastewater prior to discharging to the Authority. All SIUs submit monthly monitoring reports. Authority staff conducts semi-annual monitoring. Surcharges are applied to waste that contains pollutants in excess of domestic strength waste. A NC Division of Water Quality approved enforcement response plan ensures permit violations are addressed timely and equitably. Additionally, the pretreatment program permits and monitors food service establishments and other dischargers of

CAPE FEAR PUBLIC UTILITY AUTHORITY PROFILE

non-domestic wastewater that could be harmful to the treatment works, employees, bio-solids, public health, and receiving waters.

Additional information regarding the Authority's service area and operating statistics are located in the supplemental and statistical section of this document.



Cape Fear Public Utility Authority

Strategic Plan 2019

Mission Statement

"We are a customer-centric organization that delivers high-quality water services."

Vision

Supporting our community's quality of life through the responsible use and care of water.

Values

Excellence, transparency, education, and collaboration

Goals

Goal One: Understand and respond to the community's current and future needs.

Strategies:

- 1.1. Understand, anticipate, and respond to our customers and our community's needs in a professional, prompt, and efficient manner.
- 1.2. Maintain a stable financial position that balances rates, affordability, the environment, and the organization's long-term capital and operating needs.
- 1.3. Identify partnerships, develop alliances, and encourage participation with both public and private community stakeholders.
- 1.4. Recruit and retain a well-qualified and motivated workforce that reflects the diversity of the community we serve.
- 1.5. Develop and communicate CFPUA service standards to ensure we operate a responsive and cost-effective collection, treatment, and distribution system.

Goal Two: Championing a positive customer service culture.

Strategies:

- 2.1. Remain committed to a vision of customer service delivery that understands our community's needs, increases our partnership, and ensures that our customers get the right help and support – while enjoying a consistent, positive experience.
- 2.2. Promote customer self-reliance through a range of online services that can be easily accessed from any device; and support those who need individual service.
- 2.3. Develop process improvement initiatives that are cost-effective, compliant, and address the needs of our customers and the organization.
- 2.4. Provide and promote a framework to keep customers informed and up-to-date using their preferred communication method.



Goal Three: Providing exemplary leadership in protecting natural resources.

Strategies:

- 3.1. Consistently maintain and operate the utility, and all its human and physical assets, in a manner that optimizes the care and use of water and other natural resources.
- 3.2. Build a culture of sustainability by creating new energy-reducing goals and challenging existing ones.
- 3.3. Comply and many times surpass federal, state, county, city, and industry standards.
- 3.4. Continue and enhance community education around current programming, environmental stewardship, and CFPUA's role in protecting the environment.
- 3.5. Advocate for water quality protection and related issues.
- 3.6. Explore the use of highly-treated waste water for potable or other non-potable applications.

Goal Four: Cultivating community ownership and advancing relationships.

Strategies:

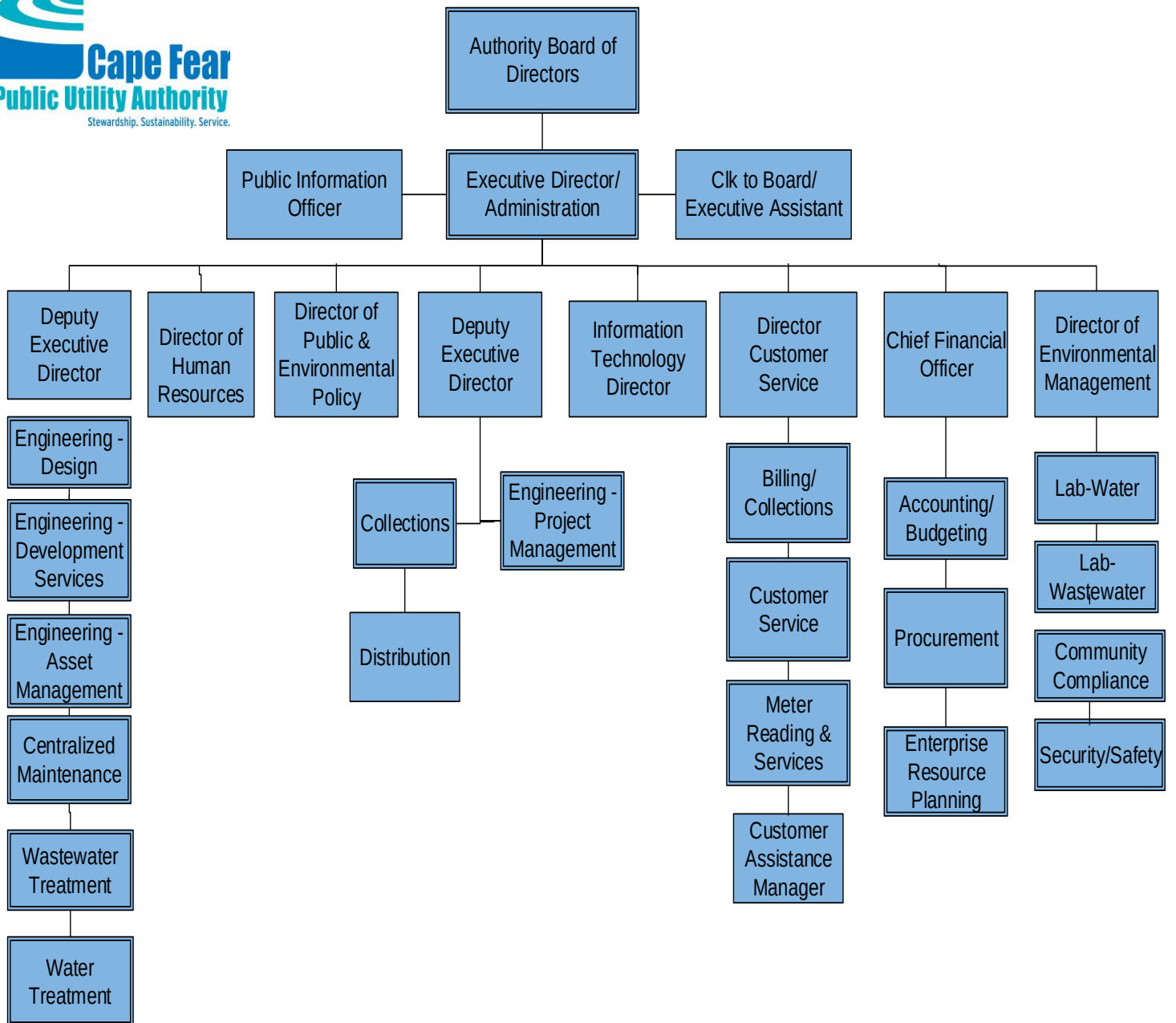
- 4.1. Develop and share compelling content to deepen CFPUA's relationship with customers and inspire positive engagement.
- 4.2. Partner with the community and media to carry a credible brand message to CFPUA's customers and to a broader audience.
- 4.3. Shift organizational messaging from CFPUA as an organization to focus on the people who provide water service.

Goal Five: Fostering an engaged and forward-thinking workforce.

Strategies:

- 5.1. Adopt state-of-the-art tools, systems, and processes that prepare CFPUA for future technological advancements.
- 5.2. Establish best practices around a culture of talent management and employee development to ensure employees are trained and ready to advance.
- 5.3. Implement leadership and communication best practices to grow employee morale, engagement, and productivity.
- 5.4. Acquire and implement technologies and tools that allow for enhanced interdepartmental collaboration, enterprise-wide sharing of information, and operational efficiencies.





FINANCIAL STRUCTURE

Fund Description, Fund Structure and Basis of Accounting

The Authority uses fund accounting to account for its financial resources and report the results of its operations. In fund accounting, accounts are organized based on 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. 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 to fund these costs 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 capital projects, rather than for a single fiscal year. The Capital Projects Fund accounts for system-wide, water, and wastewater capital projects that are appropriated in the capital budget. Funding sources include transfers from the Operating Fund, proceeds from the issuance of debt obligations, grant revenues, and contributions from third parties through cost-sharing agreements.

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.

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 board-adopted policies.

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 progresses and is a primary communication tool of the budget process. The Authority's budget calendar must adhere to the following requirements detailed in NC General Statute 159-8.

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.

The development of the annual operating budget begins when the Finance Department distributes departmental budget request forms and communicates instructions for the annual budget process. Departmental budget requests detail the operating and discretionary salary line items necessary to execute departmental objectives and meet performance indicator targets. After submission, meetings are held with each department to review each departmental budget request and make adjustments as appropriate. Non-discretionary salary line items are separately forecasted by the Finance Department. The proposed operating budget is reviewed by the Finance Committee and the full Board in March through May. Changes are made based on these deliberations.

The development of the capital budget involves a risk-based prioritization process based on asset management best practices that results in the 10-Year Capital Improvement Plan. This plan is reviewed by the Finance Department to identify funding sources and ensure that the plan is consistent with CFPUA's financial policies and that key financial metrics will continue to be achieved. The proposed 10-Year Capital Improvement plan is reviewed by the Long-Range Planning Committee, Finance Committee, and the full Board in February through May. Changes are made based on these deliberations.

The Board adopts the annual operating and capital budgets in June.

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.

BUDGET PROCESS

- 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 board-adopted policies, 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 for by policy:

- Transfers of budget authority among appropriation lines in the Budget Ordinances require approval of the Chief Financial Officer 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 through an adopted budget ordinance.

BUDGET CALENDAR

Day/Date/Time	Event	Group
September 2018 – December 2018	Multi Departmental CIP Team Develops Draft FY20 CIP and Ten-Year CIP	Multi Departmental CIP Team
Wednesday, January 2, 2019 9:00 am IT Conference Room	Regular Finance Committee Meeting - Budget Calendar	Finance Committee
Wednesday, January 9, 2019 9:00 am NHC-Harrell Room	Regular Board Meeting - Budget Calendar	Authority Board
Thursday, January 24, 2019	FY20 CIP Draft Budget to LRPC	Engineering/LRPC
Friday, February 1, 2019	Publish System Development Charge on CFPUA website for Public Comment	
Wednesday, February 6, 2019 9:00 am IT Conference Room	Regular Finance Committee Meeting	Finance Committee
Wednesday, February 13, 2019 Following Regular Board Meeting	Regular Board Meeting - FY20 CIP Board Workshop	Engineering/Authority Board
Friday, February 8, 2019	Employee Group and Business Insurance Estimates Due	Human Resources/Finance
Friday, February 15, 2019	New Position Requests due to HR	CFPUA Staff
Monday, February 18, 2019	Departmental Budgets Submitted to Finance by 5:00 pm Fee Schedule Review Submitted to Finance by 5:00 pm	CFPUA Staff CFPUA Staff
Thursday, February 28, 2019	Performance Evaluations Due to HR	Human Resources
Monday, March 4, 2019	Departmental Budget Reviews	ED/Finance
Wednesday, March 6, 2019 9:00 am IT Conference Room	Regular Finance Committee Meeting	Finance Committee
Wednesday, March 13, 2019 9:00 am NHC-Harrell Room	Regular Board Meeting	Authority Board
Monday, March 18, 2019	End of Public Comment Period for the System Development Charge	
Thursday, March 25, 2019	FY20 CIP Approval by LRPC	Engineering/LRPC
Wednesday, April 3, 2019 9:00 am IT Conference Room	Regular Finance Committee Meeting - Preliminary Rate Review - Preliminary Budget Review - Review SDC Calculation	Finance Committee
Wednesday, April 10, 2019 9:00 am NHC-Harrell Room	Regular Board Meeting/Public Hearing - Preliminary Rate Review - Public Hearing on SDC Calculation and Adoption of SDCs (if no revisions are needed) - Preliminary Budget Review - FY20 CIP Recommended for Approval	Authority Board
Wednesday, April 17, 2019 9:00 am IT Conference Room	Bi-monthly Finance Committee Meeting (OPTIONAL) - Preliminary Rate Review Continued - Preliminary Budget Review Continued	Finance Committee
Friday, April 19, 2019	Recommended Budget Completed	CFPUA Staff
Wednesday, May 1, 2019 9:00 am IT Conference Room	Regular Finance Committee Meeting - Recommended Budget Submitted - Review Revised System Development Charge (if necessary)	Finance Committee

BUDGET CALENDAR

Day/Date/Time	Event	Group
Wednesday, May 8, 2019 9:00 am NHC-Harrell Room	Regular Board Meeting - Recommended Budget Submitted - Review and Approve Revised System Development Charge (if necessary)	Authority Board
Wednesday, May 8, 2019 IT Conference Room (following Regular Board meeting)	Budget Workshop (including rates) - OPTIONAL	Authority Board
Wednesday, June 5, 2019 9:00 am IT Conference Room	Regular Finance Committee Meeting - Recommendation of Budget Adoption Submitted (including rates)	Finance Committee
Wednesday, June 12, 2019 9:00 am NHC-Harrell Room	Regular Board Meeting/Public Hearing - Budget Adoption (including rates)	Authority Board

FINANCIAL POLICIES

Policies that affect the Authority's long-term financial sustainability are adopted by the Board. These policies are periodically reviewed. These policies are summarized below.

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.
- Operating appropriations lapse at the end of each fiscal year and are controlled at the department and expenditure category level. Capital appropriations do not lapse at the end of each fiscal year and are controlled at the project level.

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 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%, consistent with target debt coverage and expected long-term borrowing costs.

Unrestricted Fund Balance and One-time Revenues

- The Authority periodically evaluates the targeted level of unrestricted fund balance that is needed to maintain sufficient liquidity for working capital needs and to provide for a reserve for unanticipated expenditures and/or revenue shortfalls that is tailored to the specific business risks relevant to the Authority's operations. The Authority's current unrestricted fund balance target is \$50 million.
- The Authority is precluded from using "one-time" revenues, including operating surpluses generated in prior years, to fund recurring expenditures. After the end of each fiscal year, operating surpluses are identified and designated through Board action for the early retirement of debt, the accumulation of capital reserves, the payment of post-retirement healthcare benefits, or to remain as unrestricted fund balance available to fund future non-recurring expenditures.

FINANCIAL POLICIES

Revenues

The Authority sets rates and charges in accordance with North Carolina General Statute 162A-9. Water and wastewater rates consist of fixed and volumetric charges. Fixed charges are based on the greater of annual debt service requirements or 35% of the operating budget. Volumetric charges are established to fund all operating costs less the estimated fixed charges, system development charges, and other revenues.

Investments

- The Authority is empowered to invest in types of securities in accordance with North Carolina General Statute 159-30 (c).
- The Authority prepares detailed cash flow forecasts to maximize the amount and maturity of investments to optimize investment returns.
- 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 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.

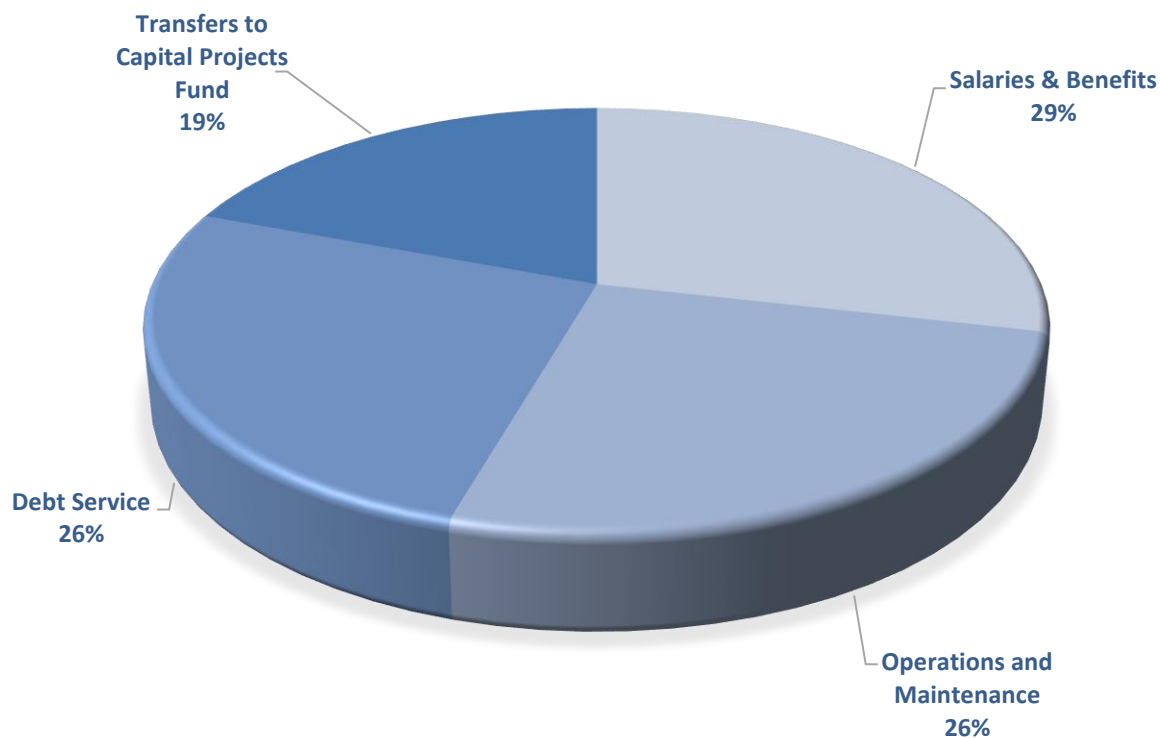
Long-term Financial Planning

In order to plan and demonstrate the Authority's long-term operational and financial sustainability, the Authority is required to annually prepare a long-term financial plan which incorporates long-term capital expenditure plans and projected operating costs constrained by the Authority's debt and revenue policies. The long-term financial plan is an iterative, multi-departmental process that seeks to balance efficient and effective service delivery, sufficient capital investment, the Authority's financial health, and rate affordability.

EXPENDITURE SUMMARY

The Authority's operating budget covers the cost to operate the system each year including water and wastewater treatment, water distribution, wastewater collection, system maintenance, environmental management, engineering, customer service, and administration. Appropriations in the operating budget are made on an annual basis meaning that budget authority lapses at the end of each fiscal year. This contrasts with the capital budget in which specific project appropriations continue through the life of the project, which may span multiple fiscal years. The FY 19-20 operating budget is \$85,554,722, an increase of 4.6% compared to the adopted FY 18-19 operating budget. The information below summarizes the major expenditure categories and some of the key factors and assumptions driving the FY 19-20 operating budget.

Fiscal Year 2019-2020 Expenditures by Type



Salaries and Benefits

Salaries and benefits costs related to the Authority's employees and retirees budgeted for FY 19-20 are approximately \$24.4 million, which makes up 29% of the Authority's operating budget. The following chart details the Authority's staffing trends over the upcoming budget year and the previous two years. The FY 19-20 budget authorizes a total of 317.75 full-time equivalent (FTE) positions, an increase of 4 FTEs from the FY 18-19 adopted budget.

EXPENDITURE SUMMARY

Authorized Full-time Equivalent Positions by Fiscal Year

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>
Administration	4.00	3.00	4.00
Finance	12.00	12.00	12.00
Human Resources	4.00	4.00	4.00
Public Environmental Policy	-	3.00	3.00
Engineering	27.00	27.00	27.00
Information Technology	7.00	9.00	9.00
Operations - Administration	3.00	3.00	4.00
Operations - Centralized Maintenance	21.00	21.00	21.00
Operations - Utility Services, Collections/Distribution	90.00	90.00	91.00
Operations - Wastewater Treatment	29.00	29.00	29.00
Operations - Water Treatment	26.00	27.00	27.00
Environmental Management/Safety	29.50	28.75	29.75
Customer Service/Meters	54.00	57.00	57.00
Total	306.50	313.75	317.75

The following table details the change in individual salary and benefits line items compared to the adopted FY 18-19 operating budget.

	<u>FY19 Adopted</u>	<u>FY20 Proposed</u>	<u>Increase/ (Decrease)</u>	<u>%Difference</u>
Regular Salaries & Wages	\$ 15,868,301	\$ 16,953,124	\$ 1,084,823	6.8%
Health/Dental Insurance	3,116,031	3,042,277	\$ (73,754)	-2.4%
LGERS Pension Contribution	1,278,265	1,584,670	\$ 306,405	24.0%
FICA - Social Security	991,538	1,059,852	\$ 68,314	6.9%
Overtime	521,075	660,837	\$ 139,762	26.8%
401k Matching Contribution	603,647	649,922	\$ 46,275	7.7%
FICA - Medicare	231,900	247,888	\$ 15,988	6.9%
Standby	170,079	164,520	\$ (5,559)	-3.3%
Life/AD&D Insurance	40,836	40,840	\$ 4	0.0%
Long-term Disability	21,406	22,458	\$ 1,052	4.9%
License/Certification Incentives	11,000	10,400	\$ (600)	-5.5%
Premium Pay	6,000	5,000	\$ (1,000)	-16.7%
Miscellaneous	4,800	4,800	\$ -	0.0%
Total	\$ 22,864,878	\$ 24,446,588	\$ 1,581,710	6.9%

EXPENDITURE SUMMARY

Regular salaries and wages increased by 6.8% due to the 4 newly authorized full-time equivalent positions along with a 1.5% market cost-of-living adjustments for all positions and 2.5% merit increases for certain employees. The four newly authorized FTEs consist of the following:

- Water Control Operator (1 FTE) at the Richardson Water Treatment Plant to allow multiple operators to be on-site during normal shift periods, allowing assignment of work that requires multiple staff to complete safely.
- Utility Locator (1 FTE) within Utility services to ensure the timely completion of the increasing volume of utility locate requests.
- Assistant Public Information Officer (1 FTE) to provide support for the Authority's public communications.
- Environmental Compliance Officer (1 FTE) in Environmental Management/Safety to assist with the increased volume of backflow inspections and record management due to system growth and to ensure compliance with increased regulation of contamination from cross connections.

Budgeted overtime increased 26.8% largely due to increases in Utility Services to conform to the actual hours needed to ensure timely completion of the increasing volume of utility locates and in Customer Service for staff training upon go-live of the new customer information system that is scheduled to occur on weekends in order to not disrupt service delivery during regular work hours. The increases in regular salaries and wages and overtime resulted in commensurate increases in amounts budgeted for FICA taxes and 401(k) matching contributions. In addition to the increases in regular salaries and wages and overtime, required employer contributions to the North Carolina Local Government Employees Retirement System increased from 7.75% to 8.95% of covered payroll resulting in an overall increase of 24.0% compared to the FY 18-19 adopted budget. Despite an assumed composite 4% increase in North Carolina state health plan premiums for active employees (effective January 1, 2020), budgeted expenditures for health and dental benefits decreased from the prior year's adopted budget. The decrease is mainly attributable to a decrease in amounts budgeted for post-employment health insurance benefits for retirees.

Operations and Maintenance

Operations and maintenance 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. Operations and maintenance budgeted for FY 19-20 total approximately \$22.2 million, an increase of 16.7% from the FY 18-19 adopted budget. Budgeted operations and maintenance costs include \$2,166,358 related to PFAS including \$454,000 for legal costs; \$212,358 for sampling and testing of surface and ground water, finished water, and biosolids; and a \$1.5 million increase in cost related to the disposal of biosolids. The FY 19-20 budget does not include the cost of replacing filter media at the Sweeney Water

EXPENDITURE SUMMARY

Treatment Plant to reduce levels of PFAS in finished drinking water. Instead, these costs are funded through the capital budget.

The table below details changes in budgeted operating expenditures by department.

	FY19 Adopted	FY20 Proposed	Increase/ (Decrease)	%Difference
Wastewater Treatment	2,391,940	4,050,942	1,659,002	69.4%
Utility Services	\$ 3,582,585	\$ 4,145,129	\$ 562,544	15.7%
Information Technology	1,586,836	2,065,407	478,571	30.2%
Customer Service	844,917	1,093,338	248,421	29.4%
Environmental Management	644,345	820,229	175,884	27.3%
Non-departmental	1,968,810	2,052,774	83,964	4.3%
Centralized Maintenance	1,412,692	1,496,040	83,348	5.9%
Human Resources	129,375	152,452	23,077	17.8%
Public & Environmental Policy	16,702	32,196	15,494	92.8%
Operations Administration	13,972	19,762	5,790	41.4%
Authority Board	25,951	24,299	(1,652)	-6.4%
Finance	151,732	145,159	(6,573)	-4.3%
Water Treatment	5,297,427	5,276,200	(21,227)	-0.4%
Engineering	223,957	162,918	(61,039)	-27.3%
Administration	724,427	645,807	(78,620)	-10.9%
	<u>\$ 19,015,668</u>	<u>\$ 22,182,652</u>	<u>\$ 3,166,984</u>	<u>16.7%</u>

Significant increases in operations and maintenance expenditures from the FY 18-19 adopted budget by department are as follows:

- Wastewater Treatment – In the past, CFPUA has transported biosolid residuals from the water and wastewater treatment process to be applied to farm land in the surrounding counties. Due to the presence of PFAS in biosolids, CFPUA will transport this material to a land fill which will cost approximately \$1.5 million more than land application.
- Utility Services
 - Amounts related to asphalt for street cuts. The City of Wilmington has set a maximum area that they will cover. Asphalt for areas that exceed the maximum must be completed by a competitively selected contractor. The pricing contained in the contract is substantially more than the City's rates.
 - Amounts related to scheduled replacement of air release valves and other water line parts.
 - An anticipated 7% increase in the odor control and corrosion protection service contract costs.
 - Scheduled demolition and replacement costs of 3 small, wooden pump stations.
- Information Technology
 - Increases in software licenses due to the planned overlap of SunGard and D365 during the fiscal year

EXPENDITURE SUMMARY

- Increases in a licensing agreement for virtual connections to enhance cybersecurity and reduce the risk of data breaches and intrusions.
- Customer Service
 - Amounts related to replacing broken and stuck meters that were funded from the capital program in FY 18-19
 - Amounts for reconfiguring the customer service space
- Environmental Management - Amounts related to increased sampling of source water, finished water, and biosolids related to PFAS.
- Non-departmental - Due to scheduled increases in lease rental expenditures and liability insurance premiums.
- Centralized Maintenance - Increases in contract prices for landscaping, membrane roof cleaning, annual boiler servicing, and tree & vegetation removal.

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 assumed 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 debt management policies are designed to maintain coverage of at least 1.6 times the annual debt service requirement. In addition, this policy provides that the Authority cannot 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 plans to issue approximately \$70 million in revenue bonds in FY 19-20 largely to fund surface water treatment enhancements to reduce the levels of PFAS in finished water and the Authority's portion of a new raw surface water transmission main. Through the use of capital reserve funds and the structure of the debt, principal and interest related to this debt issuance will not become due, and will not be reflected in water rates, until the water treatment enhancements become operational in FY 21-22. Therefore, the FY 19-20 budget does not include debt service related to this planned issuance.

The following chart compares the budgeted debt service in FY 19-20 to the FY 18-19 adopted budget:

	FY19 Adopted	FY20 Proposed	Increase/ (Decrease)	%Difference
Water and Sewer Rate Revenue Bonds	\$ 21,023,165	\$ 19,568,765	\$ (1,454,400)	-6.9%
Debt Assumed from New Hanover County	1,439,350	1,383,450	(55,900)	-3.9%
State Revolving Loans	716,403	1,473,267	756,864	105.6%
Total	\$ 23,178,918	\$ 22,425,482	\$ (753,436)	-3.3%

EXPENDITURE SUMMARY

The debt service appropriation for the FY 19-20 budget is \$22.4 million, a decrease of 3.3% compared to the FY 18-19 adopted budget. The decrease reflects declining principal and interest payments related to the Authority's revenue bonds and limited obligation bonds assumed from New Hanover County of \$1.5 million. This decrease is largely offset with an increase in principal and interest payments of Clean Water State Revolving Loans related to four sewer rehabilitation projects. FY 19-20 principal payments total \$12.5 million and interest payments total \$9.9 million.

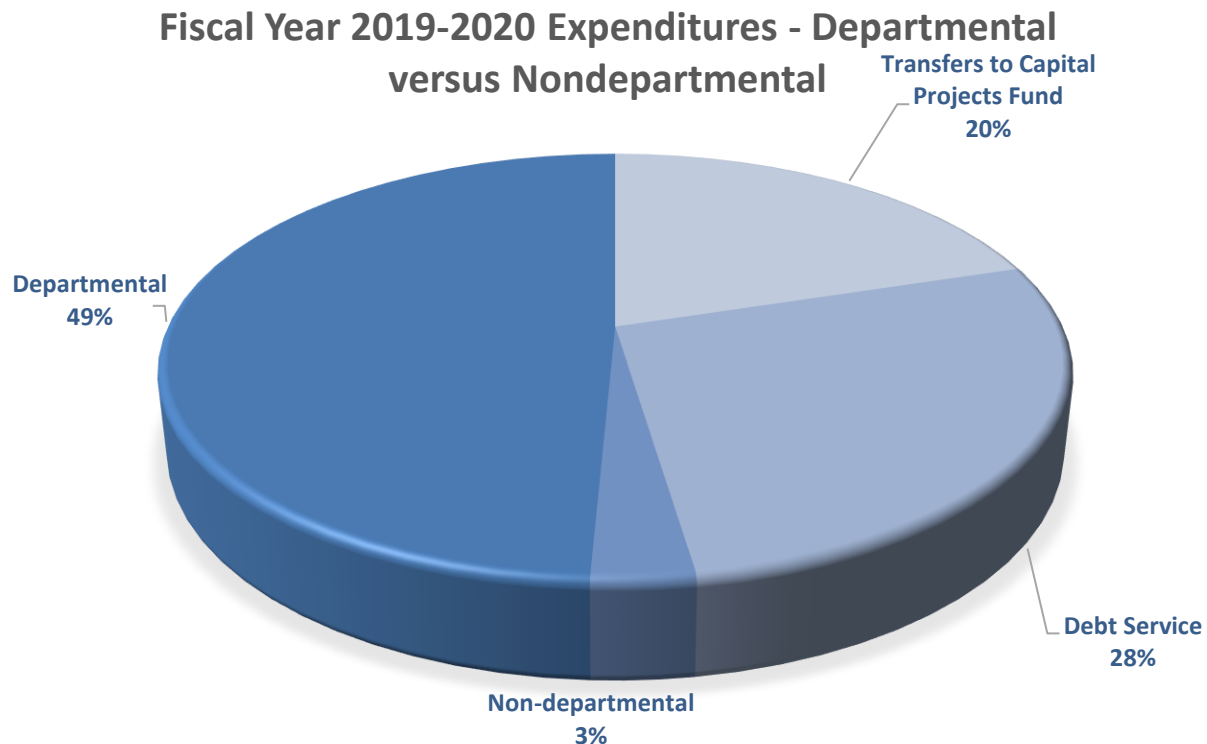
Debt service coverage is project to be 1.78 times the FY 19-20 debt service requirement and maintain outstanding debt balances at 41.9% of capital assets, or an additional \$22.7 million in debt issuance capacity. The Authority maintains credit ratings of AA+ and Aa2 from Standard & Poor's and Moody's, respectively. Both ratings are one level below the highest possible ratings.

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 in FY 16-17, transfers were planned to gradually increase until an annual target of \$18.0 million was projected to be achieved in FY 22-23. Due to growth in customers that outpaced original projections, revenues were projected to be sufficient to fund the \$18.0 million target without an increase in rates. However, due to projected increases in the cost of biosolids disposal of approximately \$1.5 million, the Authority has chosen to fund this increase through reductions in its capital program. Therefore, transfers to capital projects funds are \$16.5 million.

DEPARTMENTAL SUMMARIES

As the chart below shows, 49% of the FY 19-20 budget is controlled by the Authority's various departments including salaries and benefits and operational costs to execute the Strategic Plan. The remaining 51% are not controlled by individual departments and include transfers to the capital projects fund, debt service, and various overhead expenditures that aren't attributable to a specific department such as expenditures for rent and insurance.



AUTHORITY BOARD

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, among other things, adopting the annual budget, setting water and sewer rates, making policy decisions, managing the Executive Director, and contracting with the Authority's Legal Counsel.

The Authority Board budget for FY 19-20 is \$63,058, or .07% of the total FY 19-20 operating budget. Of the total departmental budget, \$38,759 (or 61.5%) is budgeted to pay monthly stipends for the Board's 11 members. The remaining \$24,299 (or 38.5%) is budgeted for various expenditures including costs to broadcast Board meetings, advertise public hearings, and cell phone and tablet stipends.

DEPARTMENTAL SUMMARIES

ADMINISTRATION

The Administration Department consists of the Executive Director, Public Information Officer, Assistant Public Information Officer, and Clerk to the Board. The Executive Director serves at the pleasure of the Board and is responsible for executing the Board's strategic vision, policies, and objectives. The Public Information Officer and Assistant Public Information Officer are responsible for keeping customers and other key stakeholders, including the news media, informed about CFPUA's activities and issues affecting customers and the region. They also support departments with outreach to customers affected by scheduled construction projects or by providing emergency response assistance.

The Administration Department budget for FY 19-20 is \$1,189,981, or 1.39% of the total FY 19-20 operating budget. Of the total departmental budget, \$544,174 (or 45.7%) is budgeted to pay salaries and benefits for the department's 4 full-time equivalent positions. The remaining \$645,807 (or 54.3%) is budgeted for various expenditures including \$605,000 for legal costs including those related to PFAS.

FINANCE

The Finance Department is responsible for the following:

- developing and recommending financial policies that facilitate the fiscal sustainability of the organization and developing and executing budgets and financial plans in accordance with these policies including rate development, debt issuance, and the investment of public funds;
- supporting organization-wide operations through the timely, accurate payment of vendors, employees, and other parties; managing the procurement of goods and services; budget management; and enterprise resource planning system support;
- communicating financial information to stakeholders including customers, the Board, credit rating agencies, the development community, and governmental partners.

The Finance Department budget for FY 19-20 is \$1,268,232, or 1.48% of the total FY 19-20 operating budget. Of the total departmental budget, \$1,123,073 (or 88.6%) is budgeted to pay salaries and benefits for the department's 12 full-time equivalent positions. The remaining \$145,159 (or 11.4%) is budgeted for various expenditures including the cost of the annual financial audit, financial advisors/consultants, and professional development.

HUMAN RESOURCES

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.

DEPARTMENTAL SUMMARIES

The Human Resources Department budget for FY 19-20 is \$602,049 or .70% of the total FY 19-20 operating budget. Of the total departmental budget, \$449,597 (or 74.7%) is budgeted to pay salaries and benefits for the department's 4 full-time equivalent positions. The remaining \$152,452 (or 25.3%) is budgeted for various expenditures including costs related to insurance brokerage services for employee benefits, worker's compensation claims administration, organizational training, employee recognition and education assistance, and advertisement of position vacancies.

PUBLIC & ENVIRONMENTAL POLICY

The Public and Environmental Policy Department consists of the Director, the Public and Environmental Policy Specialist and the Environmental Data Analyst. The mission of the Public and Environmental Policy Department is to ensure that CFPUA contributes to the long-term sustainability of Wilmington and New Hanover County. The department helps create strategic environmental and public policy goals and assists other departments in implementing and maintaining programs to meet them.

The department provides white papers, regulatory research, data analysis and educational materials to help the organization monitor and improve its environmental and public policy initiatives. The department also conducts external outreach to customers, environmental groups, research organizations and local government, ensuring that CFPUA has stakeholder input and local expertise looped into our policies and programs.

The Public & Environmental Policy Department budget for FY 19-20 is \$304,045, or .36% of the total FY 19-20 operating budget. Of the total departmental budget, \$271,849 (or 89.4%) is budgeted to pay salaries and benefits for the department's 3 full-time equivalent positions. The remaining \$32,196 (or 10.6%) is budgeted for various expenditures including software licenses and training, printing for special educational materials, and various computer hardware.

INFORMATION TECHNOLOGY

The Information Technology Department 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 telephone systems. In addition, the Information Technology Department is responsible for the Authority's technology security, the website, closed-circuit television (CCTV), and network security across the organization.

The Information Technology Department budget for FY 19-20 is \$2,972,746, or 3.47% of the total FY 19-20 operating budget. Of the total departmental budget, \$907,339 (or 30.5%) is budgeted to pay salaries and benefits for the department's 9 full-time equivalent positions. The remaining \$2,065,407 (or 69.5%) is budgeted for various expenditures including the cost of software licenses, scheduled replacement of

DEPARTMENTAL SUMMARIES

computers, data connection services, regular maintenance on the Authority's SCADA system, and costs related to transition to new ERP software.

ENGINEERING

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 Engineering Department budget for FY 19-20 is \$2,740,896, or 3.20% of the total FY 19-20 operating budget. Of the total departmental budget, \$2,577,978 (or 94.1%) is budgeted to pay salaries and benefits for the department's 27 full-time equivalent positions. The remaining \$162,918 (or 5.9%) is budgeted for various expenditures including the cost of updates to the Authority's construction specifications and CIP database maintenance.

OPERATIONS – ADMINISTRATION

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, and centralized maintenance. The department is responsible for regulatory compliance of the various utility systems and providing outstanding water and sewer service to our customers. The Department continues its efforts to minimize sanitary sewer overflows (SSOs), improve water quality, and improve response to critical events that can damage infrastructure or the environment.

The Operations - Administration budget for FY 19-20 is \$396,515, or .46% of the total FY 19-20 operating budget. Of the total departmental budget, \$376,753 (or 95%) is budgeted to pay salaries and benefits for the department's 3 full-time equivalent positions. The remaining \$19,762 (or 5%) is budgeted for various expenditures including cell phone stipends, dues and subscriptions, and office supplies.

OPERATIONS – CENTRALIZED MAINTENANCE

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 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 approach

DEPARTMENTAL SUMMARIES

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.

The Operations – Centralized Maintenance budget for FY 19-20 is \$2,945,577, or 3.44% of the total FY 19-20 operating budget. Of the total division budget, \$1,449,537 (or 49.2%) is budgeted to pay salaries and benefits for the division's 21 full-time equivalent positions. The remaining \$1,496,040 (or 50.8%) is budgeted for various expenditures including contracted services for fleet and equipment maintenance, landscaping, and materials costs for various plant and facilities maintenance.

OPERATIONS – UTILITY SERVICES

Operations – Utility Services consists of the Collection System Operations and Maintenance Division and the Construction and Water Distribution Division. The Collection System Operations and Maintenance Division maintains the collection systems through regular inspection and cleaning of gravity lines, maintains outfalls, and operates and maintains 142 pump stations. These duties help reduce the frequency and volume of sanitary sewer overflows (SSOs). The Construction and Water Distribution Division repairs breaks to lines, performs locate services, and ensures water quality through regular line flushing.

The Operations – Utility Services budget for FY 19-20 is \$10,375,303, or 12.13% of the total FY 19-20 operating budget. Of the total division budget, \$6,230,174 (or 60%) is budgeted to pay salaries and benefits for the division's 91 full-time equivalent positions. The remaining \$4,145,129 (or 40%) is budgeted for various expenditures including contracted service for odor and corrosion control and root control, pump replacement, electricity for pump stations, fuel for service vehicles and generators, materials costs for line and pump station repairs, maintenance costs for CCTV inspection equipment, and contracted surveying and clearing services for right-of-way maintenance.

OPERATIONS – WATER TREATMENT

The Water Treatment Division processes source water from the Cape Fear River and confined aquifers 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.

The Operations – Water Treatment budget for FY 19-20 is \$7,429,552, or 8.68% of the total FY 19-20 operating budget. Of the total division budget, \$2,153,352 (or 29%) is budgeted to pay salaries and benefits for the division's 27 full-time equivalent positions. The remaining \$5,276,200 (or 71%) is budgeted for various expenditures including electricity and chemicals used in the treatment process, the

DEPARTMENTAL SUMMARIES

purchase of raw water, residuals disposal, maintenance and instrumentation contracts, plant maintenance, and equipment replacement.

OPERATIONS – WASTEWATER TREATMENT

The Wastewater Treatment Division manages the operation and maintenance of the Authority's two wastewater treatment plants (WWTPs): Northside (NSWWTP) and Southside (SSWWTP). 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 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.

The Operations – Wastewater Treatment budget for FY 19-20 is \$6,060,426, or 7.08% of the total FY 19-20 operating budget. Of the total division budget, \$2,009,484 (or 33.2%) is budgeted to pay salaries and benefits for the division's 29 full-time equivalent positions. The remaining \$4,050,942 (or 66.8%) is budgeted for various expenditures including electricity and chemicals used in the treatment process, the disposal of wastewater residuals, plant maintenance, and equipment replacement.

ENVIRONMENTAL MANAGEMENT/SAFETY

The Environmental and Safety Management Department supports the core mission of the Authority through operational and administrative activities of five divisions: Laboratory Services for Water, Laboratory Services for Wastewater, Community Compliance, Emergency Response and Security and Safety Management, and Environmental Management.

- Laboratory Services provides critical operational and compliance lab data daily to support operation of both the water and wastewater systems.
- Community Compliance ensures proper implementation of the Sewer Use and Cross Connection control ordinances to help prevent treatment disruptions at the wastewater treatment plants and eliminate sanitary sewer overflows. The oversight of the cross-connection program helps ensure

DEPARTMENTAL SUMMARIES

protection of public health and drinking water quality by minimizing system vulnerabilities that could allow system contamination.

- Emergency Response and Security Management works with staff in each department and other agencies to identify system threats and vulnerabilities and to develop and implement plans and training opportunities to mitigate and respond to risk.
- Environmental Management supports compliance efforts and activities to drive continual improvement and environmental stewardship. This area works with staff and other environmental agencies to formalize processes and programs, ensure training and perform compliance audits and identify opportunities for improvement. Safety Management works with staff and OSHA to ensure safe work practices meet or exceed safety requirements. These programs ensure staff are performing their work safely.

The Environmental Management/Safety Department budget for FY 19-20 is \$3,090,852 or 3.61% of the total FY 10-20 operating budget. Of the total departmental budget, \$2,270,623 (or 73.5%) is budgeted to pay salaries and benefits for the department's 29.75 full-time equivalent positions. The remaining \$820,229 (or 26.5%) is budgeted for various expenditures including the cost of chemicals and supplies for in-house lab testing, third party lab testing services, maintenance agreements on lab equipment, and employee safety training.

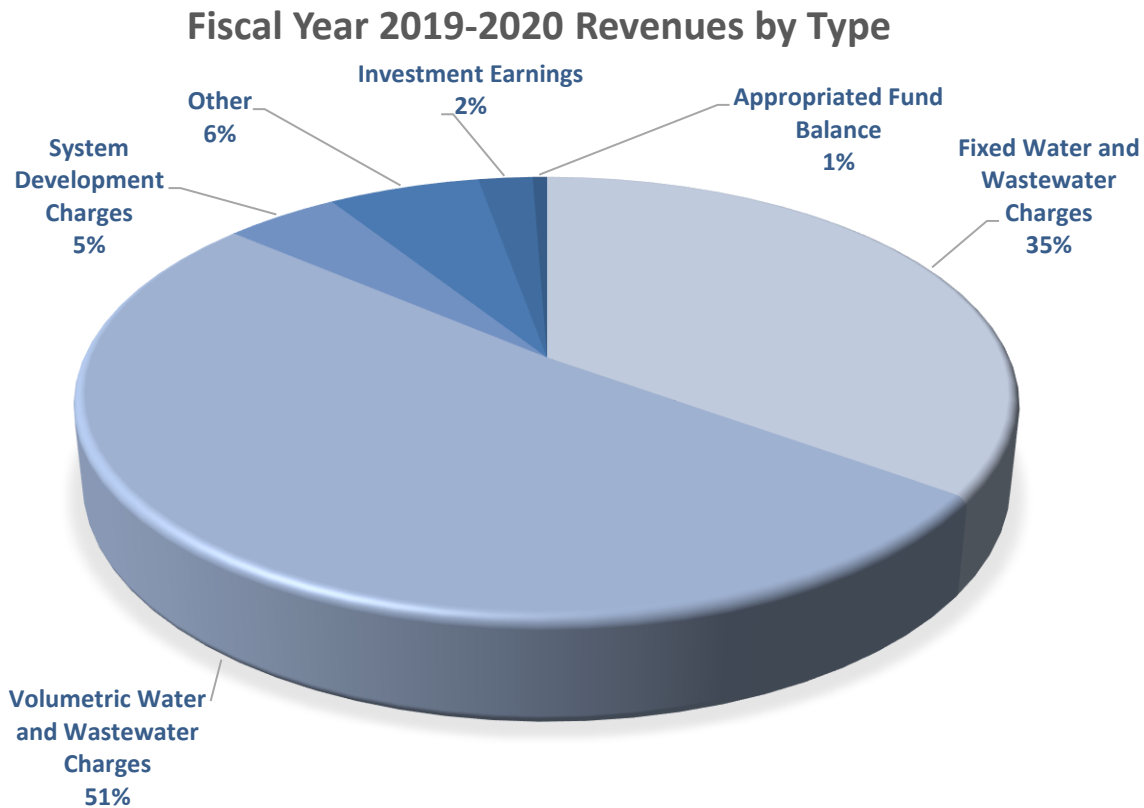
CUSTOMER SERVICE

The Customer Service Department is responsible for customer service related functions including reading and maintaining meter services, billing customer accounts, addressing customer concerns and collecting on customer accounts. In addition, Customer Service bills for miscellaneous receivables and processes payments for service through multiple payment channels. 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 provide an exceptional customer experience by meeting our customers' needs through timely response, effective service and managed financial costs.

The Customer Service Department budget for FY 19-20 is \$4,637,234, or 5.42% of the total FY 19-20 operating budget. Of the total departmental budget, \$3,543,896 (or 76.4%) is budgeted to pay salaries and benefits for the department's 57 full-time equivalent positions. The remaining \$1,093,338 (or 23.6%) is budgeted for various expenditures including contracted services for utility bill printing and mailing, materials to repair/replace water meters, licenses for automatic meter reading software, fuel for meter reading vehicles, fees to third-party collections agencies, and annual fees for the interactive voice response system.

REVENUE SUMMARY

The Authority sets rates, fees and charges with oversight, supervision, and approval from the Board. The Authority's operations, capital improvement program and debt payments are funded almost entirely through rates, fees and other charges for water and wastewater services, with occasional grants from the state or federal government and contributions from the City of Wilmington, New Hanover County or other governmental and nongovernmental entities.



Water and Wastewater Fixed and Volumetric Charges

Most of the Authority's revenues (86%) are generated from rate revenues for water and wastewater service. Rates are composed of fixed and volumetric portions. Fixed charges represent the minimum amount a customer will pay regardless of usage. The volumetric component charges a cost per 1,000 gallons of usage. As shown above, in FY 19-20, 51% of total budgeted revenue are from volumetric charges and 35% of total budgeted revenue are from fixed charges. Fixed charges are estimated to total \$29.9 million (\$14.8 million from water and \$15.1 million from wastewater), a 1.8% increase from the FY 18-19 adopted budget. Volumetric revenues are anticipated to total \$43.9 million (\$21.6 million from water and \$22.3 million from wastewater), a 3.1% increase from the FY 18-19 adopted budget. The increases in budgeted fixed and volumetric charges do not include increases to rates. Rather, the increases are

REVENUE SUMMARY

attributable to increases in the number of equivalent residential units and usage per equivalent residential unit compared to the FY 18-19 adopted budget.

Water and wastewater fixed charges are developed to recover the greater of debt service due during the year or 35% of the operating budget. This policy exists for two reasons: 1) to guarantee that sufficient amounts are available to pay debt service irrespective of usage and 2) in periods in which annual debt service requirements are declining, to ensure that the Authority's revenues are insulated from significant decreases in water and wastewater usage.

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 active accounts as if each customer were a residential customer. ERUs assumed for the FY 19-20 budget are based on current actual ERUs. The table below compares the ERU assumptions and fixed charge revenues in the FY 18-19 and FY 19-20 budgets.

	FY19 Adopted	FY20 Proposed	Increase/ (Decrease)	% Difference
Assumed ERUs - Water	88,000	89,700	1,700	1.9%
Bimonthly Fixed Water Charge	\$ 27.56	\$ 27.56	\$ -	0.0%
Total Fixed Charges Water	\$ 14,551,680	\$ 14,832,792	\$ 281,112.00	1.9%
Assumed ERUs - Wastewater	85,000	86,500	1,500	1.8%
Bimonthly Fixed Wastewater Charge	\$ 29.10	\$ 29.10	\$ -	0.0%
Total Fixed Charges Wastewater	\$ 14,841,000	\$ 15,102,900	\$ 261,900	1.8%
Total Fixed Charges	\$ 29,392,680	\$ 29,935,692	\$ 543,012	1.8%

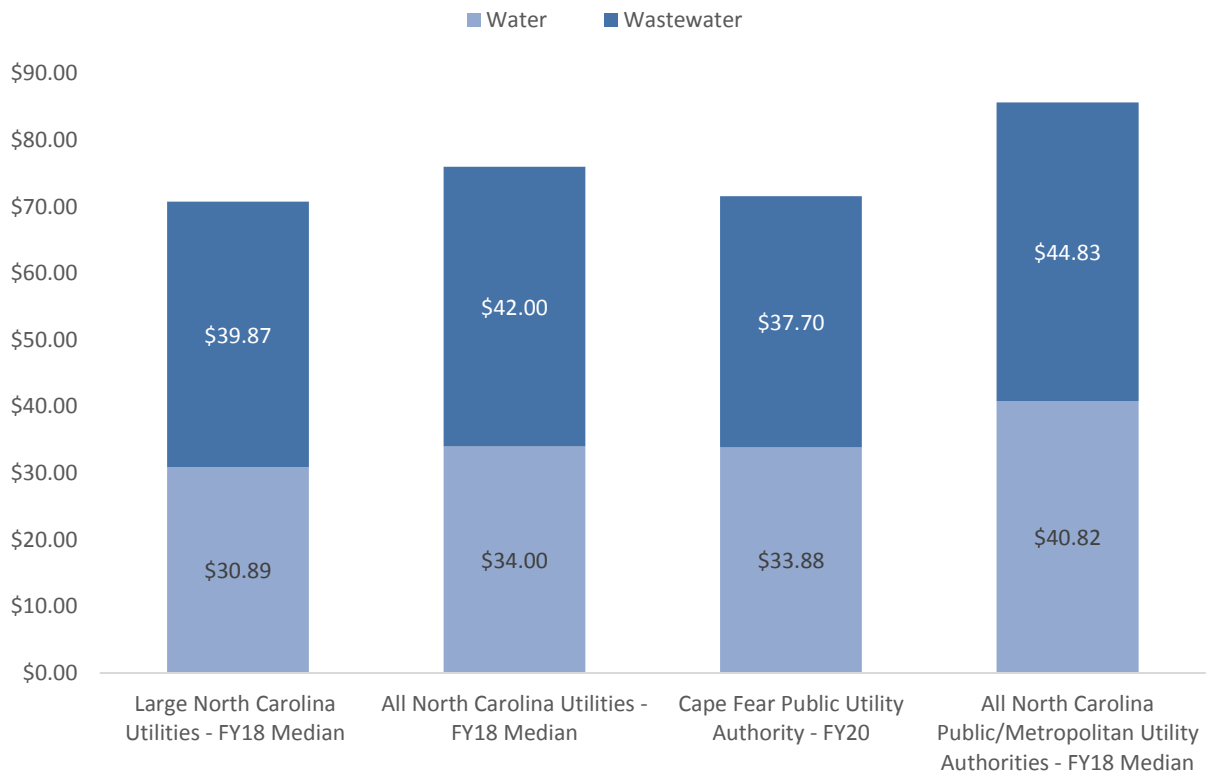
The volumetric charge utilizes a uniform rate structure such that the rate per 1,000 gallons remains constant for all levels of usage. Volumetric charges are developed to recover operating costs allocated to water and wastewater, respectively, that aren't recovered from fixed charges and other revenues. The remaining allocated cost pools for water and wastewater are divided by projected water and wastewater usage. Usage projections for FY 19-20 are equal to actual FY 18-19 usage projected through the end of fiscal year. The table below compares the usage assumptions and volumetric charge revenues in the FY 18-19 and FY 19-20 budgets.

	FY19 Adopted	FY20 Proposed	Increase/ (Decrease)	% Difference
Assumed Annual Usage - Water (TGal)	5,194,766	5,375,646	180,880	3.5%
Volumetric Charge - Water	\$ 4.02	\$ 4.02	\$ -	0.0%
Total Volumetric Charges - Water	\$ 20,882,958	\$ 21,610,097	\$ 727,139	3.5%
Assumed Annual Usage - Wastewater (Tgal)	4,682,223	4,812,134	129,911	2.8%
Volumetric Charge - Wastewater	\$ 4.63	\$ 4.63	\$ -	0.0%
Total Volumetric Charges - Wastewater	\$ 21,678,691	\$ 22,280,179	\$ 601,488	2.8%
Total Volumetric Charges	\$ 42,561,649	\$ 43,890,276	\$ 1,328,626	3.1%

REVENUE SUMMARY

The Authority's water and wastewater rates remain at or below the median rates within North Carolina. Assuming monthly usage of 5,000 gallons, a residential customer will pay \$71.58 per month (\$143.16 every two months) in FY 19-20. The graph below compares the Authority's monthly residential water and wastewater bills to those of other North Carolina public water and wastewater utilities in effect for FY 17-18. Although the Authority bills customers every two months, monthly bill amounts were calculated for purposes of comparability.

Median Monthly Residential Water and Sewer Bill



Source: Environmental Finance Center, *Water and Wastewater Rates and Rate Structures in North Carolina, 2018*

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 17-18. The amounts presented for the Authority are based on rates for FY 19-20. 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 1.2% higher than the median bill for large North Carolina Utilities. The Authority's monthly

REVENUE SUMMARY

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 public water and wastewater utilities.

System Development Charges

The system development charge (SDC) is the upfront contribution that a new customer pays to buy into infrastructure that will benefit the new customer that has been paid for with past rate collections. The SDC calculation consists of two parts: 1) quantifying the value of infrastructure paid for by current and past rate payers that will benefit new customers (i.e. rate payer equity) and 2) allocating rate payer equity to existing and new customers. Rate payer equity is calculated by reducing the depreciated value of infrastructure by amounts that were not paid by past rate payers including the outstanding balance of debt issued to acquire or construct the infrastructure, conveyed infrastructure, grant funding, and cash contributions from developers and governmental entities. Rate payer equity is then 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 projected for water and sewer for the upcoming fiscal year.

Total SDC revenues are mainly a function of new development and the extent to which capital investments have been funded by rate payers. The table below presents the adopted SDCs (for 5/8" meters) for FY 18-19 and FY 19-20:

	FY19 Adopted	FY20 Adopted	Increase/ (Decrease)	% Difference
System Development Charge - Water	\$ 1,830	\$ 1,880	\$ 50	2.7%
System Development Charge - Wastewater	\$ 1,800	\$ 1,930	\$ 130	7.2%

The increases in the adopted SDC charges are a direct result of the adoption of revisions to the Authority's debt management policy. These revisions have increased the proportion of cumulative capital investments that are funded on a pay-as-you-go basis and consequently increased rate payer equity. Despite these increases, total SDC revenues in FY 19-20 are forecasted to be \$4.0 million (or 5% of total estimated revenues for FY 19-20), a decrease of \$200,000 from the FY 18-19 adopted budget. The overall decrease is attributable to an expected drop in new development compared to FY 18-19 suggested by leading indicators such as requests for information and plan inspections.

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. Other charges for FY 19-20 are \$5.3 million, an increase of

REVENUE SUMMARY

approximately \$1.0 million from the FY 18-19 budget. The increase is due to an increase in the amounts budgeted for charges for wastewater-only customers and sales of capital assets.

Investment Earnings

Investment earnings are budgeted at \$1.9 million in FY 19-20 which is approximately 2% of total budgeted revenue. As available cash and investment balances are spent down to fund the capital program in accordance with the Authority's liquidity and reserve policies, maintaining investment earnings at levels experienced in previous fiscal years was identified as a risk factor that could put upward pressure on water and wastewater rates. The \$700,000 budgeted in FY 18-19 reflected this expected decline. To limit this risk, the Authority has implemented an investment management program designed to maximize the invested resources while maintaining adequate liquidity and maximize investment yields by maximizing investment maturities and expanding investment options to include all investments allowable under North Carolina General Statutes. Estimated investment earnings for FY 19-20 are based on a projected weighted average of available invested fund balance during the year and a 2.1% return on investments.

Appropriated Fund Balance

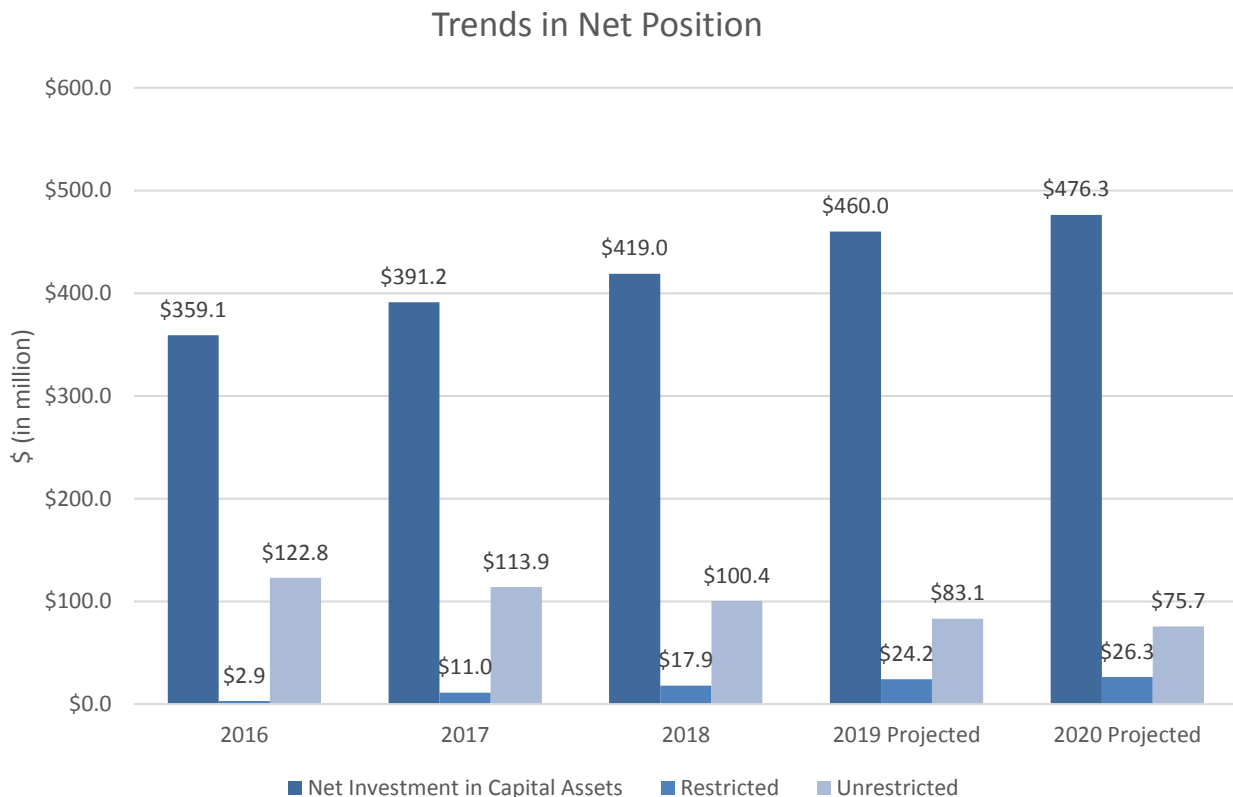
Upon inception of the Authority, the City of Wilmington and New Hanover County transferred funds that were explicitly designated for funding post-employment health insurance benefits to legacy employees. The FY 19-20 budget includes an estimated use of \$500,000 of appropriated fund balance to fund appropriations related to the provision of retiree health insurance benefits.

PROJECTED CHANGES IN NET POSITION

The Authority is 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. Net position 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.

Net position is composed of three components: 1) net investment in capital assets, 2) restricted net position, and 3) unrestricted net position. Net position in capital assets is the depreciated historical cost of system assets less the outstanding balance of debt used to acquire/construct those assets. Consequently, these amounts are not available to meet the Authority's ongoing obligations. Restricted net position consists of those resources that are restricted through law or by outside parties for a particular purpose. The Authority's remaining net position is unrestricted and can be used to satisfy the Authority's ongoing obligations including debt service, normal operating expenses, and for the acquisition of capital assets.

The following bar chart shows the components of the Authority's net position since FY 14-15 and projected through FY 19-20.



PROJECTED CHANGES IN NET POSITION

The chart on the opposite illustrates two main trends in the Authority's net position: a gradual increase in net investment in capital assets and a gradual decrease in unrestricted net position. Both trends are driven by the Authority's debt policy. Beginning in FY 17-18, the Authority began gradually increasing water and wastewater rates to increase pay-as-you-go funding for capital improvements. The increases to rates were a direct consequence of implementing revisions to the Authority's debt policy, which included the implementation of an explicit debt limit. As rates are gradually increased, unrestricted net position is available to be spent down to optimal levels to fully fund the Authority's capital improvement plan. Funding capital improvements more and more with current year revenues increases the net investment in capital assets component of net position over time. Funding capital improvements from existing reserves results in a decrease to unrestricted net position.

As a result, the Authority's net investment in capital assets is projected to increase to \$476.3 million and the Authority's unrestricted net position is projected to decrease to \$75.7 million by the end of FY 19-20. The Authority's restricted net position includes amounts restricted for debt service and amounts restricted by the Board for capital reserves. Amounts restricted for debt service are equal to $\frac{1}{6}^{\text{th}}$ of the Authority's next interest payment and $\frac{1}{12}^{\text{th}}$ of the Authority's next principal payment on its outstanding revenue bonds. Capital reserves are non-recurring revenues including operating surpluses that are restricted by the Board for capital projects that otherwise would have been funded with debt. Restricted net position is projected to increase to \$26.3 million due to increased debt service requirements attributable to the planned issuance of revenue bonds during FY 19-20.

Operating Budget Summary

	2017 Adjusted Budget	2017 Actual	2018 Adjusted Budget	2018 Actual	2019 Adopted Budget	2019 Amendments & Transfers	2019 Adjusted Budget	2020 Adopted Budget
APPROPRIATIONS								
Salaries & Benefits	\$ 20,255,705.00	\$ 19,559,711.55	\$ 21,461,510.00	\$ 20,780,009.05	\$ 22,864,878.00	\$ (125,000.00)	\$ 22,739,878.00	\$ 24,446,588.00
Operating Expenditures	19,041,652.00	17,079,764.52	19,138,654.00	17,473,823.36	19,015,668.00	864,260.00	19,879,928.00	22,182,652.00
Contingency	953,000.00	-	1,063.00	-	-	240,080.00	240,080.00	-
Debt Service & Issuance Costs	24,950,053.00	24,022,711.14	24,297,928.00	24,200,635.91	23,178,918.00	8,500.00	23,187,418.00	22,425,482.00
Payment to Refunded Bond Escrow Agent	-	-	33,960,000.00	32,729,049.60	-	-	-	-
Transfers to Capital Projects Funds	16,430,910.00	16,430,910.00	20,066,614.00	20,066,614.00	16,695,665.00	1,368,801.00	18,064,466.00	16,500,000.00
Total Appropriations	\$ 81,631,320.00	\$ 77,093,097.21	\$ 118,925,769.00	\$ 115,250,131.92	\$ 81,755,129.00	\$ 2,356,641.00	\$ 84,111,770.00	\$ 85,554,722.00
REVENUES								
Fixed Charges Revenues	\$ 27,215,000.00	\$ 25,751,349.75	\$ 28,221,790.00	\$ 29,055,359.80	\$ 29,392,680.00	-	\$ 29,392,680.00	\$ 29,935,692.00
Volumetric Charges	39,625,000.00	37,167,772.82	41,501,081.00	41,666,247.79	42,561,649.00	-	42,561,649.00	43,890,276.00
System Development Charges	3,600,000.00	6,277,464.35	4,062,000.00	6,014,920.21	4,200,000.00	-	4,200,000.00	4,000,000.00
Investment Earnings	434,000.00	652,859.00	700,000.00	1,570,176.96	700,000.00	565,000.00	1,265,000.00	1,902,000.00
Operating Grants	-	220,253.89	20,000.00	1,703,206.25	-	1,500,000.00	1,500,000.00	-
Appropriated Fund Balance	6,257,754.00	-	5,720,098.00	-	600,000.00	94,910.00	694,910.00	500,000.00
Sale of Capital Assets	-	92,022.55	-	152,212.80	-	127,930.00	127,930.00	384,000.00
Debt Proceeds	690,000.00	-	34,200,000.00	32,890,000.00	-	-	-	-
Other Revenues	3,809,566.00	6,469,749.70	4,500,800.00	5,509,048.41	4,300,800.00	68,801.00	4,369,601.00	4,942,754.00
Total Revenues	\$ 81,631,320.00	\$ 76,631,472.06	\$ 118,925,769.00	\$ 118,561,172.22	\$ 81,755,129.00	\$ 2,356,641.00	\$ 84,111,770.00	\$ 85,554,722.00
Revenues Over/(Under) Appropriations	-	\$ (461,625.15)	-	\$ 3,311,040.30	-	-	-	-

Statement of Revenues, Expenditures, & Changes in Fund Balance

	2017 Adjusted Budget	2017 Actual	2018 Adjusted Budget	2018 Actual	2019 Adopted Budget	2019 Amendments & Transfers	2019 Adjusted Budget	2020 Adopted Budget
REVENUES								
Water Revenues	\$ 31,063,342.00	\$ 29,625,368.46	\$ 33,736,230.00	\$ 34,419,838.31	\$ 35,434,638.00	-	\$ 35,434,638.00	\$ 36,442,889.00
Wastewater Revenues	34,053,524.00	32,918,776.10	35,986,641.00	36,301,769.28	36,519,691.00	-	36,519,691.00	37,383,079.00
Investment Earnings	434,000.00	652,859.00	700,000.00	1,570,176.96	700,000.00	565,000.00	1,265,000.00	1,902,000.00
System Development Charges	3,600,000.00	6,277,464.35	4,062,000.00	6,014,920.21	4,200,000.00	-	4,200,000.00	4,000,000.00
Other Revenues	5,532,700.00	7,064,981.60	4,520,800.00	7,212,254.66	4,300,800.00	1,568,801.00	5,869,601.00	4,942,754.00
TOTAL REVENUES	\$ 74,683,566.00	\$ 76,539,449.51	\$ 79,005,671.00	\$ 85,518,959.42	\$ 81,155,129.00	\$ 2,133,801.00	\$ 83,288,930.00	\$ 84,670,722.00
EXPENDITURES								
Authority Board	\$ 66,106.00	\$ 59,765.58	\$ 62,371.00	\$ 55,678.31	\$ 64,710.00	-	\$ 64,710.00	\$ 63,058.00
Administration	857,121.00	809,194.35	1,229,462.00	1,189,271.70	1,156,590.00	(67,500.00)	1,089,090.00	1,189,981.00
Finance	1,097,280.00	1,064,078.17	1,196,909.00	1,154,182.99	1,223,692.00	-	1,223,692.00	1,268,232.00
Human Resources	659,207.00	621,401.62	533,379.00	514,463.11	553,180.00	10,000.00	563,180.00	602,049.00
Public & Environmental Policy	-	-	81,055.00	74,311.76	283,723.00	35,000.00	318,723.00	304,045.00
Engineering	2,321,163.00	2,287,267.34	2,737,586.00	2,670,421.61	2,703,945.00	(45,000.00)	2,658,945.00	2,740,896.00
Information Technology	1,654,523.00	1,640,135.74	1,880,458.00	1,847,173.11	2,411,030.00	(50,000.00)	2,361,030.00	2,972,746.00
Operations - Administration	348,649.00	336,717.65	367,002.00	358,527.05	373,620.00	-	373,620.00	396,515.00
Operations - Centralized Maintenance	2,464,404.00	2,377,816.97	2,872,316.00	2,723,823.72	2,796,844.00	439,164.00	3,236,008.00	2,945,577.00
Operations - Water Treatment	6,834,163.00	6,388,620.17	7,175,024.00	6,541,755.92	7,163,778.00	137,340.00	7,301,118.00	7,429,552.00
Operations - Wastewater Treatment	3,937,545.00	3,791,694.65	4,043,517.00	3,816,740.17	4,304,456.00	192,681.00	4,497,137.00	6,060,426.00
Operations - Utility Services	9,902,694.00	8,662,732.42	9,227,530.00	8,686,076.25	9,389,317.00	106,290.00	9,495,607.00	10,375,303.00
Environmental Management	2,367,914.00	2,255,303.20	2,722,127.00	2,485,552.87	2,723,121.00	41,285.00	2,764,406.00	3,090,852.00
Customer Service	3,958,046.00	3,619,730.92	4,025,849.00	3,827,988.41	4,163,730.00	(10,000.00)	4,153,730.00	4,637,234.00
Damage Claims	50,000.00	(369.76)	-	-	-	-	-	-
Outside Partnerships	76,650.00	69,196.00	-	-	-	-	-	-
Non-capital Construction	298,500.00	293,106.86	-	-	-	-	-	-
Fines & Penalties	25,132.00	-	-	-	-	-	-	-
Nondepartmental	2,328,260.00	2,313,084.19	2,445,579.00	2,307,865.43	2,568,810.00	(50,000.00)	2,518,810.00	2,552,774.00
Debt Service	24,950,053.00	24,022,711.14	24,297,928.00	24,200,635.91	23,178,918.00	8,500.00	23,187,418.00	22,425,482.00
Litigation Settlement	50,000.00	50,000.00	-	-	-	-	-	-
Contingency	953,000.00	-	1,063.00	-	-	240,080.00	240,080.00	-
TOTAL EXPENDITURES	\$ 65,200,410.00	\$ 60,662,187.21	\$ 64,899,155.00	\$ 62,454,468.32	\$ 65,059,464.00	\$ 987,840.00	\$ 66,047,304.00	\$ 67,554,722.00
OTHER FINANCING SOURCES/(USES)								
Sale of Capital Assets	-	\$ 92,022.55	-	\$ 152,212.80	-	\$ 127,930.00	\$ 127,930.00	\$ 384,000.00
Proceeds from Bonds/Debt	690,000.00	-	-	-	-	-	-	-
Proceeds from Refunding Bonds	-	-	34,200,000.00	32,890,000.00	-	-	-	-
Appropriated Fund Balance	6,257,754.00	-	5,720,098.00	-	600,000.00	94,910.00	694,910.00	500,000.00
Insurance Proceeds	-	-	-	-	-	-	-	-
Transfers to Capital Projects	(16,430,910.00)	(16,430,910.00)	(20,066,614.00)	(20,066,614.00)	(16,695,665.00)	(1,368,801.00)	(18,064,466.00)	(16,500,000.00)
Payment to Refunded Bond Escrow Agent	-	-	(33,960,000.00)	(32,729,049.60)	-	-	-	-
TOTAL OTHER FINANCING SOURCES/(USES)	\$ (9,483,156.00)	\$ (16,338,887.45)	\$ (14,106,516.00)	\$ (19,753,450.80)	\$ (16,095,665.00)	\$ (1,145,961.00)	\$ (17,241,626.00)	\$ (17,116,000.00)
CHANGE IN FUND BALANCE	-	\$ (461,625.15)	-	\$ 3,311,040.30	-	-	-	-

Budgeted and Actual Expenditures Summarized by Department and Category

	2017 Adjusted Budget	2017 Actual	2018 Adjusted Budget	2018 Actual	2019 Adopted Budget	2019 Amendments & Transfers	2019 Adjusted Budget	2020 Adopted Budget
EXPENDITURES BY DEPARTMENT								
Authority Board	\$66,106.00	\$59,765.58	\$62,371.00	\$55,678.31	\$64,710.00	-	\$64,710.00	\$63,058.00
Administration	857,121.00	809,194.35	1,229,462.00	1,189,271.70	1,156,590.00	(67,500.00)	1,089,090.00	1,189,981.00
Finance	1,097,280.00	1,064,078.17	1,196,909.00	1,154,182.99	1,223,692.00	-	1,223,692.00	1,268,232.00
Human Resources	659,207.00	621,401.62	533,379.00	514,463.11	553,180.00	10,000.00	563,180.00	602,049.00
Public & Environmental Policy	-	-	81,055.00	74,311.76	283,723.00	35,000.00	318,723.00	304,045.00
Engineering	2,321,163.00	2,287,267.34	2,737,586.00	2,670,421.61	2,703,945.00	(75,000.00)	2,628,945.00	2,740,896.00
Information Technology	1,654,523.00	1,640,135.74	1,880,458.00	1,847,173.11	2,411,030.00	(55,000.00)	2,356,030.00	2,972,746.00
Operations - Administration	348,649.00	336,717.65	367,002.00	358,527.05	373,620.00	-	373,620.00	396,515.00
Operations - Centralized Maintenance	2,464,404.00	2,377,816.97	2,872,316.00	2,723,823.72	2,796,844.00	546,783.00	3,343,627.00	2,945,577.00
Operations - Water Treatment	6,834,163.00	6,388,620.17	7,175,024.00	6,541,755.92	7,163,778.00	232,721.00	7,396,499.00	7,429,552.00
Operations - Wastewater Treatment	3,937,545.00	3,791,694.65	4,043,517.00	3,816,740.17	4,304,456.00	598,681.00	4,903,137.00	6,060,426.00
Operations - Utility Services	9,902,694.00	8,662,732.42	9,227,530.00	8,686,076.25	9,389,317.00	256,290.00	9,645,607.00	10,375,303.00
Environmental Management	2,367,914.00	2,255,303.20	2,722,127.00	2,485,552.87	2,723,121.00	41,285.00	2,764,406.00	3,090,852.00
Customer Service	3,958,046.00	3,619,730.92	4,025,849.00	3,827,988.41	4,163,730.00	(5,000.00)	4,158,730.00	4,637,234.00
Damage Claims	50,000.00	(369.76)	-	-	-	-	-	-
Outside Partnerships	76,650.00	69,196.00	-	-	-	-	-	-
Non-capital Construction	298,500.00	293,106.86	-	-	-	-	-	-
Fines & Penalties	25,132.00	-	-	-	-	-	-	-
Nondepartmental	2,328,260.00	2,313,084.19	2,445,579.00	2,307,865.43	2,568,810.00	(50,000.00)	2,518,810.00	2,552,774.00
Debt Service	24,950,053.00	24,022,711.14	24,297,928.00	24,200,635.91	23,178,918.00	8,500.00	23,187,418.00	22,425,482.00
Litigation Settlement	50,000.00	50,000.00	-	-	-	-	-	-
Contingency	953,000.00	-	1,063.00	-	-	11,080.00	11,080.00	-
Transfers to Capital Projects	16,430,910.00	16,430,910.00	20,066,614.00	20,066,614.00	16,695,665.00	1,368,801.00	18,064,466.00	16,500,000.00
Payment to Refunded Bond Escrow Agent	-	-	33,960,000.00	32,729,049.60	-	-	-	-
TOTAL	\$81,631,320.00	\$77,093,097.21	\$118,925,769.00	\$115,250,131.92	\$81,755,129.00	\$2,856,641.00	\$84,611,770.00	\$85,554,722.00
EXPENDITURES BY CATEGORY								
Salaries & Benefits	20,255,705.00	19,559,711.55	21,461,510.00	20,780,009.05	22,864,878.00	4,000.00	22,868,878.00	24,446,588.00
Operating	18,482,654.00	16,568,977.00	18,984,837.00	17,365,814.42	18,951,468.00	1,404,505.00	20,355,973.00	22,082,510.00
Capital Outlay	558,998.00	510,787.52	153,817.00	108,008.94	64,200.00	59,755.00	123,955.00	100,142.00
Contingency	953,000.00	-	1,063.00	-	-	11,080.00	11,080.00	-
Debt Service	24,950,053.00	24,022,711.14	24,297,928.00	24,200,635.91	23,178,918.00	8,500.00	23,187,418.00	22,425,482.00
Transfers to Capital Projects	16,430,910.00	16,430,910.00	20,066,614.00	20,066,614.00	16,695,665.00	1,368,801.00	18,064,466.00	16,500,000.00
Payment to Refunded Bond Escrow Agent	-	-	33,960,000.00	32,729,049.60	-	-	-	-
TOTAL	\$ 81,631,320.00	\$ 77,093,097.21	\$ 118,925,769.00	\$ 115,250,131.92	\$ 81,755,129.00	\$ 2,856,641.00	\$ 84,611,770.00	\$ 85,554,722.00

Budgeted and Actual Expenditures by Department and Category

	2017 Adjusted Budget	2017 Actual	2018 Adjusted Budget	2018 Actual	2019 Adopted Budget	2019 Amendments & Transfers	2019 Adjusted Budget	2020 Adopted Budget
Authority Board								
Salaries & Benefits	\$ 44,108.00	\$ 43,459.86	\$ 42,635.00	\$ 40,968.54	\$ 38,759.00	\$ -	\$ 38,759.00	\$ 38,759.00
Operating	21,998.00	16,305.72	19,736.00	14,709.77	25,951.00	-	25,951.00	24,299.00
Total Authority Board	\$ 66,106.00	\$ 59,765.58	\$ 62,371.00	\$ 55,678.31	\$ 64,710.00	\$ -	\$ 64,710.00	\$ 63,058.00
Administration								
Salaries & Benefits	\$ 505,860.00	\$ 491,720.91	\$ 460,978.00	\$ 450,295.70	\$ 432,163.00		\$ 432,163.00	\$ 544,174.00
Operating	351,261.00	317,473.44	768,484.00	738,976.00	724,427.00	(67,500.00)	656,927.00	645,807.00
Total Administration	\$ 857,121.00	\$ 809,194.35	\$ 1,229,462.00	\$ 1,189,271.70	\$ 1,156,590.00	\$ (67,500.00)	\$ 1,089,090.00	\$ 1,189,981.00
Finance								
Salaries & Benefits	\$ 1,032,080.00	\$ 1,012,118.05	\$ 1,048,277.00	\$ 1,015,522.11	\$ 1,071,960.00	\$ -	\$ 1,071,960.00	\$ 1,123,073.00
Operating	65,200.00	51,960.12	148,632.00	138,660.88	151,732.00	-	151,732.00	145,159.00
Total Finance	\$ 1,097,280.00	\$ 1,064,078.17	\$ 1,196,909.00	\$ 1,154,182.99	\$ 1,223,692.00	\$ -	\$ 1,223,692.00	\$ 1,268,232.00
Human Resources								
Salaries & Benefits	\$ 516,647.00	\$ 494,602.69	\$ 409,313.00	\$ 402,679.86	\$ 423,805.00	\$ 10,000.00	\$ 433,805.00	\$ 449,597.00
Operating	142,560.00	126,798.93	124,066.00	111,783.25	129,375.00	-	129,375.00	152,452.00
Total Human Resources	\$ 659,207.00	\$ 621,401.62	\$ 533,379.00	\$ 514,463.11	\$ 553,180.00	\$ 10,000.00	\$ 563,180.00	\$ 602,049.00
Public & Environmental Policy								
Salaries & Benefits	\$ -	\$ -	\$ 80,739.00	\$ 74,045.62	\$ 267,021.00	\$ -	\$ 267,021.00	\$ 271,849.00
Operating	-	-	316.00	266.14	16,702.00	19,730.00	36,432.00	32,196.00
Capital Outlay	-	-	-	-	-	15,270.00	15,270.00	-
Total Public & Environmental Policy	\$ -	\$ -	\$ 81,055.00	\$ 74,311.76	\$ 283,723.00	\$ 35,000.00	\$ 318,723.00	\$ 304,045.00
Information Technology								
Salaries & Benefits	\$ 560,798.00	\$ 554,629.78	\$ 666,803.00	\$ 663,938.16	\$ 824,194.00	\$ (50,000.00)	\$ 774,194.00	\$ 907,339.00
Operating	1,093,725.00	1,085,505.96	1,202,784.00	1,172,364.45	1,586,836.00	-	1,586,836.00	2,065,407.00
Capital Outlay	-	-	10,871.00	10,870.50	-	-	-	-
Total Information Technology	\$ 1,654,523.00	\$ 1,640,135.74	\$ 1,880,458.00	\$ 1,847,173.11	\$ 2,411,030.00	\$ (50,000.00)	\$ 2,361,030.00	\$ 2,972,746.00
Engineering								
Salaries & Benefits	\$ 2,191,212.00	\$ 2,167,147.14	\$ 2,377,929.00	\$ 2,346,479.52	\$ 2,479,988.00	\$ (45,000.00)	\$ 2,434,988.00	\$ 2,577,978.00
Operating	121,451.00	111,667.20	359,657.00	323,942.09	223,957.00	-	223,957.00	162,918.00
Capital Outlay	8,500.00	8,453.00	-	-	-	-	-	-
Total Engineering	\$ 2,321,163.00	\$ 2,287,267.34	\$ 2,737,586.00	\$ 2,670,421.61	\$ 2,703,945.00	\$ (45,000.00)	\$ 2,658,945.00	\$ 2,740,896.00
Operations - Centralized Maintenance								
Salaries & Benefits	\$ 1,331,670.00	\$ 1,285,858.34	\$ 1,373,646.00	\$ 1,301,726.59	\$ 1,384,152.00	\$ -	\$ 1,384,152.00	\$ 1,449,537.00
Operating	1,118,310.00	1,077,536.04	1,481,066.00	1,422,097.13	1,412,692.00	397,560.00	1,810,252.00	1,465,898.00
Capital Outlay	14,424.00	14,422.59	17,604.00	-	-	41,604.00	41,604.00	30,142.00
Total Operations - Centralized Maintenance	\$ 2,464,404.00	\$ 2,377,816.97	\$ 2,872,316.00	\$ 2,723,823.72	\$ 2,796,844.00	\$ 439,164.00	\$ 3,236,008.00	\$ 2,945,577.00
Operations - Administration								
Salaries & Benefits	\$ 332,416.00	\$ 322,653.52	\$ 346,084.00	\$ 340,402.17	\$ 359,648.00	\$ -	\$ 359,648.00	\$ 376,753.00
Operating	16,233.00	14,064.13	20,918.00	18,124.88	13,972.00	-	13,972.00	19,762.00
Total Operations - Administration	\$ 348,649.00	\$ 336,717.65	\$ 367,002.00	\$ 358,527.05	\$ 373,620.00	\$ -	\$ 373,620.00	\$ 396,515.00
Operations - Water Treatment								
Salaries & Benefits	\$ 1,699,821.00	\$ 1,605,378.06	\$ 1,760,969.00	\$ 1,646,500.44	\$ 1,866,351.00	\$ -	\$ 1,866,351.00	\$ 2,153,352.00
Operating	5,066,096.00	4,716,466.43	5,388,367.00	4,869,706.01	5,297,427.00	99,886.00	5,397,313.00	5,276,200.00
Capital Outlay	68,246.00	66,775.68	25,688.00	25,549.47	-	9,454.00	9,454.00	-
Total Operations - Water Treatment	\$ 6,834,163.00	\$ 6,388,620.17	\$ 7,175,024.00	\$ 6,541,755.92	\$ 7,163,778.00	\$ 109,340.00	\$ 7,273,118.00	\$ 7,429,552.00

Budgeted and Actual Expenditures by Department and Category

	2017 Adjusted Budget	2017 Actual	2018 Adjusted Budget	2018 Actual	2019 Adopted Budget	2019 Amendments & Transfers	2019 Adjusted Budget	2020 Adopted Budget
Operations - Wastewater Treatment								
Salaries & Benefits	\$ 1,740,978.00	\$ 1,711,643.65	\$ 1,853,980.00	\$ 1,793,597.19	\$ 1,912,516.00	\$ -	\$ 1,912,516.00	\$ 2,009,484.00
Operating	2,196,567.00	2,080,051.00	2,161,473.00	2,023,142.98	2,327,740.00	224,683.00	2,552,423.00	3,980,942.00
Capital Outlay	-	-	28,064.00	-	64,200.00	(32,002.00)	32,198.00	70,000.00
Total Operations - Wastewater Treatment	\$ 3,937,545.00	\$ 3,791,694.65	\$ 4,043,517.00	\$ 3,816,740.17	\$ 4,304,456.00	\$ 192,681.00	\$ 4,497,137.00	\$ 6,060,426.00
Operations - Utility Services								
Salaries & Benefits	\$ 5,315,576.00	\$ 5,099,477.43	\$ 5,483,876.00	\$ 5,339,660.91	\$ 5,806,732.00	\$ (30,000.00)	\$ 5,776,732.00	\$ 6,230,174.00
Operating	4,213,221.00	3,230,946.80	3,672,064.00	3,274,826.37	3,582,585.00	136,290.00	3,718,875.00	4,145,129.00
Capital Outlay	373,897.00	332,308.19	71,590.00	71,588.97	-	-	-	-
Total Operations - Utility Services	\$ 9,902,694.00	\$ 8,662,732.42	\$ 9,227,530.00	\$ 8,686,076.25	\$ 9,389,317.00	\$ 106,290.00	\$ 9,495,607.00	\$ 10,375,303.00
Environmental Management								
Salaries & Benefits	\$ 1,801,568.00	\$ 1,742,888.35	\$ 1,981,850.00	\$ 1,915,310.08	\$ 2,078,776.00	\$ -	\$ 2,078,776.00	\$ 2,270,623.00
Operating	495,928.00	446,988.79	740,277.00	570,242.79	644,345.00	41,285.00	685,630.00	820,229.00
Capital Outlay	70,418.00	65,426.06	-	-	-	-	-	-
Total Environmental Management	\$ 2,367,914.00	\$ 2,255,303.20	\$ 2,722,127.00	\$ 2,485,552.87	\$ 2,723,121.00	\$ 41,285.00	\$ 2,764,406.00	\$ 3,090,852.00
Customer Service								
Salaries & Benefits	\$ 2,787,971.00	\$ 2,640,011.82	\$ 3,034,431.00	\$ 2,966,364.52	\$ 3,318,813.00	\$ (10,000.00)	\$ 3,308,813.00	\$ 3,543,896.00
Operating	1,146,562.00	956,317.10	991,418.00	861,623.89	844,917.00	-	844,917.00	1,093,338.00
Capital Outlay	23,513.00	23,402.00	-	-	-	-	-	-
Total Customer Service	\$ 3,958,046.00	\$ 3,619,730.92	\$ 4,025,849.00	\$ 3,827,988.41	\$ 4,163,730.00	\$ (10,000.00)	\$ 4,153,730.00	\$ 4,637,234.00
Damage Claims	\$ 50,000.00	\$ (369.76)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Outside Partnerships	76,650.00	69,196.00	-	-	-	-	-	-
Non-capital Construction	298,500.00	293,106.86	-	-	-	-	-	-
Fines & Penalties	25,132.00	-	-	-	-	-	-	-
Nondepartmental	2,328,260.00	2,313,084.19	2,445,579.00	2,307,865.43	2,568,810.00	(50,000.00)	2,518,810.00	2,552,774.00
Debt Service	24,950,053.00	24,022,711.14	24,297,928.00	24,200,635.91	23,178,918.00	8,500.00	23,187,418.00	22,425,482.00
Litigation Settlement	50,000.00	50,000.00	-	-	-	-	-	-
Contingency	953,000.00	-	1,063.00	-	-	268,080.00	268,080.00	-
Transfers to Capital Projects	16,430,910.00	16,430,910.00	20,066,614.00	20,066,614.00	16,695,665.00	1,368,801.00	18,064,466.00	16,500,000.00
Payment to Refunded Bond Escrow Agent	-	-	33,960,000.00	32,729,049.60	-	-	-	-
TOTAL	\$ 81,631,320.00	\$ 77,093,097.21	\$ 118,925,769.00	\$ 115,250,131.92	\$ 81,755,129.00	\$ 2,356,641.00	\$ 84,111,770.00	\$ 85,554,722.00

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 by reducing long-term debt and associated costs. 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.

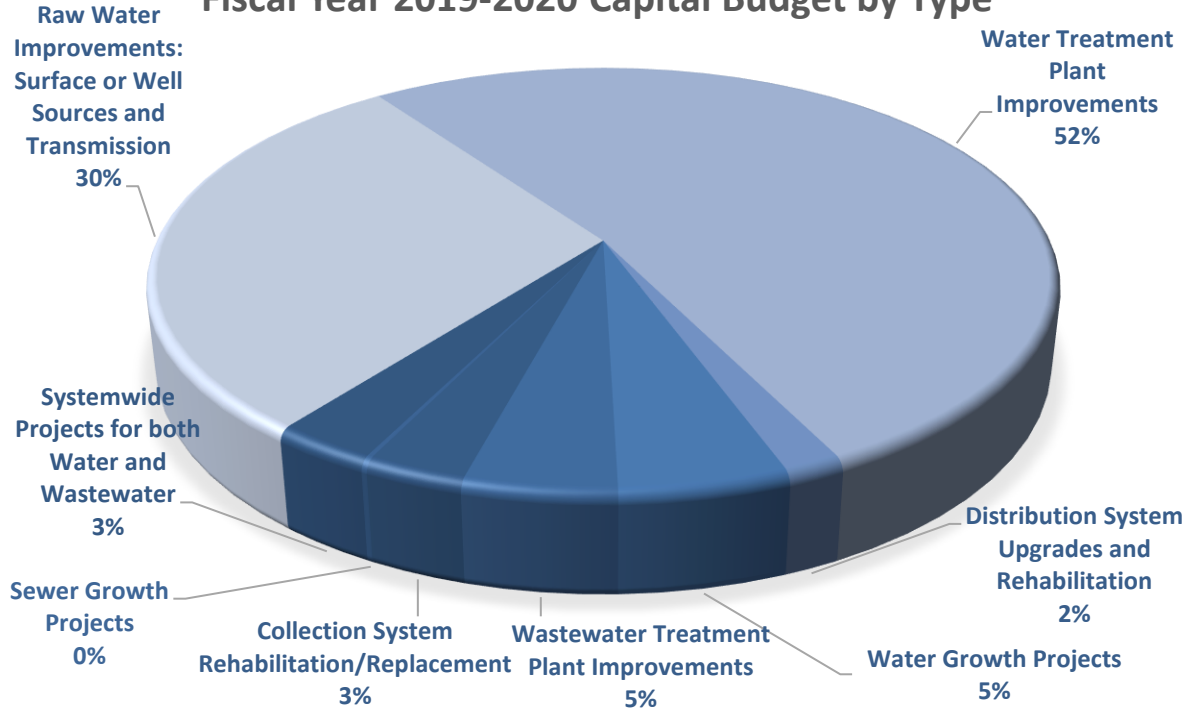
An important aspect of capital budgeting is the effect that budgeted projects have on the annual operating budget. As previously mentioned, most of the Authority's capital expenditures are debt funded or pay-as-you-go funded. Both funding methods impact the annual operating budget. Under the pay-as-you-go 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 19-20 are \$16.5 million and \$22.4 million, respectively. Combined, these appropriations comprise 46% of the FY 19-20 operating budget.

The FY 19-20 capital budget totals \$84.9 million. The majority (57.6%) of the FY 19-20 capital budget is focused on enhancement of existing infrastructure at the Sweeney Water Treatment Plant needed to reduce PFAS compounds in drinking water. Another 37.1% of the FY 19-20 capital budget is programmed for system rehabilitation and replacement. Notable projects include construction of a new raw water line with LCFWSA. The remaining 5.4% of the FY 19-20 capital budget is programmed for system expansion. Notable expansion projects include the Northern Water Mains Cost Recovery Project.

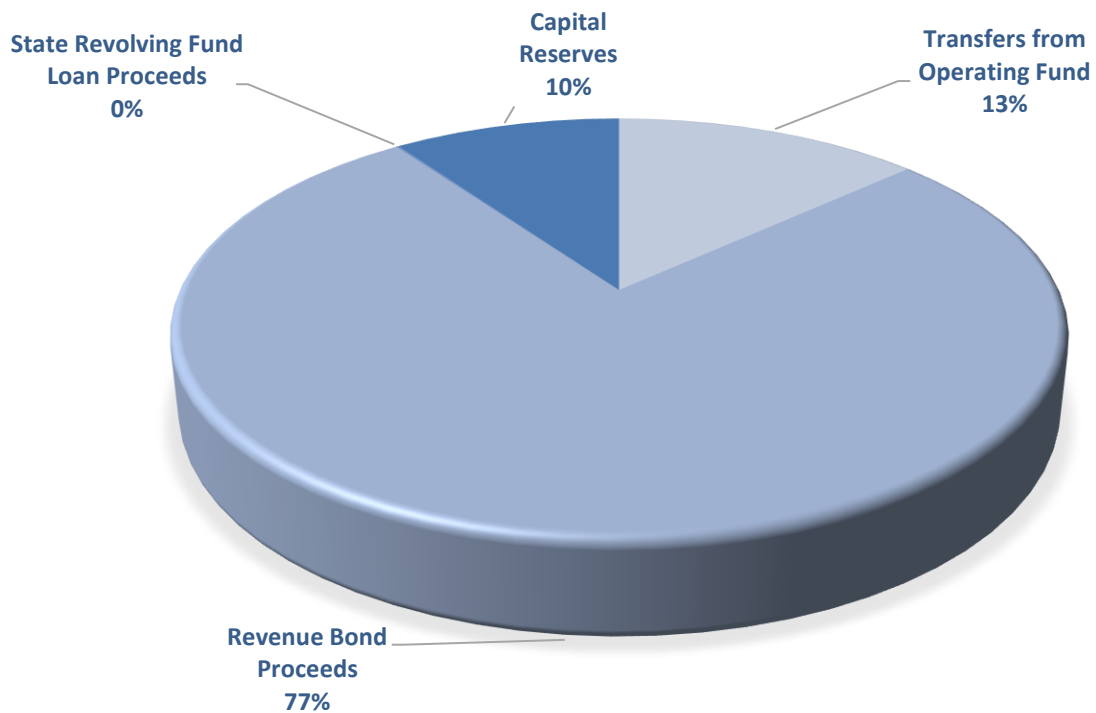
The pie charts on the following page detail project appropriations by type and the funding sources incorporated in the FY 19-20 capital budget.

CAPITAL BUDGET

Fiscal Year 2019-2020 Capital Budget by Type



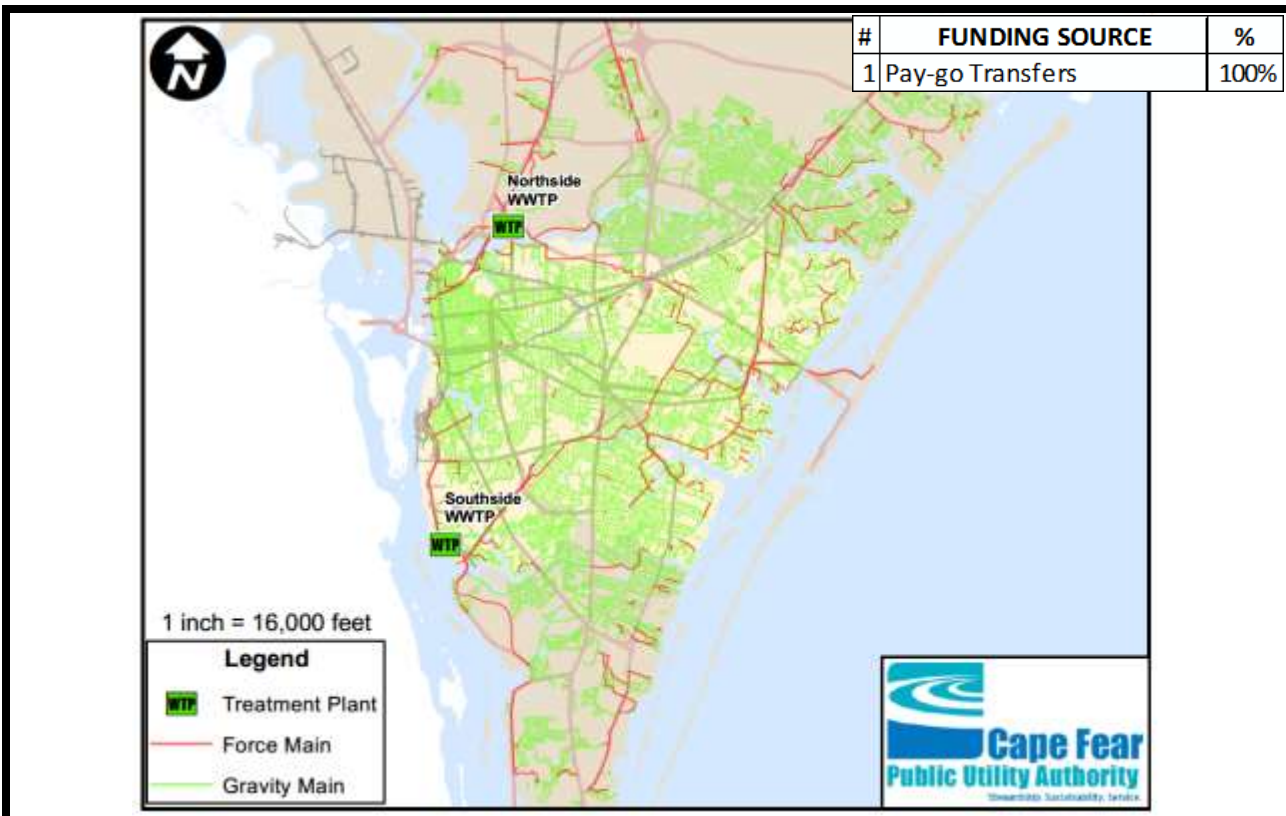
Fiscal Year 2019-2020 Capital Budget Funding Sources



Risk Before						
RISK ASSIGNMENT MATRIX						
5 - Very Likely	5	20	35	50	65	80
4 - Likely	4	9	12	15	18	21
3 - Possible	3	6	9	12	15	18
2 - Unlikely	2	3	6	9	12	15
1 - Very Unlikely	1	2	3	6	9	12
0 - None	0	0	0	0	0	0
CONSIDERANCE						

Risk After						
RISK ASSIGNMENT MATRIX						
5 - Very Likely	5	20	35	50	65	
4 - Likely	4	9	12	15	20	
3 - Possible	3	6	9	12	15	
2 - Unlikely	2	3	6	8	11	
1 - Very Unlikely	1	2	3	4	5	
0 - None	0	0	0	0	0	
CONSIDERANCE						

REFERENCE NUMBER	Sewer Emergency Repair		175393
1			
Project Type:	Rehab or Replace Assets		
Project Area:	Wastewater Collection		
Summary: This project funds emergency repair of sewer infrastructure if there is a failure prior to programmed replacement or rehabilitation. Spending on sewer emergency repair in the last 5-years was as follows: FY-18 - \$2,023,733; FY-17 - \$355,211; FY-16 - \$773,563; FY 15 - \$817,430; FY 14 - \$530,333.			
<u>Project Drivers and Benefits:</u> • 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		\$20,500,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$15,500,000		\$500,000	\$4,500,000



Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	4	3	2	1	0	1
3 - Possible	3	2	1	0	1	1
2 - Doubtful	2	1	0	1	0	1
1 - Very Unlikely	1	0	1	0	0	1
0 - Not at all	0	0	0	0	0	1
CORROSION RISK						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	4	3	2	1	0	1
3 - Possible	3	2	1	0	1	1
2 - Doubtful	2	1	0	1	0	1
1 - Very Unlikely	1	0	1	0	0	1
0 - Not at all	0	0	0	0	0	1
CORROSION RISK						

REFERENCE NUMBER	Find It, Fix It Methodology Sewer Collection Rehabilitation (AMP)	17S394
4		
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; 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 894 miles of gravity sewer. It is estimated that 217 miles or 24% is over 40 years old, with 97 miles or 11% in the City which is over 70 years old.		
<u>Project Drivers and Benefits:</u> • 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	\$50,000,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs
\$10,500,000	\$1,500,000	\$38,000,000

#	FUNDING SOURCE	%
1	Pay-go Transfers	100%



Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	5	20	35	20	35	1
4 - Likely	4	9	12	12	12	2
3 - Possible	3	3	9	12	12	3
2 - Unlikely	2	3	9	9	9	4
1 - Very Unlikely	1	2	3	3	3	5
1 - Very Unlikely	1	2	3	3	3	5
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	5	20	20	20	20	1
4 - Likely	4	9	12	12	12	2
3 - Possible	3	3	9	12	12	3
2 - Unlikely	2	3	9	9	9	4
1 - Very Unlikely	1	2	3	3	3	5
1 - Very Unlikely	1	2	3	3	3	5
CORROSION						

REFERENCE NUMBER	IT SCADA (PS Upgrades)		16S344
10			
Project Type:	Rehab or Replace Assets		
Project Area:	Other		
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 52 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.			
<u>Project Drivers and Benefits:</u> • 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		\$2,250,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs	
\$1,000,000	\$250,000	\$1,000,000	

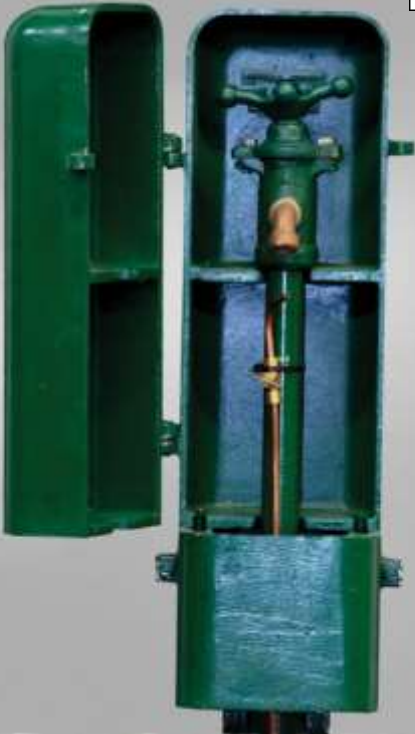
			#	FUNDING SOURCE	%
			1	Pay-go Transfers	100%
					

Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	0
4 - Likely	3	2	1	0	0	0
3 - Possible	2	1	0	0	0	0
2 - Unlikely	1	0	0	0	0	0
1 - Very Unlikely	0	0	0	0	0	0
0 - Not at all	0	0	0	0	0	0
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	0
4 - Likely	3	2	1	0	0	0
3 - Possible	2	1	0	0	0	0
2 - Unlikely	1	0	0	0	0	0
1 - Very Unlikely	0	0	0	0	0	0
0 - Not at all	0	0	0	0	0	0
CORROSION						

REFERENCE NUMBER	Water Distribution Sample Stations		17W245
18			
Project Type:	Enhancement		
Project Area:	Water Distribution		
Summary: CFPUA needs 250 sampling locations for its routine sampling of the distribution system water quality. Several sample sites are located on private property and owners want them removed. DEQ also wants redundancy for compliance. This project will remove the sampling sites from private property and construct new sampling stations in the public rights-of-way. The first phase of the Water Distribution Sample Stations project installed 105 sample stations. Future funding will address the remaining sampling stations.			
<u>Project Drivers and Benefits:</u> • 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		\$820,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$420,000		\$200,000	\$200,000

#	FUNDING SOURCE	%
1	Pay-go Transfers	100%



Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	0	0	12	12	12	12
3 - Possible	0	0	0	12	12	12
2 - Unlikely	0	0	0	0	0	12
1 - Very Unlikely	0	0	0	0	0	0
0 - Not at all	0	0	0	0	0	0
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	0	0	12	12	12	12
3 - Possible	0	0	0	12	12	12
2 - Unlikely	0	0	0	0	0	12
1 - Very Unlikely	0	0	0	0	0	0
0 - Not at all	0	0	0	0	0	0
CORROSION						

REFERENCE NUMBER	Comprehensive Meter Replacement Program		16W215
22			
Project Type:	Rehab or Replace Assets		
Project Area:	Water Distribution		
Summary: CFPUA has approximately 63,000 small meters (5/8" – typical residential), 3,900 midsize meter (1", 1,1/2", and 2") and 307 large meters (3" or larger). 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. Phase 1 and 2 install 30,141 small to midsize meters. Phase 3 project is currently ongoing with the expected to install 33,330 meters. Future funding will address the remaining large meters.			
<u>Project Drivers and Benefits:</u>			
• 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		\$19,480,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$18,280,000		\$200,000	\$1,000,000

			#	FUNDING SOURCE	%
			1	Pay-go Transfers	100%
					

	1	2	3	4	5
1. Entry Likelihood	1	2	3	4	5
2. Entry Difficulty	1	2	3	4	5
3. Penetration	1	2	3	4	5
4. Attributability	1	2	3	4	5
5. Entry Consequences	1	2	3	4	5
Total Risk	1. Negligible	2. Minor	3. Moderate	4. Significant	5. Severe

CROSS GRADENCE

	1	2	3	4	5	6
1. Very Likely	8	10	12	14	16	18
2. Likely	6	8	9	11	12	14
3. Possible	4	6	8	9	12	14
4. Unlikely	3	4	5	6	8	11
5. Very Unlikely	1	2	3	4	5	7
6. Riskless	1	1	1	1	1	1
	1. Negligible	2. Minor	3. Moderate	4. Significant	5. Serious	

Source: GAO (2002)

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 CFPWA 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.			
<u>Project Drivers and Benefits:</u> • 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		\$7,400,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs	
\$1,400,000	\$600,000	\$5,400,000	

A construction worker in a white hard hat and yellow safety vest is kneeling on a wooden form, using a trowel to lay bricks. Another worker is visible in the background. A large stack of bricks is on a pallet to the right.

Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	0
4 - Likely	3	2	1	0	0	0
3 - Possible	2	1	0	0	0	0
2 - Unlikely	1	0	0	0	0	0
1 - Very Unlikely	0	0	0	0	0	0
0 - Not Possible	0	0	0	0	0	0
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	0
4 - Likely	3	2	1	0	0	0
3 - Possible	2	1	0	0	0	0
2 - Unlikely	1	0	0	0	0	0
1 - Very Unlikely	0	0	0	0	0	0
0 - Not Possible	0	0	0	0	0	0
CORROSION						

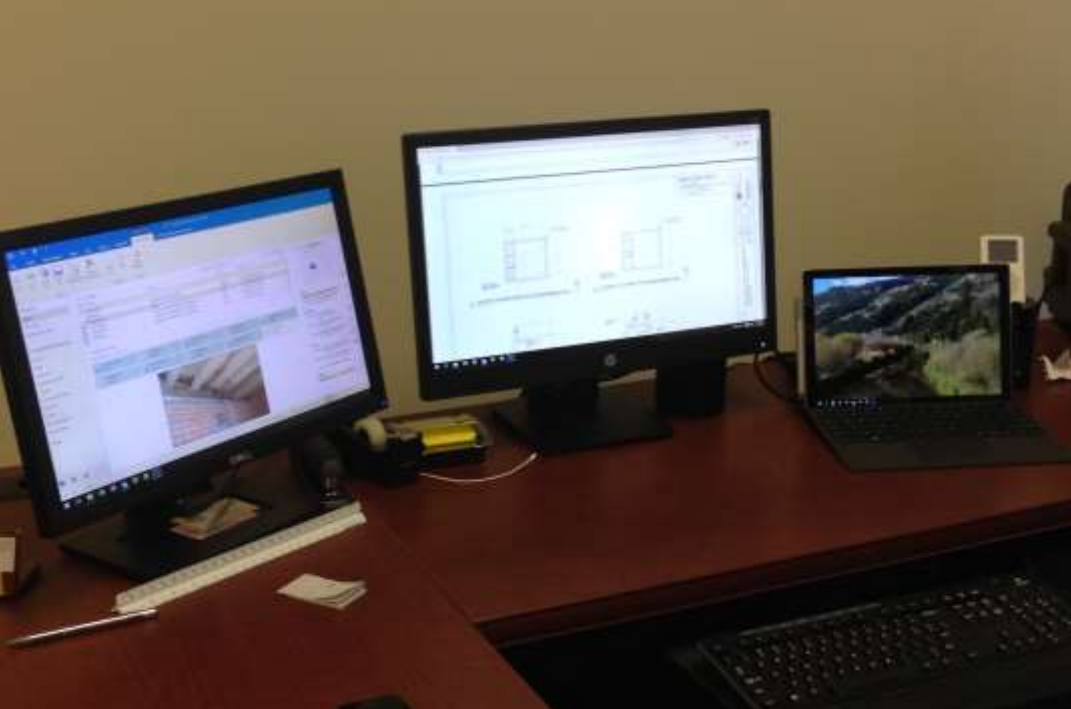
REFERENCE NUMBER	Rehabilitation of Water Infrastructure Matching with City Streets		17W243
24			
Project Type:	Rehab or Replace Assets		
Project Area:	Water Distribution		
Summary: When the City of Wilmington initiates street repaving or stormwater projects there are opportunities for replacement of CFWA 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 sewer infrastructure.			
<u>Project Drivers and Benefits:</u> • 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		\$6,737,234	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$1,137,234		\$200,000	\$5,400,000

#	FUNDING SOURCE	%
1	Pay-go Transfers	100%

Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	3	2	1	0	1	0
3 - Possible	2	1	0	1	0	1
2 - Unlikely	1	0	1	0	1	0
1 - Very Unlikely	0	1	0	1	0	1
0 - Not at all	1 - Negligible	2 - Minor	3 - Moderate	4 - Significant	5 - Severe	
CROSS-GROWTH						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	3	2	1	0	1	0
3 - Possible	2	1	0	1	0	1
2 - Unlikely	1	0	1	0	1	0
1 - Very Unlikely	0	1	0	1	0	1
0 - Not at all	1 - Negligible	2 - Minor	3 - Moderate	4 - Significant	5 - Severe	
CROSS-GROWTH						

REFERENCE NUMBER	IT Virtual Desktop Migration		16A008
28			
Project Type:	Enhancement		
Project Area:	Other		
Summary: Desktop PC's are being replaced with a thin client which is less costly than a desktop. Desktop PC's will be allowed to run to failure to maximize the investment. Server resources are shared among virtual desktops to ensure that all resources are being utilized and not wasted. This solution allows for centralized management of the user's desktop. This solution has multiple levels of redundancy and can be securely accessed remotely from any location with Internet access which meets the Information Technology Division's Business Continuity plan.			
<u>Project Drivers and Benefits:</u> • 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		\$520,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$380,000		\$140,000	\$0

#	FUNDING SOURCE	%
1	Pay-go Transfers	100%
		

	A	B	C	D	E	F
A-Entry Criteria						100%
B-Entry	0	0	0	10	10	10
C-Prevention	0	0	0	10	10	10
D-Workable	0	0	0	0	0	10
E-Entry Criteria	0	0	0	0	0	0
F-Exit	1-Notifiable	1-Minor	2-Moderate	3-Significant	4-Serious	

5 - Very Likely	5	25	100	20	30
4 - Likely	4	8	32	12	24
3 - Possible	3	3	9	3	9
2 - Unlikely	2	1	2	1	2
1 - Very Unlikely	1	0	0	0	0
Overall	1 - Negligible	2 - Minor	3 - Moderate	4 - Significant	5 - Severe

CONCLUSION

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.			
<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		\$1,464,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs	
\$464,000	\$100,000	\$900,000	

Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	5	20	20	20	20	20
4 - Likely	4	8	12	12	12	12
3 - Possible	3	6	6	12	12	12
2 - Unlikely	2	4	4	6	6	12
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	5	20	20	20	20	20
4 - Likely	4	8	12	12	12	12
3 - Possible	3	6	6	12	12	12
2 - Unlikely	2	4	4	6	6	12
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5
1 - Very Unlikely	1	2	2	3	4	5

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.			
<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		\$8,500,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs	
\$2,500,000	\$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.			
<u>Project Drivers and Benefits:</u>			
• 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		\$3,250,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$750,000		\$250,000	\$2,250,000



#	FUNDING SOURCE	%
1	Pay-go Transfers	100%

This Project Is Not
Risk Driven



REFERENCE NUMBER	Collection System - Standard Developer Agreements		17S399
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.			
<u>Project Drivers and Benefits:</u>			
• 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		\$2,300,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$800,000		\$150,000	\$1,350,000



#	FUNDING SOURCE	%
1	Pay-go Transfers	100%

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.			
<u>Project Drivers and Benefits:</u>			
• 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		\$2,300,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$800,000		\$150,000	\$1,350,000



#	FUNDING SOURCE	%
1	Pay-go Transfers	100%

Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	5	20	20	20	20	1
4 - Likely	4	9	12	12	12	2
3 - Possible	3	9	9	12	12	3
2 - Unlikely	2	9	9	9	9	4
1 - Very Unlikely	1	2	3	4	5	5
1 - Not at All	1 - Negligible	2 - Minor	3 - Moderate	4 - Significant	5 - Severe	
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	5	20	20	20	20	1
4 - Likely	4	9	12	12	12	2
3 - Possible	3	9	9	12	12	3
2 - Unlikely	2	9	9	9	9	4
1 - Very Unlikely	1	2	3	4	5	5
1 - Not at All	1 - Negligible	2 - Minor	3 - Moderate	4 - Significant	5 - Severe	
CORROSION						

REFERENCE NUMBER	OPS Large Equipment Purchases (Pumps, Plant Equipment, HVAC)	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.		
<u>Project Drivers and Benefits:</u> • 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	\$5,780,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs
\$780,000	\$500,000	\$4,500,000

			#	FUNDING SOURCE	%
			1	Pay-go Transfers	100%

Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	5	4	3	2	1	0
3 - Possible	4	3	2	1	0	1
2 - Unlikely	3	2	1	0	1	2
1 - Very Unlikely	2	1	0	1	2	3
0 - Not Possible	1	0	1	2	3	4
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	5	4	3	2	1	0
3 - Possible	4	3	2	1	0	1
2 - Unlikely	3	2	1	0	1	2
1 - Very Unlikely	2	1	0	1	2	3
0 - Not Possible	1	0	1	2	3	4
CORROSION						

REFERENCE NUMBER	Construction of New Raw Water Line with LCFWSA ILA		17W261
45			
Project Type:	Rehab or Replace Assets		
Project Area:	Water Treatment		
Summary: CFPUA’s raw water source from surface water is partially conveyed through LCFWSA infrastructure. LCFWSA is planning to build a second raw water line for redundancy and ultimate capacity needs. CFPUA, as a significant partner, is participating in the cost for the second raw water line. Design funding was approved in FY-18. This funding is CFPUA’s share for the construction effort.			
<u>Project Drivers and Benefits:</u> • COMPLIANCE 0%: No direct impact on compliance. • EFFICIENCY 50%: Increase in efficiency with additional benefits. • CAPACITY 50%: Increase in capacity with additional benefits. • GROWTH 0%: No direct Impact on customer growth.			
Total Estimated Cost		\$26,700,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$1,700,000		\$25,000,000	\$0

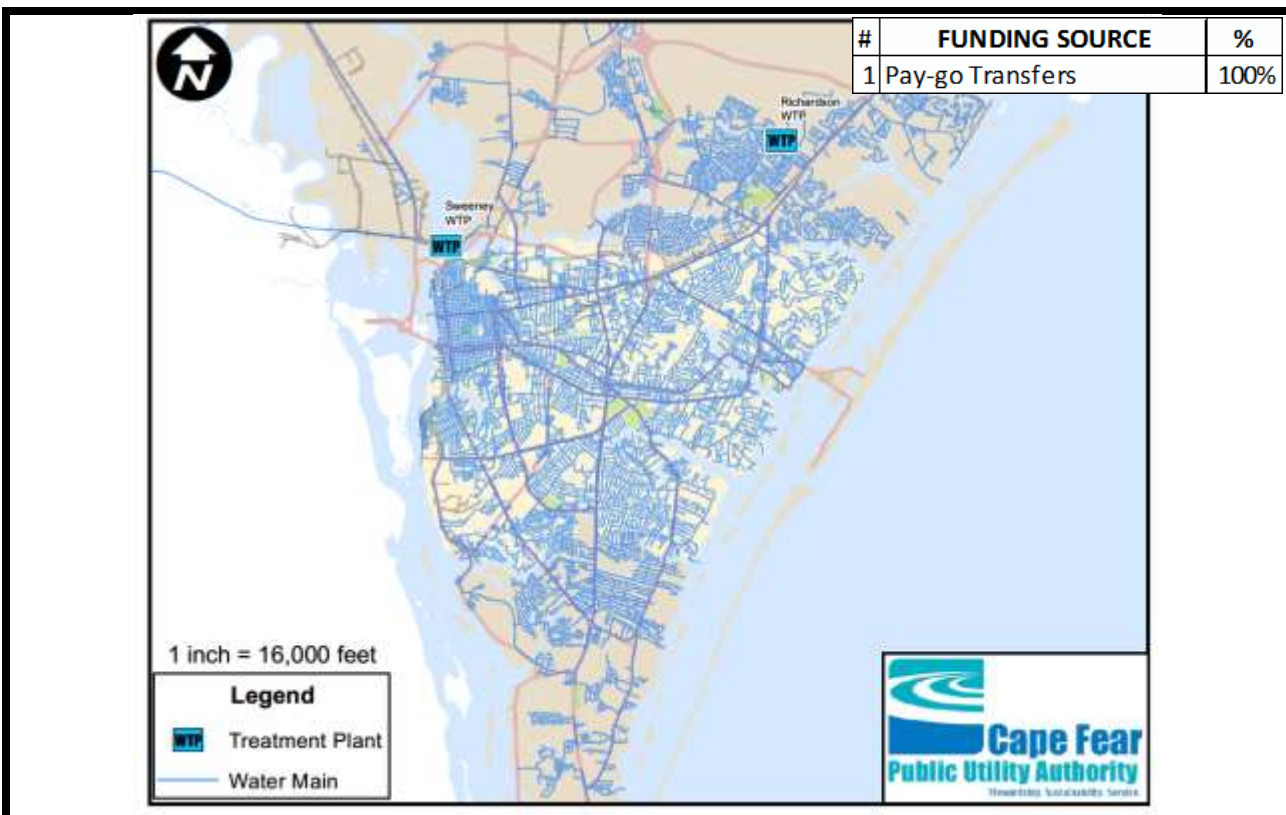
	#	FUNDING SOURCE	%
	2	Bond Proceeds	100%



Risk Before						
RISK ASSESSMENT MATRIX						
5 - Very Likely	5	20	20	20	20	1
4 - Likely	4	8	12	12	12	2
3 - Possible	3	6	6	12	12	3
2 - Unlikely	2	4	4	4	4	4
1 - Very Unlikely	1	2	2	2	2	5
1 - Negligible	1	1	1	1	1	6
2 - Minor	2	2	2	2	2	7
3 - Moderate	3	3	3	3	3	8
4 - Significant	4	4	4	4	4	9
5 - Severe	5	5	5	5	5	10

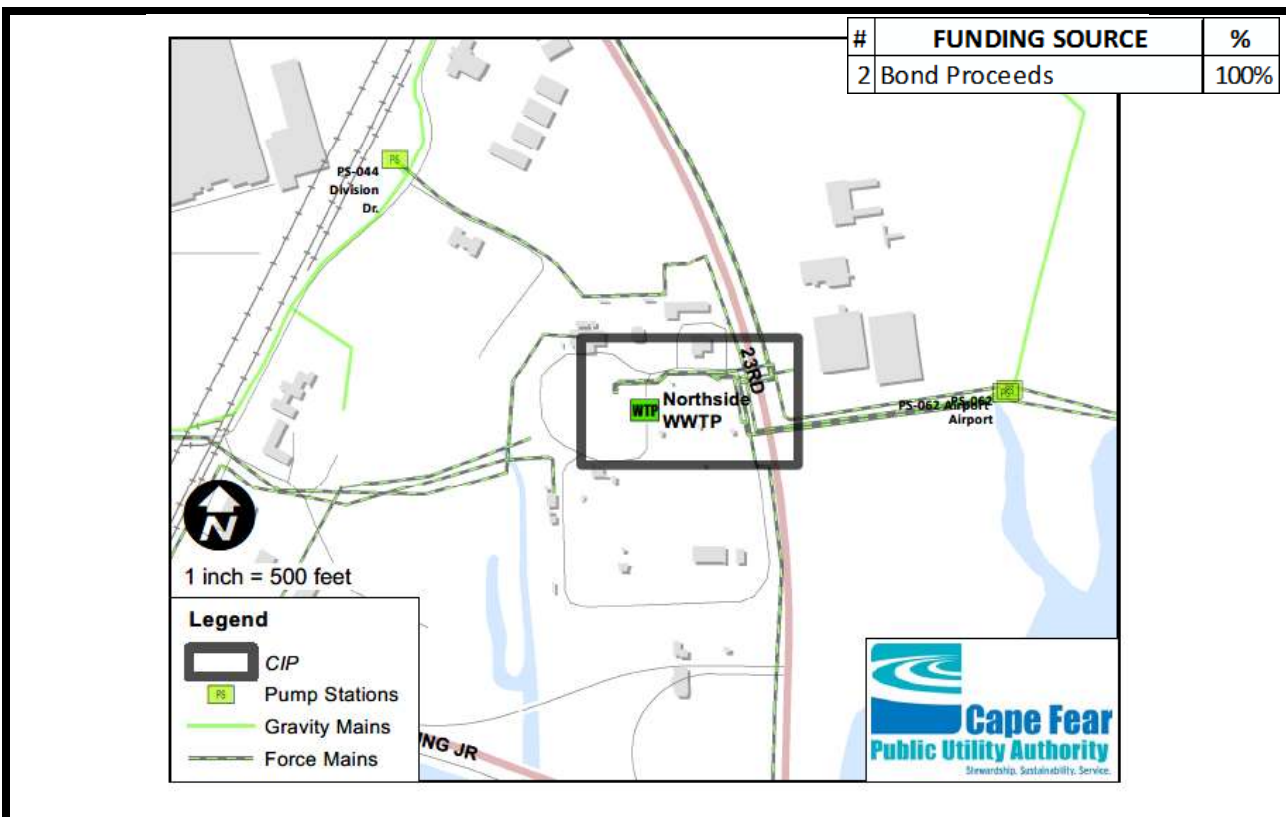
Risk After						
RISK ASSESSMENT MATRIX						
5 - Very Likely	5	20	20	20	20	1
4 - Likely	4	8	12	12	12	2
3 - Possible	3	6	6	12	12	3
2 - Unlikely	2	4	4	4	4	4
1 - Very Unlikely	1	2	2	2	2	5
1 - Negligible	1	1	1	1	1	6
2 - Minor	2	2	2	2	2	7
3 - Moderate	3	3	3	3	3	8
4 - Significant	4	4	4	4	4	9
5 - Severe	5	5	5	5	5	10

REFERENCE NUMBER	Water Emergency Repair		16W223
57			
Project Type:	Rehab or Replace Assets		
Project Area:	Water Distribution		
Summary: Funding to address emergency water repair. Spending on water emergency repair in the last 2 years was as follows: FY-17 - \$2,168,190; FY-18 - \$229,083			
<u>Project Drivers and Benefits:</u> - 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		\$2,433,845	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$433,845		\$250,000	\$1,750,000





REFERENCE NUMBER	Northside WWTP - Enhancements, Upgrades and Generator Replacement	
90		
Project Type:	Enhancement	
Project Area:	Wastewater Treatment	
Summary: The Northside WWTP is a major and vital asset in the CFPUA system, providing advanced wastewater treatment for customers in the northern CFPUA service area. Internal review of the facility indicated a need for several modifications to improve operational reliability and flexibility of the plant. These modifications include, aeration basin channel flexibility, backup generator replacement, tertiary filter walkway improvements, protective coating of secondary clarifiers, drainage, erosion, security improvements.		
<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	\$4,050,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs
\$100,000	\$3,950,000	\$0



Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	3	2	1	0	0	0
3 - Possible	2	1	0	0	0	0
2 - Unlikely	1	0	0	0	0	0
1 - Very Unlikely	0	0	0	0	0	0
0 - Not Possible	0	0	0	0	0	0
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	3	2	1	0	0	0
3 - Possible	2	1	0	0	0	0
2 - Unlikely	1	0	0	0	0	0
1 - Very Unlikely	0	0	0	0	0	0
0 - Not Possible	0	0	0	0	0	0
CORROSION						

REFERENCE NUMBER	Water Distribution Main Enhancements		18W005
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.			
<u>Project Drivers and Benefits:</u>			
• 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 2015-2019		Requested FY 2020	Future Budget Needs
\$100,000		\$300,000	\$900,000

#	FUNDING SOURCE	%
1	Pay-go Transfers	100%

A photograph of a fire hydrant with a red cap, surrounded by green grass and trees. A large plume of white steam or smoke is rising from the hydrant, partially obscuring the background.

Risk Before

RISK ADJUSTMENT MATRIX

5 - Very Likely	5	20	20	20	30	1
4 - Likely	4	9	12	12	12	2
3 - Possible	3	9	9	12	12	3
2 - Unlikely	2	9	9	9	9	3
1 - Very Unlikely	1	2	3	4	5	5
1 - Very Unlikely	1	2	3	4	5	5

CROSS-GUIDANCE

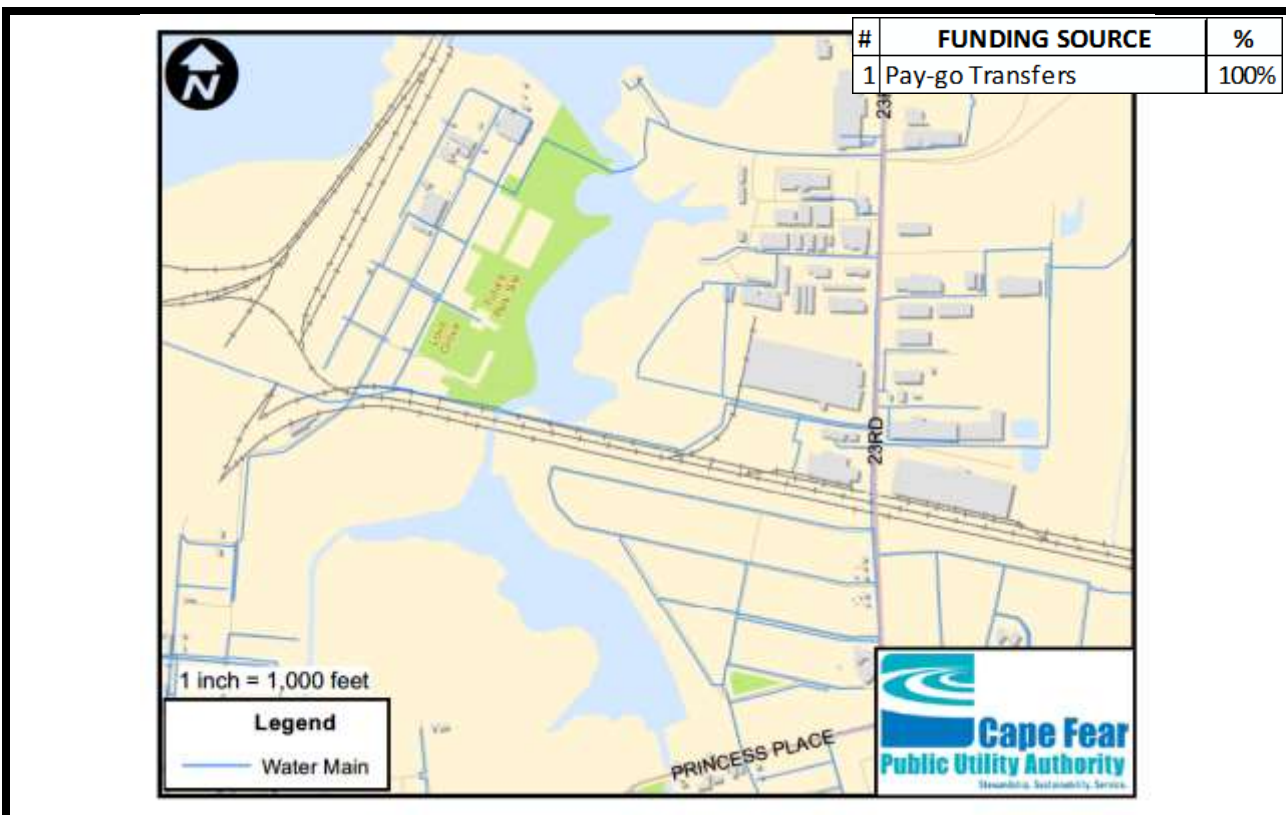
Risk After

RISK ADJUSTMENT MATRIX

5 - Very Likely	5	20	20	20	30	1
4 - Likely	4	9	12	12	12	2
3 - Possible	3	9	9	12	12	3
2 - Unlikely	2	9	9	9	9	3
1 - Very Unlikely	1	2	3	4	5	5
1 - Very Unlikely	1	2	3	4	5	5

CROSS-GUIDANCE

REFERENCE NUMBER	Cross Town Feeder Under Burnt Mill Creek		
95	Rehab/Replace		
Project Type:	Rehab or Replace Assets		
Project Area:	Water Distribution		
Summary: Crosstown feeder is at a shallow depth under Burnt Mill Creek. Pipe is exposed, allowing potential damage and failure. Project will rehab existing line under the creek while constructing a duplicate redundant line at a deeper depth.			
<u>Project Drivers and Benefits:</u> • 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		\$400,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$0		\$50,000	\$350,000



Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	6	20	30	40	50	60
4 - Likely	4	9	12	16	20	24
3 - Possible	3	6	9	12	16	20
2 - Unlikely	2	3	4	6	8	10
1 - Very Unlikely	1	1	2	3	4	5
1 - Very Unlikely	1	1	2	3	4	5
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	6	20	30	40	50	60
4 - Likely	4	9	12	16	20	24
3 - Possible	3	6	9	12	16	20
2 - Unlikely	2	3	4	6	8	10
1 - Very Unlikely	1	1	2	3	4	5
1 - Very Unlikely	1	1	2	3	4	5
CORROSION						

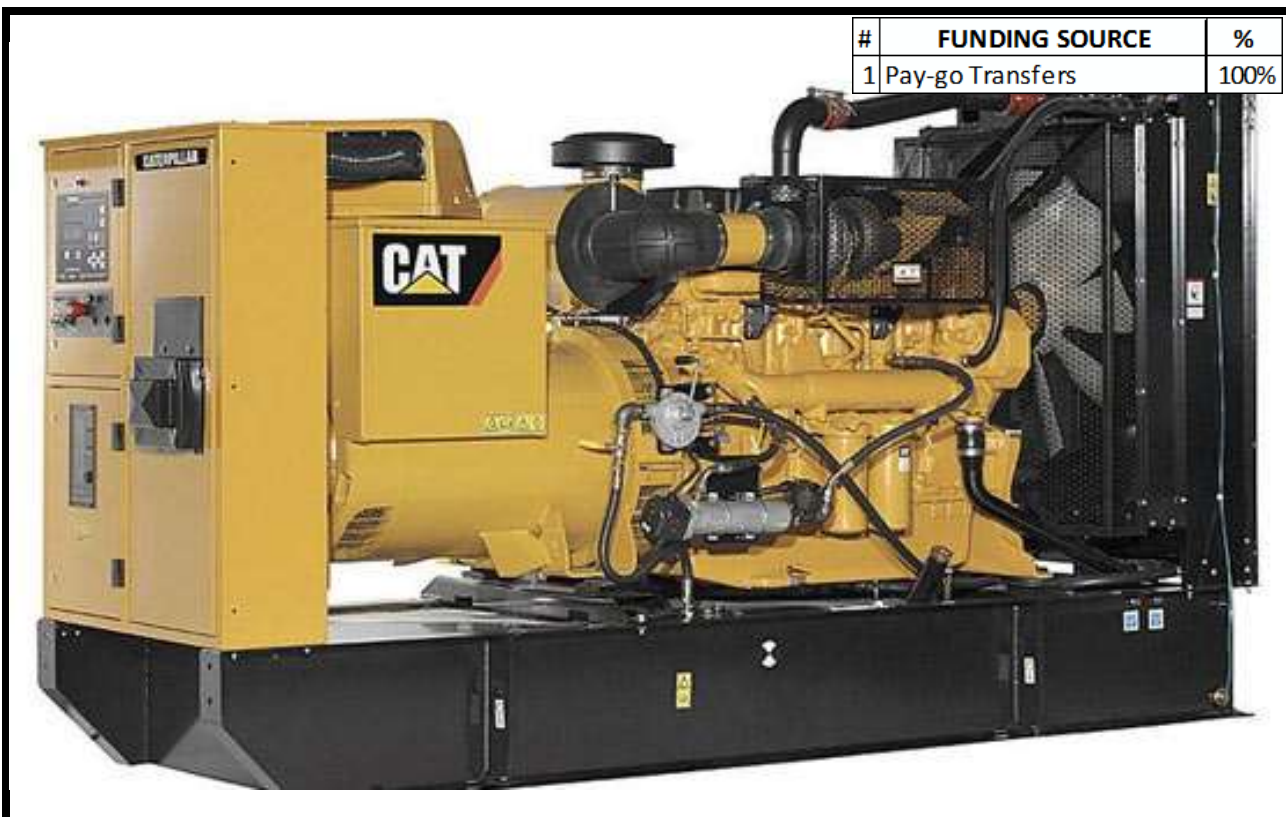
REFERENCE NUMBER	Rehab/Replace Aerial Raw Water Lines and Piliings	
96		
Project Type:	Rehab or Replace Assets	
Project Area:	Water Treatment	
Summary: The raw water line from the Kings Bluff Pump Station has issues with structural integrity at the aerial crossing. The supports on the southern 24-inch raw water transmission line needs to be replaced at all locations and the northern section of the transmission will need supports reviewed and replaced as needed.		
<u>Project Drivers and Benefits:</u> • 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	\$8,000,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs
\$0	\$100,000	\$7,900,000

	FUNDING SOURCE	
	#	%
	4	100%
		

Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	5	20	20	20	20	20
4 - Likely	4	8	12	12	12	12
3 - Possible	3	3	6	12	12	12
2 - Unlikely	2	3	3	6	6	12
1 - Very Unlikely	1	1	1	3	3	1
1 - Negligible	1	1	1	1	1	1
2 - Minor	2	2	2	2	2	2
3 - Moderate	3	3	3	3	3	3
4 - Significant	4	4	4	4	4	4
5 - Severe	5	5	5	5	5	5

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	5	20	20	20	20	20
4 - Likely	4	8	12	12	12	12
3 - Possible	3	3	6	12	12	12
2 - Unlikely	2	3	3	6	6	12
1 - Very Unlikely	1	1	1	3	3	1
1 - Negligible	1	1	1	1	1	1
2 - Minor	2	2	2	2	2	2
3 - Moderate	3	3	3	3	3	3
4 - Significant	4	4	4	4	4	4
5 - Severe	5	5	5	5	5	5

REFERENCE NUMBER	Generator Rehab and Replacement Program (AMP)	18A001
110		
Project Type:	Rehab or Replace Assets	
Project Area:	Other	
Summary: CFPUA owns approximately 150 standby 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.		
<u>Project Drivers and Benefits:</u> • 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		\$2,400,000
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs
\$400,000	\$200,000	\$1,800,000



Risk Before

RISK ASSIGNMENT MATRIX

1-Very Likely	1	20	20	20	20
2-Likely	9	9	12	12	12
3-Possible	6	6	6	12	12
4-Unlikely	3	3	3	6	12
5-Rare/Unlikely	1	2	3	6	6
6-Not Risk	1-Not Risk	2-Minor	3-Moderate	4-Significant	5-Severe

CORRO GADGET

Risk After

RISK ASSIGNMENT MATRIX

	1-None	2-Low	3-Moderate	4-High	5-Critical
1-None	1	2	3	4	5
2-Low	2	3	4	5	6
3-Moderate	3	4	5	6	7
4-High	4	5	6	7	8
5-Critical	5	6	7	8	9

CORRO GARD™

REFERENCE NUMBER	IT SCADA		
114			
Project Type:	Rehab or Replace Assets		
Project Area:	Other		
Summary: The SCADA system at CFPUA's facilities are becoming obsolete. Due to cyber security demands, standardization, centralized management, and to reduce future integration costs, SCADA is being migrated to an updated Wonderware platform. All hardware has been procured, configured and installed. Purchase and installation of new applications is planned at every plant over the next 3 years. SCADA controls are necessary for compliant and efficient operation of each facility.			
<u>Project Drivers and Benefits:</u> • 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		\$3,000,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs	
\$750,000	\$750,000	\$1,500,000	

A photograph of a control room. A person is seated at a desk with multiple computer monitors. Two large monitors are mounted on the wall, displaying a green field with white lines. The desk has several smaller monitors, some showing the same green field, and others showing different data. The room has a white ceiling with fluorescent lights and a white wall with a large whiteboard on the right.

Risk Before						
RISK ADJUSTMENT MATRIX						
	1	2	3	4	5	6
1. Very Likely	1	2	3	4	5	6
2. Likely	2	3	4	5	6	7
3. Possible	3	4	5	6	7	8
4. Unlikely	4	5	6	7	8	9
5. Very Unlikely	5	6	7	8	9	10
6. Not Possible	6	7	8	9	10	11
CORROSION						

Risk After						
RISK ADJUSTMENT MATRIX						
	1	2	3	4	5	6
1. Very Likely	1	2	3	4	5	6
2. Likely	2	3	4	5	6	7
3. Possible	3	4	5	6	7	8
4. Unlikely	4	5	6	7	8	9
5. Very Unlikely	5	6	7	8	9	10
6. Not Possible	6	7	8	9	10	11
CORROSION						

REFERENCE NUMBER	Richardson Raw Water Supply, Chemistry and Membranes		16W210
122			
Project Type:	Rehab or Replace Assets		
Project Area:	Water Treatment		
Summary: The Richardson WTP is ten years old and additional raw water supply from existing or new wells is needed to meet peak demands. This project includes increasing raw water supply, evaluation of more aquifer raw water blending prior to treatment, water chemistry enhancements required by new water changes, treatment enhancements and membrane selection and procurement. A new floor surface will be added to the plant as part of the project to replace worn or damaged areas.			
<u>Project Drivers and Benefits:</u>			
• 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		\$3,500,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$500,000		\$300,000	\$2,700,000

#	FUNDING SOURCE	%
2	Bond Proceeds	100%



Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	35
4 - Likely	3	2	1	0	0	20
3 - Possible	2	1	0	0	0	10
2 - Unlikely	1	0	0	0	0	5
1 - Very Unlikely	0	0	0	0	0	0
0 - Not at all	0	0	0	0	0	0
CORROSION RISK						

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	35
4 - Likely	3	2	1	0	0	20
3 - Possible	2	1	0	0	0	10
2 - Unlikely	1	0	0	0	0	5
1 - Very Unlikely	0	0	0	0	0	0
0 - Not at all	0	0	0	0	0	0
CORROSION RISK						

REFERENCE NUMBER	Sweeney WTP Treatment Enhancements		18W009
123			
Project Type:	Enhancement		
Project Area:	Water Treatment		
Summary: This project was initiated to reduce contaminant levels of multiple per- and polyfluoroalkyl (PFAS) compounds, including GenX, that are present in the Cape Fear River, the raw water source for the Sweeney Water Treatment Plant (WTP). Although the Sweeney WTP already has advanced treatment processes, these were not designed to significantly reduce PFAS in the treated water. Extensive pilot testing identified Granular Activated Carbon (GAC) as the most effective treatment addition to the existing plant. The long-term solution for PFAS reduction is being designed. Funds requested in FY-2020 is to construct a post-filter, deep bed, GAC contractor process that is appropriately sized for the Sweeney WTP at a total capacity of 44 million gallons per day. The total project cost for design and construction of the deep bed contactors is estimated at \$46 million. Funds also include an interim GAC change out for \$1.3 million.			
<u>Project Drivers and Benefits:</u> • 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		\$49,880,200	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$5,580,200		\$44,300,000	\$0

	#	FUNDING SOURCE	%
	2	Bond Proceeds	81%
	6	Capital Reserve	19%

This Project Is Not
Risk Driven



REFERENCE NUMBER	Northern Water Mains - Cost Recovery Project		17W264
124			
Project Type:	Expansion		
Project Area:	Water Distribution		
Summary: This project provides water capacity for future develop throughout northern New Hanover County by completing a water transmission main loop. The planned water main is approximately 4.5 miles long and extends northward from the newly constructed Kerr Avenue water main to the General Electric campus, then eastward toward the New Hanover County Jail. Without the benefits of this looped main, all development north of I-140 will be constrained by limited water supply.			
<u>Project Drivers and Benefits:</u> • COMPLIANCE 0%: No direct impact on compliance. • EFFICIENCY 25%: Increase in efficiency with substantial other benefits. • CAPACITY 75%: Significant increase in capacity with some other beneficial considerations. • GROWTH 25%: Some increase in customer growth with substantial other. Benefits			
Total Estimated Cost		\$6,000,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$2,000,000		\$4,000,000	\$0

#	FUNDING SOURCE	%
1	Pay-go Transfers	100%

Risk Before						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	6	5	4	3	2	1
3 - Possible	8	6	5	4	3	2
2 - Unlikely	9	7	6	5	4	3
1 - Very Unlikely	10	8	7	6	5	4
0 - Not Possible	11	9	8	7	6	5
	1 - Very High	2 - High	3 - Moderate	4 - Significant	5 - Severe	
	CORROSION RISK					

Risk After						
RISK ADJUSTMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	6	5	4	3	2	1
3 - Possible	8	6	5	4	3	2
2 - Unlikely	9	7	6	5	4	3
1 - Very Unlikely	10	8	7	6	5	4
0 - Not Possible	11	9	8	7	6	5
	1 - Very High	2 - High	3 - Moderate	4 - Significant	5 - Severe	
	CORROSION RISK					

REFERENCE NUMBER	Large Water Meter Vault Replacement		
134			
Project Type:	Rehab or Replace Assets		
Project Area:	Water Distribution		
Summary: Replace or repair large meter vaults or meter vault lids that may pose a hazard to the public and CFPWA personnel because of condition. Currently there are over 50 vaults identified that need work.			
<u>Project Drivers and Benefits:</u>			
• 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		\$1,800,000	
Budgeted FY 2015-2019		Requested FY 2020	Future Budget Needs
\$0		\$300,000	\$1,500,000

	#	FUNDING SOURCE	%
	1	Pay-go Transfers	100%
			

Risk Before						
RISK ASSESSMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	6	9	12	15	18	21
3 - Possible	8	16	24	32	40	48
2 - Unlikely	1	2	3	4	5	6
1 - Very Unlikely	1	2	3	4	5	6
0 - Not at all	1	2	3	4	5	6
CORROSION RISK						

Risk After						
RISK ASSESSMENT MATRIX						
5 - Very Likely	4	3	2	1	0	1
4 - Likely	6	9	12	15	18	21
3 - Possible	8	16	24	32	40	48
2 - Unlikely	1	2	3	4	5	6
1 - Very Unlikely	1	2	3	4	5	6
0 - Not at all	1	2	3	4	5	6
CORROSION RISK						

REFERENCE NUMBER	Facilities Structural and Roof Assessment and Rehab/Replace (AMP)		
136			
Project Type:	Rehab or Replace Assets		
Project Area:	Other		
Summary: CFPUA assets include buildings, tanks and other structures made of concrete, steel and other materials approaching end of lifecycle. This project assesses, prioritizes, rehabs or replaces damaged areas of these structures.			
<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		\$1,000,000	
Budgeted FY 2015-2019	Requested FY 2020	Future Budget Needs	
\$0	\$100,000	\$900,000	

	#	FUNDING SOURCE	%
	1	Pay-go Transfers	100%
			

WATER: Projected 10 Year Capital Improvements Plan

Ref. #	FY-2020 to FY-2029 CIP	Funding Source	Current Project #	Amount Budgeted Prior to FY-20	Project Balance Jan 1, 2019	FY-20 to FY-29 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	FY-28 Planned	FY-29 Planned
Water Capital Improvement Projects		All dollar amounts are shown in 2019 dollars														
Raw Water Improvements: Surface or Well Sources and Transmission																
45	Construction of New Raw Water Line with LCFWSA ILA	2	17W261	\$1,700,000		\$25,000,000	\$25,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
96	Rehab/Replace Aerial Raw Water Lines and Pilings	4		\$0		\$8,000,000	\$100,000	\$400,000	\$7,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Treatment Plant Improvements																
123	Sweeney WTP Treatment Enhancements	2, 6	18W009	\$5,580,200		\$44,300,000	\$44,300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
132	Sweeney WTP Filters 1-4 Rehabilitation	1		\$0		\$200,000	\$0	\$0	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0
133	Sweeney Generators #1 and #2 Replacement	1		\$0		\$4,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000,000	\$0	\$0	\$0
122	Richardson Raw Water Supply, Chemistry and Membranes	2	16W210	\$500,000		\$3,000,000	\$300,000	\$2,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
100	Sweeney WTP Ozone Replacement	1	17W241	\$1,686,000		\$1,580,000	\$0	\$1,580,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Storage Improvements: Elevated, Ground and Aquifer Storage																
53	Elevated Tank Rehabilitation and Coatings	1	18W002	\$1,000,000		\$4,500,000	\$0	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Distribution System Upgrades and Rehabilitation																
22	Comprehensive Meter Replacement Program	1	16W215	\$18,280,000		\$1,200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$0	\$0	\$0	\$0
134	Large Water Meter Vault Replacement	1		\$0		\$1,800,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$0	\$0	\$0	\$0
5	Interconnect Monterey Heights Water System to Surface Water	1	17W257	\$2,675,000		\$13,000,000	\$0	\$3,000,000	\$0	\$5,000,000	\$2,000,000	\$3,000,000	\$0	\$0	\$0	\$0
27	Find It, Fix It Methodology Water Replace and Rehab (AMP)	1	17W244	\$1,200,000		\$19,000,000	\$0	\$1,000,000	\$1,000,000	\$1,000,000	\$3,000,000	\$1,000,000	\$3,000,000	\$1,000,000	\$4,000,000	\$4,000,000
24	Rehabilitation of Water Infrastructure Matching with City Streets	1	17W243	\$1,137,234		\$5,600,000	\$200,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
57	Water Emergency Repair	1	16W223	\$433,845		\$2,000,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$0	\$0
94	Water Distribution Main Enhancements	1	18W005	\$100,000		\$1,200,000	\$300,000	\$0	\$300,000	\$0	\$300,000	\$0	\$300,000	\$0	\$0	\$0
18	Water Distribution Sample Stations	1	17W245	\$420,000		\$400,000	\$200,000	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
95	Cross Town Feeder Under Burnt Mill Creek Rehab/Replace	1		\$0		\$400,000	\$50,000	\$350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
130	Water Services Rehabilitation or Replace	1		\$0		\$6,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000,000	\$3,000,000
Water Growth Projects																
36	Water Meters for New Customers	1	17W247	\$750,000		\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
124	Northern Water Mains - Cost Recovery Project	1	17W264	\$2,000,000		\$4,000,000	\$4,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
39	Distribution System - Standard Developer Agreements	1	17W248	\$800,000		\$1,500,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Total Water Capital Improvement Projects				\$38,262,279	\$0	\$149,180,000	\$75,600,000	\$11,280,000	\$11,250,000	\$8,450,000	\$7,550,000	\$6,250,000	\$9,050,000	\$2,750,000	\$8,500,000	\$8,500,000
Total Wastewater Capital Improvement Projects				\$29,200,000	\$0	\$85,550,000	\$6,700,000	\$10,350,000	\$13,750,000	\$7,750,000	\$6,250,000	\$13,750,000	\$6,250,000	\$7,250,000	\$6,250,000	\$7,250,000
Total System Wide Capital Improvement Projects				\$6,274,000	\$0	\$22,740,000	\$2,640,000	\$2,500,000	\$2,500,000	\$2,100,000	\$5,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Proposed Total Capital Improvement Projects				\$73,736,279	\$0	\$257,470,000	\$84,940,000	\$24,130,000	\$27,500,000	\$18,300,000	\$19,300,000	\$21,500,000	\$16,800,000	\$11,500,000	\$16,250,000	\$17,250,000

Funding Source																
1	Pay-go Transfers						\$5,900,000	\$8,180,000	\$3,750,000	\$8,450,000	\$7,550,000	\$6,250,000	\$9,050,000	\$2,750,000	\$8,500,000	\$8,500,000
2	Bond Proceeds						\$61,272,836	\$2,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Grants						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	SRF Loan Proceeds						\$100,000	\$400,000	\$7,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Contributions from Others						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Capital Reserves						\$8,327,164	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL WATER						\$75,600,000	\$11,280,000	\$11,250,000	\$8,450,000	\$7,550,000	\$6,250,000	\$9,050,000	\$2,750,000	\$8,500,000	\$8,500,000

Sum of All: Water, Waste Water and System Wide																
1	Pay-go Transfers						\$11,290,000	\$21,030,000	\$13,500,000	\$18,300,000	\$19,300,000	\$21,500,000	\$16,800,000	\$11,500,000	\$16,250,000	\$17,250,000
2	Bond Proceeds						\$65,222,836	\$2,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Grants						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	SRF Loan Proceeds						\$100,000	\$400,000	\$14,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Contributions from Others						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Capital Reserves						\$8,327,164	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL						\$84,940,000	\$24,130,000	\$27,500,000	\$18,300,000	\$19,300,000	\$21,500,000	\$16,800,000	\$11,500,000	\$16,250,000	\$17,250,000

WASTE WATER: Projected 10 Year Capital Improvements Plan

Ref. #	FY-2020 to FY-2029 CIP	Funding Source	Current Project #	Amount Budgeted Prior to FY-20	Project Balance Jan 1, 2019	FY-20 to FY-29 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	FY-28 Planned	FY-29 Planned
Wastewater Capital Improvement Projects		All dollar amounts are shown in 2019 dollars														
Waste Water Treatment Plant Improvements																
131	Southside WWTP - Interim Rehabilitation Phase II	1		\$0		\$7,000,000	\$0	\$0	\$0	\$500,000	\$0	\$6,500,000	\$0	\$0	\$0	\$0
90	Northside WWTP - Enhancements, Upgrades and Generator Replacement	2		\$100,000		\$3,950,000	\$3,950,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Collection System Rehabilitation/Replacement																
4	Find It, Fix It Methodology Sewer Collection Rehabilitation (AMP)	1	17S394	\$10,500,000		\$39,500,000	\$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
1	Sewer Emergency Repair	1	17S393	\$15,500,000		\$5,000,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
23	Rehabilitation of Sewer Infrastructure Matching with City Streets	1	17S395	\$1,400,000		\$6,000,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Pump Station & Forcemain Improvements																
107	PS - 14 Greenfield Lake FM Replacement	4	18S004	\$400,000		\$6,500,000	\$0	\$0	\$6,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
55	PS - 69 Motts Creek Pump Station Upgrade	1	15S307	\$400,000		\$3,900,000	\$0	\$3,900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
126	Pump Stations Prioritization and Rehabilitation	1		\$100,000		\$5,000,000	\$0	\$1,000,000	\$0	\$1,000,000	\$0	\$1,000,000	\$0	\$1,000,000	\$0	\$1,000,000
129	College Road Force Main Capacity in Chair Road Force Main	1		\$0		\$2,200,000	\$0	\$2,200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
135	Country Haven Force Main to Northside WWTP	1		\$0		\$5,000,000	\$0	\$500,000	\$4,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Growth Projects																
38	Collection System - Standard Developer Agreements	1	17S399	\$800,000		\$1,500,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Total Wastewater Capital Improvement Projects				\$29,200,000	\$0	\$85,550,000	\$6,700,000	\$10,350,000	\$13,750,000	\$7,750,000	\$6,250,000	\$13,750,000	\$6,250,000	\$7,250,000	\$6,250,000	\$7,250,000
Total Water Capital Improvement Projects				\$38,262,279	\$0	\$149,180,000	\$75,600,000	\$11,280,000	\$11,250,000	\$8,450,000	\$7,550,000	\$6,250,000	\$9,050,000	\$2,750,000	\$8,500,000	\$8,500,000
Total System Wide Capital Improvement Projects				\$6,274,000	\$0	\$22,740,000	\$2,640,000	\$2,500,000	\$2,500,000	\$2,100,000	\$5,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Proposed Total Capital Improvement Projects				\$73,736,279	\$0	\$257,470,000	\$84,940,000	\$24,130,000	\$27,500,000	\$18,300,000	\$19,300,000	\$21,500,000	\$16,800,000	\$11,500,000	\$16,250,000	\$17,250,000
Funding Source																
1	Pay-go Transfers						\$2,750,000	\$10,350,000	\$7,250,000	\$7,750,000	\$6,250,000	\$13,750,000	\$6,250,000	\$7,250,000	\$6,250,000	\$7,250,000
2	Bond Proceeds						\$3,950,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Grants						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	SRF Loan Proceeds						\$0	\$0	\$6,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Contributions from Others						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Capital Reserves						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL WASTEWATER						\$6,700,000	\$10,350,000	\$13,750,000	\$7,750,000	\$6,250,000	\$13,750,000	\$6,250,000	\$7,250,000	\$6,250,000	\$7,250,000

SYSTEM WIDE: Projected 10 Year Capital Improvements Plan

Ref. #	FY-2020 to FY-2029 CIP	Funding Source	Current Project #	Amount Budgeted Prior to FY-20	Project Balance Jan 1, 2019	FY-20 to FY-29 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	FY-28 Planned	FY-29 Planned
System Wide Capital Improvement Projects		All dollar amounts are shown in 2019 dollars														
Systemwide projects for both Water and Wastewater																
34	Motor Fleet Capital	1	17A013	\$2,500,000		\$6,000,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
40	OPS Large Equipment Purchases (Pumps, Plant Equipment, HVAC)	1	17A012	\$780,000		\$5,000,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
58	IT and Utility Ops New Ground Water Way Buildings	1		\$0		\$4,100,000	\$0	\$0	\$0	\$350,000	\$3,750,000	\$0	\$0	\$0	\$0	\$0
114	IT SCADA	1		\$750,000		\$2,250,000	\$750,000	\$750,000	\$750,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	IT SCADA (PS Upgrades)	1	16S344	\$1,000,000		\$1,250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$0	\$0	\$0	\$0	\$0
30	Information Technology Networking Infrastructure Replacement	1	16A007	\$464,000		\$1,000,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
28	IT Virtual Desktop Migration	1	16A008	\$380,000		\$140,000	\$140,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
110	Generator Rehab and Replacement Program (AMP)	1	18A001	\$400,000		\$2,000,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
136	Facilities Structural and Roof Assessment and Rehab/Replace (AMP)	1		\$0		\$1,000,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Total System Wide Capital Improvement Projects				\$6,274,000	\$0	\$22,740,000	\$2,640,000	\$2,500,000	\$2,500,000	\$2,100,000	\$5,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Total Water Capital Improvement Projects				\$38,262,279	\$0	\$149,180,000	\$75,600,000	\$11,280,000	\$11,250,000	\$8,450,000	\$7,550,000	\$6,250,000	\$9,050,000	\$2,750,000	\$8,500,000	\$8,500,000
Total Wastewater Capital Improvement Projects				\$29,200,000	\$0	\$85,550,000	\$6,700,000	\$10,350,000	\$13,750,000	\$7,750,000	\$6,250,000	\$13,750,000	\$6,250,000	\$7,250,000	\$6,250,000	\$7,250,000
Proposed Total Capital Improvement Projects				\$77,233,538	\$0	\$257,470,000	\$84,940,000	\$24,130,000	\$27,500,000	\$18,300,000	\$19,300,000	\$21,500,000	\$16,800,000	\$11,500,000	\$16,250,000	\$17,250,000
Funding Source																
1	Pay-go Transfers						\$2,640,000	\$2,500,000	\$2,500,000	\$2,100,000	\$5,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
2	Bond Proceeds						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Grants						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	SRF Loan Proceeds						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Contributions from Others						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Capital Reserves						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL SYSTEM WIDE						\$2,640,000	\$2,500,000	\$2,500,000	\$2,100,000	\$5,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000

PROJECTED OPERATING BUDGET IMPACTS FROM FY 2020 CIP

Reference Number	Capital Project	Current Project #	Amount Budgeted Prior to FY-20 Budgeted	FY-20 Budgeted	FY-21 to FY-29 Annual Planned	Total Cumulative Project Cost Planned	Estimated Completion Fiscal Year	Quantifiable Annual Operating Budget Impact Expected	Unquantifiable Annual Operating Budget Impact Expected	Annual Operating Budget Impact Comments
All dollar amounts are shown in 2015 dollars. No adjustments are made for projected inflation or deflation.										
1	Sewer Emergency Repair	17S393	\$15,500,000	\$500,000	\$4,500,000	\$20,500,000	Annual		Future Operating Budget Decrease	Sewer Emergency Repairs reduce future operating costs by rapidly intervening and eliminating ongoing sanitary sewer spills and other emergency conditions.
4	Find It, Fix It Methodology Sewer Collection Rehabilitation (AMP)	17S394	\$10,500,000	\$1,500,000	\$38,000,000	\$50,000,000	Annual		Future Operating Budget Decrease	Rehabilitating sewer collection infrastructure reduces the operating costs of infiltration and inflow. This includes electricity costs, wear and tear on pumps and treatment chemical costs.
10	IT SCADA (PS Upgrades)	16S344	\$1,000,000	\$250,000	\$1,000,000	\$2,250,000	2019		Future Operating Budget Decrease	Supervisory Control and Data Acquisition (SCADA) systems allow more efficient data collection at pump stations, potentially reducing the need for site visits by using automated means.
18	Water Distribution Sample Stations	17W245	\$420,000	\$200,000	\$200,000	\$820,000	2020		Future Operating Budget Decrease	Installation of water distribution sample stations potentially reduces operating budget by providing CFPUA personnel locations to sample without the time and risk of entering customers homes.
22	Comprehensive Meter Replacement Program	16W215	\$18,280,000	\$200,000	\$1,000,000	\$19,480,000	Annual		Future Operating Budget Decrease	More accurate meter reads reduce the costs of mobilizing staff to re-read meters in question and reduces the chance that more water passes through the meter than is read by the device.
23	Rehabilitation of Sewer Infrastructure Matching with City Streets	17S395	\$1,400,000	\$600,000	\$5,400,000	\$7,400,000	Annual		Future Operating Budget Decrease	Rehabilitating sewer collection infrastructure reduces the operating costs of infiltration and inflow. This includes electricity costs, wear and tear on pumps and treatment chemical costs.
24	Rehabilitation of Water Infrastructure Matching with City Streets	17W243	\$1,137,234	\$200,000	\$5,400,000	\$6,737,234	Annual		Future Operating Budget Decrease	Rehabilitating water distribution infrastructure reduces the operating costs of water loss. This includes electricity costs, wear and tear on pumps and treatment chemical costs.
28	IT Virtual Desktop Migration	16A008	\$380,000	\$140,000	\$0	\$520,000	2019		Future Operating Budget Decrease	Virtual Descktops are much easier for IT Staff to update and maintain than networked computers. Once the server is updated, all virtual desktops can be updated automatically.
30	Information Technology Networking Infrastructure Replacement	16A007	\$464,000	\$100,000	\$900,000	\$1,464,000	Annual		Future Operating Budget Decrease	IT Networking infrastructure is important to organizational efficiency. When networks fail, there are risks of cyber-crime, critical water and sewer failures and major operating inefficiencies.
34	Motor Fleet Capital	17A013	\$2,500,000	\$600,000	\$5,400,000	\$8,500,000	Annual		Future Operating Budget Decrease	When fleet vehicles break down while in operation, the cost to retrieve and repair the vehicles is far greater than the cost of ongoing maintenance and replacement.
36	Water Meters for New Customers	17W247	\$750,000	\$250,000	\$2,250,000	\$3,250,000	Annual		Future Operating Budget Increase	New customer accounts need meters to accurately bill for water received.
38	Collection System - Standard Developer Agreements	17S399	\$800,000	\$150,000	\$1,350,000	\$2,300,000	Annual		Future Operating Budget Decrease	Investments by CFPUA in developer installed infrastructure typically reduce future operating budgets by right-sizing infrastructure for additional future customers.
39	Distribution System - Standard Developer Agreements	17W248	\$800,000	\$150,000	\$1,350,000	\$2,300,000	Annual		Future Operating Budget Decrease	Investments by CFPUA in developer installed infrastructure typically reduce future operating budgets by right-sizing infrastructure for additional future customers.
40	OPS Large Equipment Purchases (Pumps, Plant Equipment, HVAC)	17A012	\$780,000	\$500,000	\$4,500,000	\$5,780,000	Annual		Future Operating Budget Decrease	Rebuilding or replacing large equipment reduces the operating costs of inefficient components. This includes electricity costs, maintenance costs of old equipment and downtime.
45	Construction of New Raw Water Line with LCFWSA ILA	17W261	\$1,700,000	\$25,000,000	\$0	\$26,700,000	2021		Future Operating Budget Decrease	CFPUA's agreement with LCFWSA allows CFPUA to purchase raw water at a relatively low cost compared to constructing, owning and operating redundant infrastructure to LCFWSA.
57	Water Emergency Repair	16W223	\$433,845	\$250,000	\$1,750,000	\$2,433,845	Annual		Future Operating Budget Decrease	Water Emergency Repairs reduce future operating costs by rapidly intervening and eliminating ongoing sanitary sewer spills and other emergency conditions.
90	Northside WWTP - Enhancements, Upgrades and Generator Replacement		\$100,000	\$3,950,000	\$0	\$4,050,000	2022		Future Operating Budget Decrease	Replacement and improvements to major components at Northside WWTP increase efficiency and decrease operating costs.
94	Water Distribution Main Enhancements	18W005	\$100,000	\$300,000	\$900,000	\$1,300,000	2018		Future Operating Budget Decrease	Water distribution main enhancements that eliminate dead ends, reduces the need for system flushing and reduces operating costs.
95	Cross Town Feeder Under Burnt Mill Creek Rehab/Replace		\$0	\$50,000	\$350,000	\$400,000	2022		Future Operating Budget Decrease	This project rehabilitates existing infrastructure that is at the end of its lifecycle. Reducing the risk of failure and the operating costs of responding to an emergency decreases future operating costs.
96	Rehab/Replace Aerial Raw Water Lines and Pilings		\$0	\$100,000	\$7,900,000	\$8,000,000	Annual		Future Operating Budget Decrease	This project rehabilitates existing infrastructure that is at the end of its lifecycle. Reducing the risk of failure and the operating costs of responding to an emergency decreases future operating costs.
110	Generator Rehab and Replacement Program (AMP)	18A001	\$400,000	\$200,000	\$1,800,000	\$2,400,000	Annual		Future Operating Budget Decrease	This project rehabilitates existing infrastructure that is at the end of its lifecycle. Reducing the risk of failure and the operating costs of responding to an emergency decreases future operating costs.
114	IT SCADA (Wonderware)		\$750,000	\$750,000	\$1,500,000	\$3,000,000	2023		Future Operating Budget Decrease	The current software is no longer supported by its supplier. This project upgrades the software and reduces staff time and other operating costs to support the system.

Reference Number	Capital Project	Current Project #	Amount Budgeted Prior to FY-20 Budgeted	FY-20 Budgeted	FY-21 to FY-29 Annual Planned	Total Cumulative Project Cost Planned	Estimated Completion Fiscal Year	Quantifiable Annual Operating Budget Impact Expected	Unquantifiable Annual Operating Budget Impact Expected	Annual Operating Budget Impact Comments
All dollar amounts are shown in 2015 dollars. No adjustments are made for projected inflation or deflation.										
122	Richardson Raw Water Supply, Chemistry and Membranes	16W210	\$500,000	\$300,000	\$2,700,000	\$3,500,000	2022		Future Operating Budget Decrease	Current membrane performance has degraded and requires frequent cleaning and chemistry adjustments. New membranes with improved supply and stable water chemistry will result in savings.
123	Sweeney WTP Treatment Enhancements	18W009	\$5,580,200	\$44,300,000	\$0	\$49,880,200	2022		Operating Budget Increase Of \$2.9 Million Per Year Starting In 2022	This project will increase operating budget due to increased operating and maintenance costs plus annual consumable costs for granular activated carbon media.
124	Northern Water Mains - Cost Recovery Project		\$2,000,000	\$4,000,000	\$0	\$6,000,000	2021		Future Operating Budget Increase	Since this project increases the amount of infrastructure that needs to be maintained, it will increase operating budget. However, revenues from new customers will help offset this.
134	Large Water Meter Vault Replacement		\$0	\$300,000	\$1,500,000	\$1,800,000	2026		Future Operating Budget Decrease	Current condition of large water meter vaults is poor. This project will replace this infrastructure, reducing the operating cost of frequent repair and risk of injury to the staff and public.
136	Facilities Structural and Roof Assessment and Rehab/Replace (AMP)		\$0	\$100,000	\$900,000	\$1,000,000	2030		Future Operating Budget Decrease	This project will rehab and replace this infrastructure, reducing the operating cost of frequent repairs and risk of failure potentially resulting in more damage and need for emergency response.
	TOTAL CAPITAL IMPROVEMENT PROJECTS		\$66,280,000	\$84,940,000	\$90,550,000	\$241,765,279				

*These growth projects will have substantial capital cost recovery from new customers or other stakeholders. The entire project amount is programmed to allow construction prior to cost recovery.

LONG-TERM FINANCIAL MANAGEMENT

Consistent with its 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 both challenges and opportunities. 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 20-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.

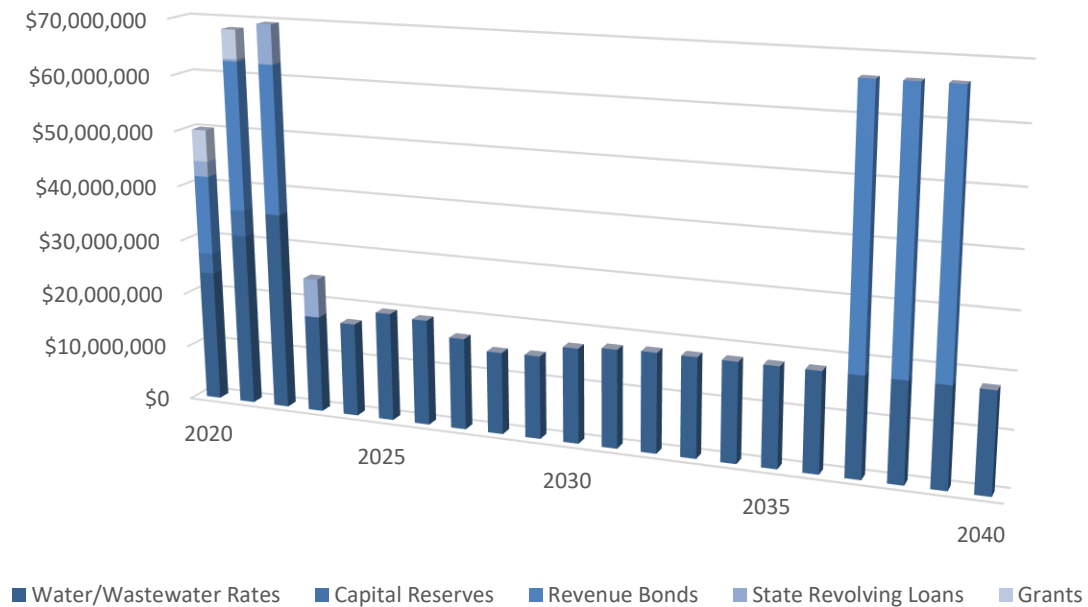
Operational Sustainability

Operational sustainability means that high-quality service will continue to be delivered to customers over the long-term. This notion not only includes providing 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 goals 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.

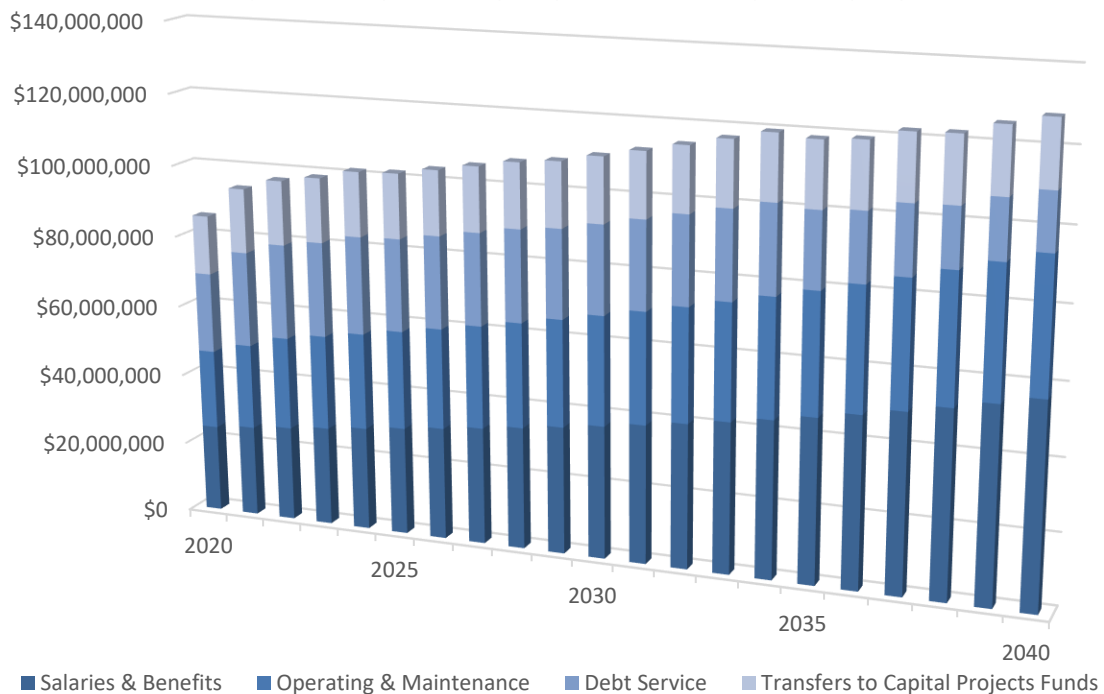
Capital expenditure projections are based on the Authority's Ten-Year Capital Improvement Program, which is developed using risk-based analyses to plan the extent and timing of water and wastewater system improvements. Capital expenditures throughout the 20-year time horizon include scheduled replacement and rehabilitation of water and wastewater system assets of approximately \$18 million per year. Projected capital expenditures through FY 22-23 include several large projects that will be debt funded through the issuance of revenue bonds or the state revolving loans totaling approximately \$83 million. These projects include the construction of a new raw water transmission line from the King's Bluff intake station to Brunswick County's water treatment; upgrades to the Sweeney Water Treatment plant to remove PFAS and other emerging contaminants from finished drinking water; the replacement of aerial raw water transmission main pilings; and the replacement of Pump Station 14. Projected capital expenditures also include \$145 million for a large capacity upgrade to the Southside Wastewater Treatment Plant in FY 36-37 through FY 38-39.

LONG-TERM FINANCIAL MANAGEMENT

Projected Capital Expenditures by Funding Source



Projected Operating Expenditures by Category



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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. Projected operating expenditures include \$1.3 million in FY 20-21 to replace filter media at the Sweeney Water Treatment Plant prior to the treatment enhancements becoming operational in FY 21-22 at which point operating expenditures include \$2.9 million for filter media maintenance and replacement every 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.

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.

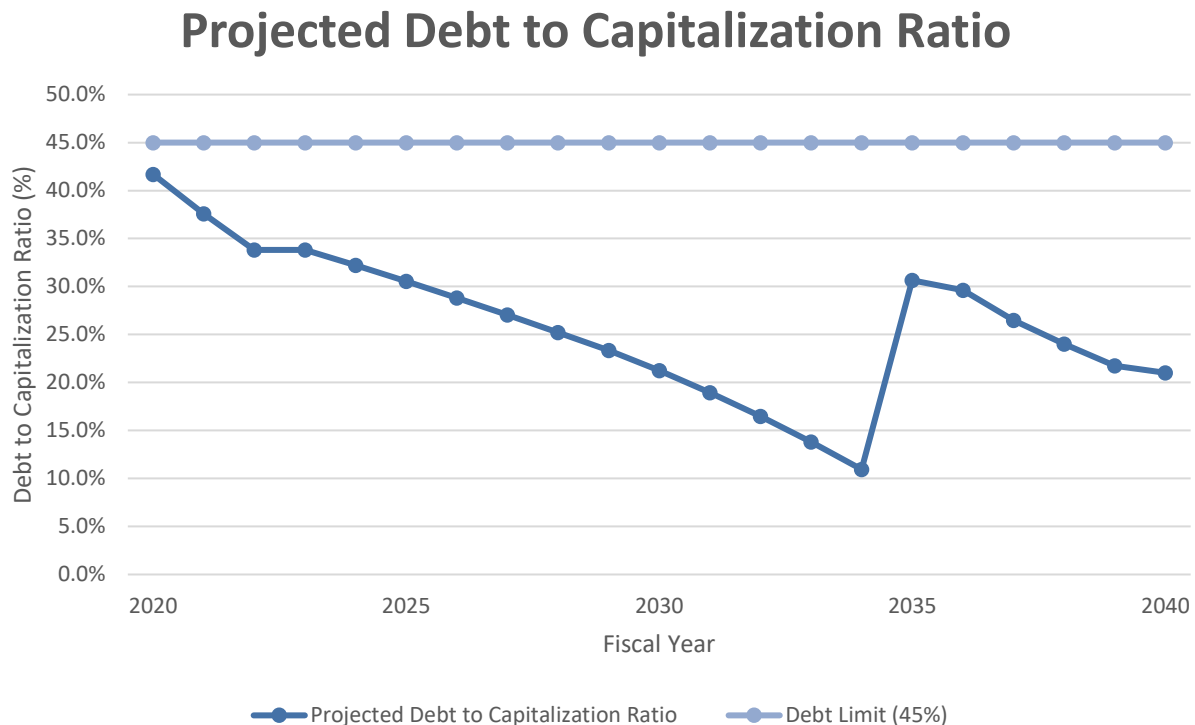
The Authority's long-term financial plan incorporates the Authority's policy on debt limitations and cash reserve levels. These policies were adopted in February 2017 to produce a resilient financial structure by reducing the proportion of the annual operating budget reserved for mandatory debt service payments, "free up" future borrowing capacity, and achieve robust coverage levels expected of the highest rated water and wastewater utilities. In accordance with these policies, rates were deliberately increased over the past two fiscal years to achieve \$18 million in annual pay-as-you-go capital funding. The Authority planned to achieve this level of funding in FY 19-20. However, the presence of PFAS in biosolid residuals has resulted in a change to how this material is disposed. Biosolids will be hauled to a land fill rather than be applied to farmland in surrounding counties. This change is projected to increase disposal costs by \$1.5 million. In FY 19-20 this additional cost will be funded by reductions to annual pay-as-you-go funded capital investment from \$18 million to \$16.5 million.

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

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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.

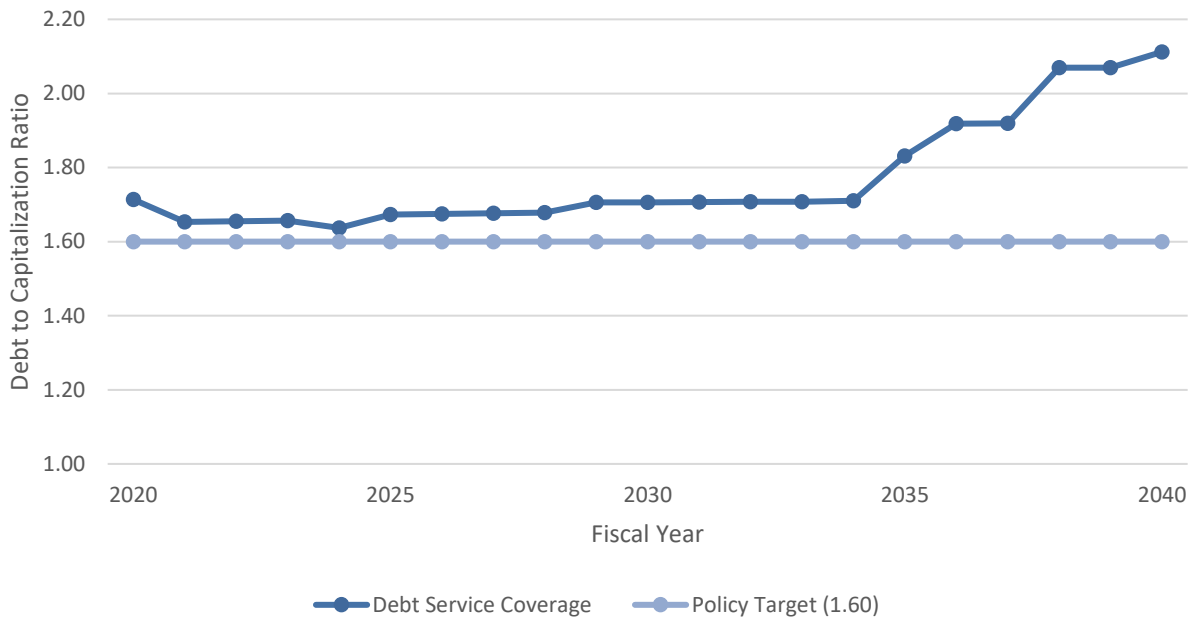


The debt-to-capitalization ratio is projected to be 41.7% due to the planned issuance of approximately \$70 million in revenue bonds to fund enhancements to the Sweeney Water Treatment Plant for the removal of PFAS and other emerging contaminants and the replacement of the Authority's raw water transmission line. The debt-to-capitalization ratio is projected to decrease through FY 33-34 as no new debt is projected to be issued and projected capital investment outpaces projected depreciation on system assets. The debt-to-capitalization ratio is projected to increase to 30.7% in FY 34-35 due to the planned issuance of debt to fund a capacity upgrade for the Southside Wastewater Treatment Plant.

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 1.2 times 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.

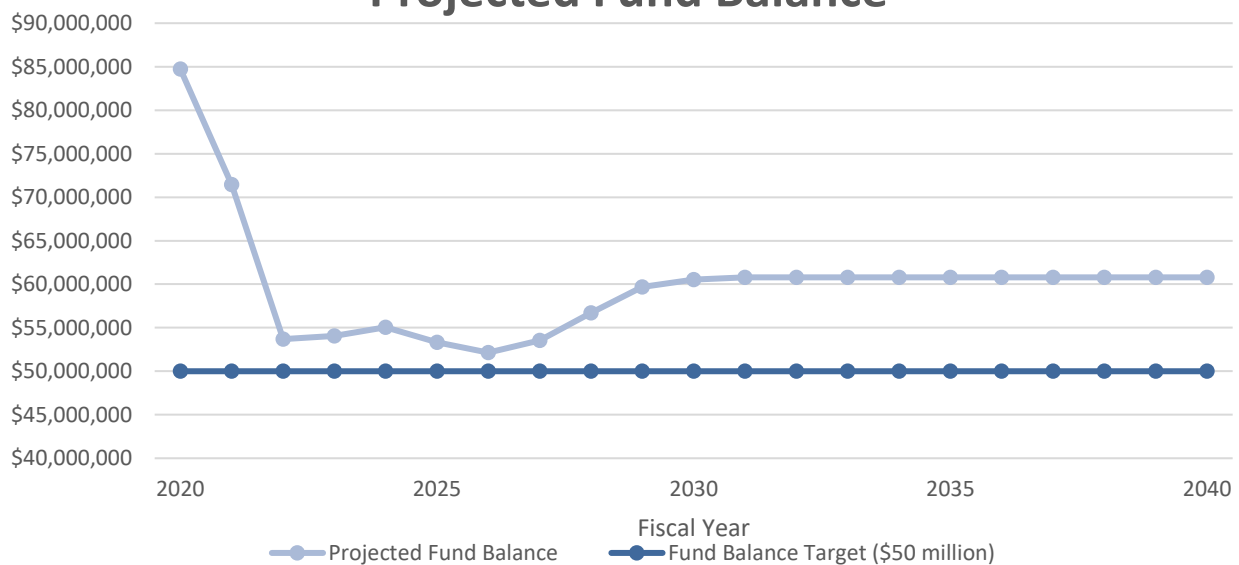
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Projected Debt Service Coverage



The graph above indicates that coverage is projected to be relatively stable through FY 33-34. Projected coverage increase rapidly through FY 39-40 to 2.11 as existing debt is fully retired which outpaces increases in debt service related to the issuance of debt to fund the capacity upgrade for the Southside Wastewater Treatment Plant.

Projected Fund Balance



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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 unrestricted fund balance target is \$50 million.

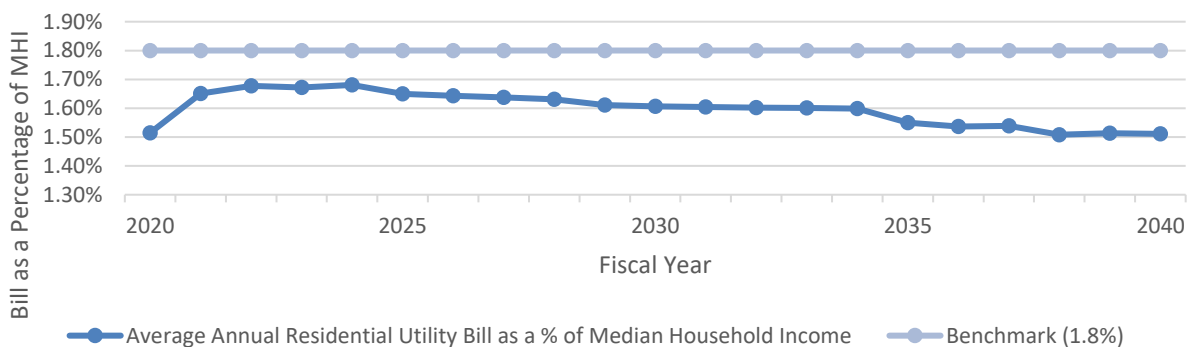
The graph on the previous page reflects CFPUA's deliberate plan to spend available fund balance on its capital program to around the \$50 million target through FY 21-22. Fund balance is projected to stay roughly flat at the \$50 million target through FY 25-26 and then experiences a projected accumulation to around \$60 million.

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 8,400 gallons per billing cycle with an assumed 1.33% increase per year in both consumption and equivalent residential units. Estimated median household income data for calendar year 2018 per the U.S. Census Bureau was used as a base year and is projected to grow by 1% per year.

Over the Authority's 20-year financial planning horizon, annual costs of residential water and wastewater service are projected to approach but remain below the target 1.8% of median household income for the service area. The annual residential utility bill as a percentage of median household income is projected to increase from 1.51% in FY 19-20 to 1.68% in FY 23-24 as rates are projected to fund increasing debt service costs from the issuance of revenue bonds and state revolving loans to fund various projects and additional annual operating costs associated with the water treatment enhancements at the Sweeney Plant. From FY 24-25 to the end of the forecast horizon the annual residential utility bill as a percentage of median household income is projected to decrease as annual debt service requirements gradually decrease.

Projected Average Annual Residential Utility Bill as a % Median Household Income



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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.

LONG TERM FINANCIAL MANAGEMENT

20-Year Projection of Operating and Capital Expenditures											
	2020 Adopted Budget	2021 Projected Budget	2022 Projected Budget	2023 Projected Budget	2024 Projected Budget	2025 Projected Budget	2026 Projected Budget	2027 Projected Budget	2028 Projected Budget	2029 Projected Budget	
Operating Activities											
Revenues	\$ 85,554,722	\$ 94,084,611	\$ 97,197,721	\$ 98,805,908	\$ 101,367,232	\$ 101,730,591	\$ 103,493,016	\$ 105,318,054	\$ 107,218,259	\$ 108,277,928	
Expenditures, before Debt Service & Capital Outlay	46,629,240	49,432,447	52,621,045	54,304,402	56,054,182	57,873,590	59,702,625	61,600,665	63,570,799	65,616,281	
Revenues over Expenditures before Debt Service & Capital Outlay	38,925,482	44,652,164	44,576,676	44,501,506	45,313,050	43,857,001	43,790,391	43,717,389	43,647,460	42,661,647	
Debt Service on Existing Debt	22,425,482	22,376,082	22,300,593	22,225,423	22,160,856	20,704,807	20,638,197	20,565,195	20,495,266	19,509,453	
Debt Service on Planned Future Debt	-	4,276,083	4,276,083	4,276,083	5,152,194	5,152,194	5,152,194	5,152,194	5,152,194	5,152,194	
Total Estimated Debt Service	22,425,482	26,652,164	26,576,676	26,501,506	27,313,050	25,857,001	25,790,391	25,717,389	25,647,460	24,661,647	
Revenue Available to Fund Capital Expenditures	16,500,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	
Capital Investment											
Capital Funding Sources:											
Current Year Revenues	16,500,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	
Available Fund Balance	8,261,525	13,771,525	18,271,525	(390,000)	(966,667)	1,700,000	1,200,000	(1,400,000)	(3,150,000)	(3,000,000)	
Capital Reserves	3,652,164	4,675,000	-	-	-	-	-	-	-	-	
Revenue Bonds	14,256,169	26,833,333	26,833,334	-	-	-	-	-	-	-	
State Revolving Loans	2,750,809	400,000	7,000,000	7,000,000	-	-	-	-	-	-	
Grants	5,699,607	5,174,607	-	-	-	-	-	-	-	-	
Total Capital Funding	51,120,273	68,854,465	70,104,859	24,610,000	17,033,333	19,700,000	19,200,000	16,600,000	14,850,000	15,000,000	
Total Capital Expenditures	51,120,273	68,854,465	70,104,859	24,610,000	17,033,333	19,700,000	19,200,000	16,600,000	14,850,000	15,000,000	
Capital Asset Balance as of 6/30	743,624,966	786,385,519	828,643,844	824,792,060	812,937,776	803,257,660	792,597,543	778,922,426	763,126,059	747,104,692	
Financial Benchmarks											
Affordability:											
Average Residential Bi-monthly Water & Sewer Bill	\$129.32	\$142.40	\$146.12	\$147.15	\$149.39	\$148.12	\$149.01	\$149.93	\$150.84	\$150.44	
% Change in Average Residential Bi-monthly Water and Sewer Bill	0.00%	10.11%	2.61%	0.71%	1.52%	-0.85%	0.60%	0.62%	0.61%	-0.26%	
Annual Utility Bill as % of Effective Buying Income (<1.8%)	1.51%	1.65%	1.68%	1.67%	1.68%	1.65%	1.64%	1.64%	1.63%	1.61%	
Median Household Income (1% per year growth)	\$51,232	\$51,744	\$52,262	\$52,784	\$53,312	\$53,845	\$54,384	\$54,928	\$55,477	\$56,032	
Liquidity:											
Unrestricted Fund Balance as of 6/30 (appr. \$50,000,000)	\$83,702,405	\$69,930,881	\$51,659,356	\$52,049,356	\$53,016,023	\$51,316,023	\$50,116,023	\$51,516,023	\$54,666,023	\$57,666,023	
Days Cash on Hand (>250)	655	516	358	350	345	324	306	305	314	321	
Coverage:											
Debt Coverage Ratio (>1.6)	1.71	1.66	1.66	1.66	1.64	1.68	1.68	1.68	1.68	1.71	
Debt:											
Debt Balance as of 6/30	\$309,631,002	\$294,951,089	\$279,678,294	\$278,297,223	\$261,175,153	\$244,832,412	\$227,884,113	\$210,312,264	\$192,084,765	\$174,070,404	
Debt to Capitalization Ratio (Cannot exceed 45%)	41.6%	37.5%	33.8%	33.7%	32.1%	30.5%	28.8%	27.0%	25.2%	23.3%	
Available Debt Capacity	\$25,000,233.19	\$58,922,394.73	\$93,211,435.33	\$92,859,204.11	\$104,646,846.73	\$116,633,534.75	\$128,784,780.89	\$140,202,827.18	\$151,321,961.26	\$162,126,707.94	

LONG TERM FINANCIAL MANAGEMENT

20-Year Projection of Operating and Capital Expenditures											
	2030 Projected Budget	2031 Projected Budget	2032 Projected Budget	2033 Projected Budget	2034 Projected Budget	2035 Projected Budget	2036 Projected Budget	2037 Projected Budget	2038 Projected Budget	2039 Projected Budget	2040 Projected Budget
Operating Activities											
Revenues	\$ 110,375,664	\$ 112,566,704	\$ 114,839,270	\$ 117,203,147	\$ 119,604,173	\$ 118,603,191	\$ 119,299,742	\$ 122,077,362	\$ 122,321,676	\$ 125,336,193	\$ 127,862,661
Expenditures, before Debt Service & Capital Outlay	67,740,537	69,947,177	72,240,007	74,623,040	77,100,508	79,676,878	82,356,869	85,145,460	88,047,915	91,069,797	94,216,991
Revenues over Expenditures before Debt Service & Capital Outlay	42,635,127	42,619,527	42,599,263	42,580,107	42,503,665	38,926,313	36,942,873	36,931,902	34,273,761	34,266,396	33,645,670
Debt Service on Existing Debt	19,482,933	19,467,333	19,447,069	19,427,913	19,351,471	15,774,119	4,662,203	4,651,232	1,993,091	1,985,726	1,365,000
Debt Service on Planned Future Debt	5,152,194	5,152,194	5,152,194	5,152,194	5,152,194	5,152,194	14,280,670	14,280,670	14,280,670	14,280,670	14,280,670
Total Estimated Debt Service	24,635,127	24,619,527	24,599,263	24,580,107	24,503,665	20,926,313	18,942,873	18,931,902	16,273,761	16,266,396	15,645,670
Revenue Available to Fund Capital Expenditures	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000
Capital Investment											
Capital Funding Sources:											
Current Year Revenues	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000
Available Fund Balance	(833,333)	(250,000)	-	-	-	-	-	-	-	-	-
Capital Reserves	-	-	-	-	-	-	-	-	-	-	-
Revenue Bonds	-	-	-	-	-	-	-	48,333,333	48,333,333	48,333,333	-
State Revolving Loans	-	-	-	-	-	-	-	-	-	-	-
Grants	-	-	-	-	-	-	-	-	-	-	-
Total Capital Funding	17,166,667	17,750,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	66,333,333	66,333,333	66,333,333	18,000,000
Total Capital Expenditures	17,166,667	17,750,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	66,333,333	66,333,333	66,333,333	18,000,000
Capital Asset Balance as of 6/30	732,820,825	718,676,542	704,332,258	689,537,975	674,293,691	658,599,408	642,455,124	672,985,841	701,858,224	729,072,274	707,502,990
Affordability:											
Average Residential Bi-monthly Water & Sewer Bill	\$151.58	\$152.84	\$154.17	\$155.58	\$156.98	\$153.73	\$153.84	\$155.65	\$154.09	\$156.09	\$157.42
% Change in Average Residential Bi-monthly Water and Sewer Bill	0.76%	0.83%	0.87%	0.91%	0.90%	-2.07%	0.07%	1.18%	-1.00%	1.30%	0.85%
Annual Utility Bill as % of Effective Buying Income (<1.8%)	1.61%	1.60%	1.60%	1.60%	1.60%	1.55%	1.54%	1.54%	1.51%	1.51%	1.51%
Median Household Income (1% per year growth)	\$56,592	\$57,158	\$57,729	\$58,307	\$58,890	\$59,479	\$60,074	\$60,674	\$61,281	\$61,894	\$62,513
Liquidity:											
Unrestricted Fund Balance as of 6/30 (appr. \$50,000,000)	\$58,499,356	\$58,749,356	\$58,749,356	\$58,749,356	\$58,749,356	\$58,749,356	\$58,749,356	\$58,749,356	\$58,749,356	\$58,749,356	\$58,749,356
Days Cash on Hand (>250)	315	307	297	287	278	269	260	252	244	235	228
Coverage:											
Debt Coverage Ratio (>1.6)	1.71	1.71	1.71	1.71	1.71	1.84	1.92	1.92	2.08	2.08	2.12
Debt:											
Debt Balance as of 6/30	\$155,348,851	\$135,925,658	\$115,849,250	\$95,093,925	\$73,666,420	\$201,521,653	\$189,955,431	\$177,998,710	\$168,324,949	\$158,310,255	\$148,554,730
Debt to Capitalization Ratio (Cannot exceed 45%)	21.2%	18.9%	16.4%	13.8%	10.9%	30.6%	29.6%	26.4%	24.0%	21.7%	21.0%
Available Debt Capacity	\$174,420,520.73	\$187,478,786.21	\$201,100,265.91	\$215,198,163.44	\$229,765,740.74	\$94,848,080.04	\$99,149,374.94	\$124,844,918.57	\$147,511,251.67	\$169,772,267.76	\$169,821,615.56

**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

TERM	STANDS FOR
EOC	Emergency Operations Center
EFT	Electronic Funds Transfer
EPA	Environmental Protection Agency
ERT	Encoder Receiver Transmitter
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

**CAPE FEAR PUBLIC UTILITY AUTHORITY
ACRONYMS**

TERM	STANDS FOR
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
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	Nephelometric Turbidity Units
O & M	Operational & Maintenance
ORC	Operator in Responsible Charge
OSHA	Occupational Safety and Health Administration
PER	Preliminary Engineering Report
PFAS	Polyfluoroalkyl Substances
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

TERM	STANDS FOR
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
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
RATES AND FEES SCHEDULE FY 19-20

		Rates and Fees Effective 7/1/18	Rates and Fees Effective 7/1/19	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"	\$ 27.56	\$ 27.56	Sec. 1-97 (1) f
	1" (Single-Family Residential with fire sprinkler system)	\$ 27.56	\$ 27.56	Sec. 1-97 (1) f
	1"	\$ 68.90	\$ 68.90	Sec. 1-97 (1) f
	1 1/2"	\$ 137.80	\$ 137.80	Sec. 1-97 (1) f
	2"	\$ 220.48	\$ 220.48	Sec. 1-97 (1) f
	3"	\$ 413.40	\$ 413.40	Sec. 1-97 (1) f
	4"	\$ 689.00	\$ 689.00	Sec. 1-97 (1) f
	6"	\$ 1,378.00	\$ 1,378.00	Sec. 1-97 (1) f
	8"	\$ 2,204.80	\$ 2,204.80	Sec. 1-97 (1) f
	10"	\$ 3,445.00	\$ 3,445.00	Sec. 1-97 (1) f
	12"	\$ 4,134.00	\$ 4,134.00	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)**	\$ 4.02	\$ 4.02	Sec. 1-97 (1) c
	** Single-Family Residential is serviced by one domestic meter			
C.	Availability Charge for unconnected 5/8" water service; Availability Charge for larger meters based on meter size	\$ 27.56	\$ 27.56	Sec. 1-97 (1) a
D.	Bulk Water Rates			
	Bulk Water Resale Rate (per 1,000 gallons)	\$ 3.48	\$ 3.48	Sec. 1-97 (1) b
	Bulk Reclaimed Water In-Service Area Rate (per 1,000 gallons)	\$ 2.55	\$ 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)	\$ 3.19	\$ 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	\$ 1,850.00	\$ 1,850.00	Sec. 1-97 (2) a; Sec. 1-5 c
	2" Service	\$ 2,300.00	\$ 2,300.00	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.	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)	\$ 1,830.00	\$ 1,880.00	Sec. 1-97 (2) d
	1" (Single-Family Residential with fire sprinkler system)	\$ 1,830.00	\$ 1,880.00	Sec. 1-97 (2) d
	1"	\$ 4,575.00	\$ 4,700.00	Sec. 1-97 (2) d
	1 1/2"	\$ 9,150.00	\$ 9,400.00	Sec. 1-97 (2) d
	2"	\$ 14,640.00	\$ 15,040.00	Sec. 1-97 (2) d
	3"	\$ 27,450.00	\$ 28,200.00	Sec. 1-97 (2) d
	4"	\$ 45,750.00	\$ 47,000.00	Sec. 1-97 (2) d
	6"	\$ 91,500.00	\$ 94,000.00	Sec. 1-97 (2) d
	8"	\$ 146,400.00	\$ 150,400.00	Sec. 1-97 (2) d
	10"	\$ 228,750.00	\$ 235,000.00	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			
	Initial inspection	No Charge	No Charge	Sec. 1-97 (2) b

CAPE FEAR PUBLIC UTILITY AUTHORITY
RATES AND FEES SCHEDULE FY 19-20

		Rates and Fees Effective 7/1/18	Rates and Fees Effective 7/1/19	Ordinance Reference
	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		\$ 4.63	\$ 4.63	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 based on the average residential consumption plus the fixed metered charge for a 5/8" meter			Sec. 1-97 (1) g; Sec. 1-75
Note 3	Nonresidential non metered consumption capped at 24,000 gallons per bimonthly billing			Sec. 1-97 (1) g; Sec. 1-75
Note 4	No cap for non-residential metered consumption			Sec. 1-97 (1) c; Sec. 1-75
Note 5	Single-Family Residential is serviced by one domestic meter			
C. Availability Charge for unconnected 5/8" sewer service; Availability Charge for larger meters based on meter size		Bi-Monthly \$ 29.10	Bi-Monthly \$ 29.10	Sec. 1-97 (1) a
D. Bulk Wastewater Collection and Treatment Rate (per 1,000 gallons)		\$3.34	\$3.34	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"	\$ 1,800.00	\$ 1,930.00	Sec. 1-97 (2) d
	1" (Single-Family Residential with fire sprinkler system)	\$ 1,800.00	\$ 1,930.00	Sec. 1-97 (2) d
	1"	\$ 4,500.00	\$ 4,825.00	Sec. 1-97 (2) d
	1 1/2"	\$ 9,000.00	\$ 9,650.00	Sec. 1-97 (2) d
	2"	\$ 14,400.00	\$ 15,440.00	Sec. 1-97 (2) d
	3"	\$ 27,000.00	\$ 28,950.00	Sec. 1-97 (2) d
	4"	\$ 45,000.00	\$ 48,250.00	Sec. 1-97 (2) d
	6"	\$ 90,000.00	\$ 96,500.00	Sec. 1-97 (2) d
	8"	\$ 144,000.00	\$ 154,400.00	Sec. 1-97 (2) d
	10"	\$ 225,000.00	\$ 241,250.00	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		\$5.04 per gpd	\$5.60 per gpd	Per Contract
Chair Road Associates - Northwest Forcemain Improvements Only		\$3.76 per gpd	\$4.17 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)

CAPE FEAR PUBLIC UTILITY AUTHORITY
RATES AND FEES SCHEDULE FY 19-20

		Rates and Fees Effective 7/1/18	Rates and Fees Effective 7/1/19	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)	\$ 0.1378	\$ 0.1378	Sec. 1-97 (1) b; Sec. 5-33
	Out-of-Service Area Rate (per gallon)	\$ 0.1723	\$ 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)	\$ 4.63	\$ 4.63	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 CFPWA WWTP (Per Pound Total Solids Dry Weight Basis as Delivered/Received)				
		Monthly	Monthly	
	Unstabilized/Less Than Class B Residuals In-Service Area Rate	\$ 0.8020	\$ 0.8020	Sec. 1-97 (1) b; Sec. 5-33
	Stabilized/Equal to or Better Than Class B Residuals In-Service Area Rate	\$ 0.6015	\$ 0.6015	Sec. 1-97 (1) b; Sec. 5-33
	Unstabilized/Less Than Class B Residuals Out-of-Service Area Rate	\$ 1.0025	\$ 1.0025	Sec. 1-97 (1) b; Sec. 5-33
	Stabilized/Equal to or Better Than Class B Residuals Out-of-Service Area Rate	\$ 0.7519	\$ 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)	\$120.60 minimum	\$120.60 minimum	Sec. 1-97 (3) m; Sec. 1-166 (c)
	Unauthorized non-metered use of sewer (capped at 30,000 gallons consumption)	\$138.90	\$138.90	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	\$55.00	\$55.00	Sec. 1-9 (g); Sec. 1-9(h)
	Meter Obstruction Fee	\$55.00	\$55.00	Sec. 1-97 (3) q
		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
	System Tampering Civil Action Violation, in accordance with N.C.G.S. 14-151(e)			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)

CAPE FEAR PUBLIC UTILITY AUTHORITY
RATES AND FEES SCHEDULE FY 19-20

		Rates and Fees Effective 7/1/18	Rates and Fees Effective 7/1/19	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/Deferral Fee	Actual Cost to File	Actual Cost to File	Sec. 1-97 (3) k
	Meter Test	\$ 55.00	\$ 55.00	Sec. 1-97 (3) i; 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
	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
	Reconnection 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) i; 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) i; Sec. 4-3 (a)
	Main Extensions/Utility relocation/ROW widening less than 500 Linear Feet	\$ 240.00	\$ 240.00	Sec. 1-97 (3) i; Sec. 4-3 (a)
	Main Extensions/Utility relocation/ROW widening 500-999 Linear Feet	\$ 300.00	\$ 300.00	Sec. 1-97 (3) i; Sec. 4-3 (a)
	Main Extensions/Utility relocation/ROW widening 1,000-4,999 linear feet	\$ 600.00	\$ 600.00	Sec. 1-97 (3) i; Sec. 4-3 (a)
	Main Extensions/Utility relocation/ROW widening 5,000-9,999 linear feet	\$ 850.00	\$ 850.00	Sec. 1-97 (3) i; 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) i; Sec. 4-3 (a)
	Pump Station Review (plus the main extensions fee above)	\$ 350.00	\$ 350.00	Sec. 1-97 (3) i; Sec. 4-3 (a)
	Re-review Fee	\$ 50.00	\$ 50.00	Sec. 1-97 (3) i; 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	\$ 1,250.00	\$ 1,500.00	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	\$ 300.00	
	Ground Space Fee - Additional ground space above 400 square feet	\$5.92/square foot	\$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) i

**Cape Fear Public Utility Authority
Demographic Statistics
Current Fiscal Year and Last Nine 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 (000's) (4)	Per Capita Income (4)
2018	119,045	227,198	38	26,263	3.9%	N/A	N/A
2017	117,525	223,483	38	26,096	3.9%	N/A	N/A
2016	115,933	220,358	38	25,901	4.8%	\$9,444,753	\$42,262
2015	113,657	216,298	38	26,241	5.6%	\$8,921,731	\$40,487
2014	112,067	213,267	38	25,470	6.1%	\$8,454,467	\$39,035
2013	109,922	209,234	38	25,364	9.1%	\$7,819,052	\$36,653
2012	108,297	206,189	37.5	25,253	9.3%	\$7,543,199	\$36,054
2011	106,476	202,667	36.7	23,934	10.1%	\$7,419,000	\$36,020
2010	102,207	194,054	38.5	23,643	9.4%	\$7,031,719	\$34,588
2009	101,526	192,235	38	23,614	9.0%	\$7,059,313	\$35,265

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) Federal Agency Data: Bureau of Economic Analysis. Data provided for as many years as available.

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

2018					2009 ⁽¹⁾				
Ten Largest Users of the Water System Annual Consumption	Thousands of Gallons	% of System	Revenues (\$)	% of Revenues	Ten Largest Users of the Water System Annual Consumption	Thousands of Gallons	% of System	Revenues (\$)	% of Revenues
1 UNC Wilmington	102,951	1.95%	\$ 458,735	1.32%	1 UNC Wilmington	136,483	2.34%	\$ 430,613	1.89%
2 New Hanover Regional Medical Center	64,628	1.23%	297,075	0.86%	2 New Hanover County	63,232	1.08%	232,431	1.02%
3 Wilmington Housing Authority	44,688	0.85%	208,074	0.60%	3 New Hanover Regional Medical Center	61,473	1.05%	211,318	0.93%
4 Elementis	41,080	0.78%	162,159	0.47%	4 New Hanover County Schools	47,862	0.82%	208,756	0.92%
5 New Hanover County Schools	39,659	0.75%	250,703	0.72%	5 Wilmington Housing Authority	40,956	0.70%	137,433	0.60%
6 New Hanover County	37,626	0.71%	217,435	0.63%	6 Lake Forest Apartments	30,088	0.52%	97,305	0.43%
7 Tribute Properties	26,660	0.51%	207,172	0.60%	7 College Manor Apartments	23,411	0.40%	80,985	0.36%
8 Lake Forest Apartments	25,042	0.48%	111,292	0.32%	8 Mayfaire Complex	22,955	0.39%	119,091	0.52%
9 State of North Carolina	18,786	0.36%	80,488	0.23%	9 Tribute Properties	21,463	0.37%	114,526	0.50%
10 City of Wilmington	17,758	0.34%	185,271	0.53%	10 Elementis Chromium	18,971	0.33%	58,243	0.26%
Total Net Consumption / Net Revenue	418,878	7.95%	\$ 2,178,404	6.28%	Total Net Consumption / Net Revenue	466,893	8.00%	\$ 1,690,699	7.42%
Total Annual System Net Consumption / Net Revenue	5,271,263		\$ 34,667,433		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 Nine Years Ago**

2018					2009 ⁽¹⁾				
Ten Largest Users of the Wastewater System Annual Consumption					Ten Largest Users of the Wastewater System Annual Consumption				
	Thousands of Gallons	% of System	Revenues (\$)	% of Revenues		Thousands of Gallons	% of System	Revenues (\$)	% of Revenues
1 Town of Wrightsville Beach	254,728	5.17%	\$ 702,767	1.86%	1 Town of Wrightsville Beach	214,743	4.42%	\$ 442,639	2.00%
2 New Hanover Regional Medical Center	61,131	1.24%	332,756	0.88%	2 UNC Wilmington	87,800	1.81%	269,249	1.22%
3 UNC Wilmington	53,375	1.08%	323,595	0.86%	3 New Hanover Regional Medical Center	54,042	1.11%	176,741	0.80%
4 Wilmington Housing Authority	44,526	0.90%	242,297	0.64%	4 New Hanover County Schools	45,665	0.94%	199,592	0.90%
5 New Hanover County Schools	36,641	0.74%	275,907	0.73%	5 Wilmington Housing Authority	40,652	0.84%	129,175	0.58%
6 New Hanover County	34,453	0.70%	233,776	0.62%	6 New Hanover County	34,744	0.72%	132,783	0.60%
7 Tribute Properties	25,982	0.53%	231,752	0.61%	7 Lake Forest Apartments	30,080	0.62%	92,040	0.42%
8 Lake Forest Apartments	25,042	0.51%	130,929	0.35%	8 Mayfaire Complex	25,303	0.52%	125,124	0.57%
9 Corning, Inc.	22,971	0.47%	106,184	0.28%	9 Tribute Properties	24,536	0.51%	154,676	0.70%
10 State of North Carolina	18,786	0.38%	94,945	0.25%	10 College Manor Apartments	23,411	0.48%	77,352	0.35%
Total Net Consumption / Net Revenue	577,635	10.94%	\$ 2,674,908	7.09%	Total Net Consumption / Net Revenue	580,975	11.96%	\$ 1,799,371	8.15%
Total Annual System Net Consumption / Net Revenue	4,928,329		\$ 37,713,883		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 Nine Years Ago**

2018				2009			
Employers	Employees (1)	Rank	Percentage of Total County Employment	Employers	Employees (3)	Rank	Percentage of Total County Employment
New Hanover Regional Medical Center	6,880	1	5.68%	New Hanover Regional Medical Center	4,890	1	5.10%
New Hanover County Schools	4,476	2	3.70%	New Hanover County Schools	4,130	2	4.30%
GE Hitachi Nuclear Energy and GE Aviation	3,000	3	2.48%	GE Hitachi Nuclear Energy and GE Aviation	3,000	3	3.13%
Wal-Mart Stores	2,227	4	1.84%	University of North Carolina at Wilmington	1,810	4	1.89%
University of North Carolina Wilmington	2,154	5	1.78%	New Hanover County	1,670	5	1.74%
Duke Energy	1,770	6	1.46%	PPD	1,420	6	1.48%
New Hanover County	1,726	7	1.43%	Cape Fear Community College	1,260	7	1.31%
PPD	1,500	8	1.24%	City of Wilmington	1,200	8	1.25%
Verizon Wireless	1,278	9	1.06%	Verizon Wireless	1,200	9	1.25%
City of Wilmington	1,067	10	0.88%	Corning, Inc.	1,000	10	1.04%
			21.54%				22.49%
Total # Employed at June 30 of the respective FY (2)			121,074	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: 2018 Book on Business; www.wilmingtonbiz.com

(2) Source: North Carolina Employment Security Commission (2009) and www.ncworks.gov (2018)

(3) Source: New Hanover County CAFR for Fiscal Year Ended June 30, 2009 using the Wilmington Industrial Development, Inc. and NC State Demographics Website.

Cape Fear Public Utility Authority
Operating Statistics
Current Year and Last Nine Fiscal Years

	Fiscal Year									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Water System										
Number of available service connections ⁽¹⁾	74,700	73,118	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	1	1
Treatment capacity (mgd) - surface water	35.00	35.00	35.00	35.00	35.00	35.00	35.00	27.50	27.50	27.50
Average production (mgd) - surface water	14.49	14.63	14.35	13.56	13.44	13.20	13.50	13.70	13.30	14.30
Number of groundwater systems	2	2	3	3	3	3	3	3	3	3
Number of treatment plants - groundwater system	1	1	1	1	1	1	1	1	1	-
Number of active wells - groundwater system	38	37	34	36	36	36	36	36	36	36
Treatment capacity (mgd) - groundwater plant	6	6	6	6	6	6	6	6	6	-
Treatment capacity (mgd) - other groundwater systems	1.02	0.90	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Average production (mgd) - groundwater	3.07	3.08	3.04	2.94	2.48	2.95	2.95	3.20	3.30	3.10
Miles of water mains	1,131	1,113	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⁾	73,043	71,539	69,222	68,246	66,829	66,059	64,529	64,330	63,793	62,296
Number of treatment plants	2	2	3	3	3	3	3	3	3	3
WPC plant permit (mgd)	28.10	28.10	28.10	28.10	22.10	22.10	22.10	22.10	22.10	22.10
Average annual daily flow (mgd)	17.49	17.16	18.76	17.48	16.45	16.17	15.10	15.80	16.80	15.60
Number of lift stations	148	146	142	143	141	141	141	141	142	142
Miles of wastewater gravity mains ⁽²⁾	892	877	848	844	827 ⁽²⁾	850	840	840 ⁽²⁾	881	877
Miles of wastewater force mains	143	142	131	131	112	110	104	104	100	100
Number of manholes	22,097	22,017	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 implementing and improving the accuracy of an asset management system.

Cape Fear Public Utility Authority
Consumption by Customer Group
Current Fiscal Year and Last Nine Fiscal Years

	2018		2017		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	Thousand Gallons	% of Consumption	Thousand Gallons	% of Consumption
Water Customers																				
Residential	3,614,451	68.57%	3,651,875	69.45%	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	1,175,036	22.29%	1,151,382	21.90%	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	90,719	1.72%	68,109	1.30%	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	391,058	7.42%	386,583	7.35%	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	5,271,263	100.00%	5,257,949	100.00%	5,246,790	100.00%	5,031,738	100.00%	4,888,957	100.00%	5,042,734	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	3,259,728	66.14%	3,277,428	67.57%	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	1,078,506	21.88%	1,048,627	21.62%	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	254,728	5.17%	184,695	3.81%	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	14,374	0.29%	11,291	0.23%	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	17,144	0.35%	15,470	0.32%	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	303,850	6.17%	312,907	6.45%	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⁾	4,928,329	100.00%	4,850,418	100.00%	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.

Budget Ordinance

Ordinance Making Appropriations For the Fiscal Year Beginning July 1, 2019

LEGISLATIVE INTENT/PURPOSE:

Appropriations and estimated revenues for the Fiscal Year Beginning July 1, 2019.

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	
Salaries & Benefits	\$24,446,588
Operating	22,182,652
Debt Service	22,425,482
Transfers to Capital Projects Funds	16,500,000
Total Appropriations	\$85,554,722
Revenues	
Water/Wastewater Charges - Volumetric	\$43,890,276
Water/Wastewater Charges - Fixed	29,935,692
System Development Charges	4,000,000
Investment Earnings	1,902,000
Other Charges for Service	5,326,754
Appropriated Fund Balance	500,000
Total Revenues	\$85,554,722

SECTION II: That appropriations herein authorized shall have the amount of outstanding purchase orders as of June 30, 2019 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 monies 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	\$2,640,000
Water Capital Improvement Projects	75,600,000
Wastewater Capital Improvement Projects	6,700,000
Total Appropriations	<u>\$84,940,000</u>

Revenues

Transfers from Operating Fund	\$11,290,000
Bond Proceeds	68,000,000
State Revolving Loan Proceeds	100,000
Capital Reserves	5,550,000
Total Revenues	<u>\$84,940,000</u>

SECTION V: Pursuant to NCGS 159-15, the Executive Director is hereby authorized to transfer monies 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 12, 2019

ATTEST:



Donna S. Pope, Clerk to the Board



William A. Norris, Chairman

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 cash 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 owned 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.
Collateralize	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.