

2020

FLORIDA KEYS
AQUEDUCT
AUTHORITY

*2020 Budget and
Financial Plan*

2020

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FLORIDA KEYS AQUEDUCT AUTHORITY

Budget and Financial Plan
2020

305.296.2454
1100 Kennedy Dr.
Key West, FL 33040

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INTRODUCTION AND OVERVIEW

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FLORIDA KEYS AQUEDUCT AUTHORITY

2020 BOARD OF DIRECTORS

J. ROBERT DEAN CHAIRMAN

District 3- Current term expires December 31, 2020
Owner and Director, Dean-Lopez Funeral Home

RICHARD J. TOPPINO VICE CHAIRMAN

District 2- Current term expires December 31, 2022
Treasurer, Charley Toppino & Sons, Inc.
Vice President, Monroe Concrete Products, Inc.

DAVID C. RITZ SECRETARY/ TREASURER

District 5- Current term expires December 31, 2020
President, Keys Consulting of America

ANTOINETTE M. APPELL BOARD MEMBER

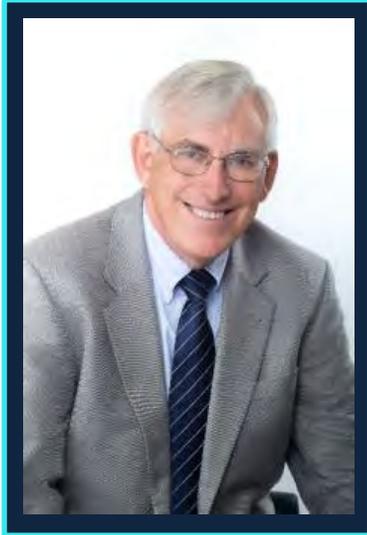
District 4- Current term expires December 31, 2020
Highly Qualified Paraprofessional with the
Monroe County School District, Retired

CARA HIGGINS BOARD MEMBER

District 1- Current term expires December 31, 2022
Partner, Horan & Higgins LLP

Message from the Executive Director

KIRK ZUELCH



On behalf of the Board of Directors and staff of the Florida Keys Aqueduct Authority, we are pleased to present our annual budget for the fiscal year ending September 30, 2020, as adopted by the Board of Directors on August 1, 2019, and the related five-year financial plan and capital financing plan.

The document is organized into five main sections. First is an introductory overview of the organization followed by a summary of our financial structure, policies and budget process. The next three sections provide financial summaries, the capital budget and debt and a detailed discussion of the operating budgets for each of our departments. This budget will remain in effect through September 30, 2020 and may only be amended through specific action of the Board. In accordance with our enabling legislation, actual expenditures for the fiscal year may not exceed the final budgeted expenditures as amended.

Operating revenue is budgeted to increase over the current year due to a 3% rate increase approved to go into effect October 1, 2019 and a 1.2% inflation index effective October 1, 2019. Sales volumes are projected to increase by 3% over current year levels based on recent trends. Operating expenses are budgeted slightly higher than the current year due mainly to additional personnel costs, increased operating costs relating to greater volume at the Cudjoe Regional Wastewater Facility as customers continue to connect to the system and replacement of aging equipment and vehicles. Capital projects are focused on projects that are critical to sustaining continued reliable operations. These projects will be funded through rates and reserves in 2020 but will require additional debt in future years to complete. Hurricane Irma had a significant impact on the Florida Keys and the Authority's infrastructure in 2017 and efforts to harden the system and recover damage costs are continuing into the upcoming budget year. No reimbursement amounts are budgeted, however, due to uncertainty of timing or amount.

Specific budget priorities and economic factors affecting the budget can be found in the introduction and overview section. Further information about the Authority can be found at our website, www.fkaa.com, or may be obtained by calling our contact center at (305) 296-2454.

We take pride in providing reliable water and wastewater services to the residents of and visitors to the Florida Keys in the most cost-effective manner while providing quality workmanship and customer service. This budget was developed to support that mission.

Respectfully submitted,

A handwritten signature in black ink that reads "Kirk C. Zuelch". The signature is written in a cursive, slightly slanted style.

Kirk Zuelch
Executive Director

August 1, 2020

VISION, MISSION, VALUES AND GUIDING PRINCIPLES

For fiscal year 2020



VISION

The Florida Keys Aqueduct Authority will be recognized nationally as a leader in the provision of safe, reliable water and wastewater services by seamlessly integrating advanced technology to enhance the customer experience and maximize efficiencies while leading as well in environmental awareness and resource protection.

MISSION

The Florida Keys Aqueduct Authority is a nationally renowned and community oriented publicly owned utility that provides reliable, safe and efficient water and wastewater services in a fiscally and environmentally responsible manner with a highly trained, professional, and dedicated team of employees.

VALUES

To achieve our mission, the Authority is committed to the following values:

- Customer satisfaction
- Excellent water quality
- Community involvement
- Strong working relationships with municipal, county, state and federal government agencies
- Employee development, communication and career growth
- Well maintained, reliable and secure systems
- Cost effective services
- Protection of environmental resources
- Financial stability

VISION, MISSION, VALUES AND GUIDING PRINCIPLES

For fiscal year 2020

GUIDING PRINCIPLES

In providing the highest quality water services to our customers, we embrace the following ten attributes of effectively managed water sector utilities as our guiding principles.

FINANCIAL VIABILITY

We understand the full life-cycle costs of the utility and maintain an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues. We establish predictable rates that are equitable and consistent with community expectations and acceptability, adequate to recover costs, provide for reserves, maintain support from bond rating agencies, and plan and invest for future needs.

- Cost effective services
- Protection of environmental resources
- Financial stability

OPERATIONAL RESILIENCY

We ensure our leadership and staff work together to anticipate and avoid problems. We proactively identify, assess, establish tolerance levels for, and effectively manage a full range of business risks including legal, regulatory, financial, environmental, safety, security, and natural disaster related.

PRODUCT QUALITY

We produce safe, high quality potable water and treated wastewater effluent in full compliance with regulatory and reliability requirements and consistent with customer, public health, and ecological needs.

INFRASTRUCTURE STABILITY

We maintain and enhance the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable risk consistent with customer, community, and regulator-supported service levels, and consistent with anticipated growth and system reliability goals.

WATER SUPPLY AVAILABILITY

We ensure water availability through long-term water supply and demand analysis, conservation, agency interaction, and public education.

CUSTOMER SATISFACTION

We provide reliable, responsive, and affordable services in line with our customer expectations. We value their opinions and suggestions.

OPERATIONAL OPTIMIZATION

We ensure ongoing, timely, cost-effective, reliable, and sustainable performance improvements in all facets of our operation.

EMPLOYEE AND LEADERSHIP DEVELOPMENT

We recruit and retain a workforce team that is skilled, motivated, adaptive, and safe-working. We encourage a participatory, collaborative organization culture dedicated to continual learning and improvement. We emphasize opportunities for professional and leadership development and strive to maintain an integrated and well-coordinated senior leadership team.

COMMUNITY SUSTAINABILITY

Manage operations, infrastructure, and investments to protect, restore, and enhance the natural environment. We efficiently use water and energy resources; promote economic vitality; and engender overall community involvement and improvement.

STAKEHOLDER UNDERSTANDING AND SUPPORT

We actively involve stakeholders in the decisions that will affect them. We garner understanding and support from community interests for service levels, rate structures, operating budgets, capital improvement programs and risk management decisions.

VISION, MISSION, VALUES AND GUIDING PRINCIPLES

For fiscal year 2020

STRATEGIC GOALS, INITIATIVES AND IMPLEMENTATION STRATEGIES

Our strategic goals define what we seek to accomplish to fulfill FCAA's vision. They reflect the unique challenges that FCAA faces as provider of water services for the Florida Keys. These goals simultaneously address infrastructure needs, opportunities to enhance customer services, and responsibilities for stewardship of our environmental resources:

1. Develop a sustainable utility and related infrastructure
2. Proactive public outreach and superior customer service
3. Enhance employee communication and development
4. Financial optimization
5. Maximize energy efficiency
6. Optimize utility operations and treatment

Our approach to accomplishing these goals is framed by the institutional and legal position as a Special District of the State of Florida.

Other Planning Processes And Their Impact On The Budget

For fiscal year 2020

	TYPE OF PLANNING PROCESS	DESCRIPTION OF PROCESS	BUDGET IMPACTS
STRATEGIC PLANNING	Long range (3 to 10 years) with objectives established for budget year	Strategic goals, initiatives and implementation strategies are reviewed with the Board as part of the budget process and updated accordingly	Provides direction for allocation of resources to meet predetermined strategic goals and objectives
FINANCIAL FORECASTING	Five-year operating plan to facilitate financial planning	Finance staff works with all departments to determine key forecast assumptions to project major revenue sources and expenditures	Provides for budget stability, planning and direction for future resource allocation decision making
CAPITAL IMPROVEMENT MASTER PLAN	Long-range plan to renew and replace water and wastewater infrastructure	Staff evaluates capital needs on an annual basis and programs the plan through a systematic prioritization process	Provides for predictable funding level from year to year to allow adequate planning for debt service requirements and operating costs of new facilities and infrastructure improvements
INFORMATION TECHNOLOGY MASTER PLAN	Multi-year plan to replace certain software applications and computer equipment	Initiatives and technology gaps identified in the plan have been prioritized by year, based on needs assessment with adjustments made as necessary	Allows for the funding of software and equipment replacements, maintenance, helpdesk support and network infrastructure replacement annually at established levels.



Profile Of The Florida Keys

For fiscal year 2020

The Florida Keys

The Florida Keys are a chain-like cluster of about 1,700 islands in the southeast United States. They begin at the southeastern tip of the Florida peninsula, about 15 miles south of Miami, and extend in a gentle arc south to southwest to Key West, the southernmost city in the contiguous United States. The islands lie along the Florida Straits, dividing the Atlantic Ocean to the east from the Gulf of Mexico to the west, and defining one edge of Florida Bay. At the nearest point, the southern tip of Key West is just 89 miles from Cuba. The total land area is approximately 137 square miles and the county-wide population is about 79,000. Much of the population is concentrated in a few areas of much higher density, such as the city of Key West, which has 32% of the entire population of the Keys.

Early History

The Keys were originally inhabited by the Tequesta Native Americans and were later found and charted by Juan Ponce de Leon. “Key” is corrupted from the Spanish cayo, meaning small island. For many years, Key West was the largest town in Florida, and it grew prosperous from sponging, cigar making and salvaging ships that wrecked on the nearby reef. The isolated outpost was well located for trade with Cuba and the Bahamas, and was on the main trade route from New Orleans. Improved navigation led to new trade routes and fewer shipwrecks, and spongers and cigar-makers moved to other parts of Florida, leaving Key West in decline by the Great Depression. The economy rebounded with an expanded Navy presence and increased tourism in the years that followed.

Profile of The Florida Keys (continued)

For fiscal year 2020

Overseas Railway

The Keys were once accessible only by water. This changed with the completion of Henry Flagler's Overseas Railway in the early 1900s. Flagler, a major developer of Florida's Atlantic coast, extended his Florida East Coast Railway down to Key West with an ambitious series of over-sea railroad trestles. The Labor Day hurricane of 1935 ended the 23-year run of the Overseas Railway. The damaged tracks were never rebuilt, and the Overseas Highway replaced the railroad as the main transportation route from Miami to Key West.

Seven Mile Bridge

One of the longest bridges in the country when it was built, the Seven Mile Bridge connects Knight's Key (part of the city of Marathon in the Middle Keys) to Little Duck Key in the Lower Keys. The water transmission line is housed inside this bridge and crosses 42 other bridges before ending in Key West.

Natural Environment and Geology

The Keys are in the subtropics between 24- and 25-degrees north latitude. The climate and environment are closer to that of the Caribbean than the rest of Florida, though unlike the Caribbean's volcanic islands, the Keys were built by plants and animals.

The Upper Keys islands are remnants of large coral reefs, which became fossilized and exposed as sea levels declined. The Lower Keys are composed of sandy-type accumulations of limestone grains produced by plants and marine organisms.

The natural habitats of the Keys are upland forests, inland wetlands and shoreline zones. Soil ranges from sand to marl to rich, decomposed leaf litter. In some places, "cap-rock" (the eroded surface of coral formations) covers the ground. Rain falling through leaf debris becomes acidic and dissolves holes in the limestone, where soil accumulates and trees root.

The climate is classified as tropical, and the Keys are the only frost-free place in Florida. There are two main seasons, hot, wet, and humid from about June through October, and somewhat drier and cooler weather from November through May. Many plants grow slowly or go dormant in the dry season. Some native trees are deciduous, and drop their leaves in the winter or with spring winds.

The Keys have distinctive plant and animal species, some found nowhere else in America, as the Keys define the northern extent of their ranges. The native flora of the Keys is diverse, including both temperate families, such as maple, pine and oak, growing at the southern end of their ranges, and tropical families, including mahogany, gumbo limbo, stoppers, Jamaican dogwood, and many others which grow only as far north as 25- or 26-degrees north latitude.

Profile Of The Florida Keys (continued)

For fiscal year 2020

The Keys are also home to unique animal species, including the Key deer, protected by the National Key Deer Refuge, and the American crocodile. The waters surrounding the Keys are part of a protected area known as the Florida Keys National Marine Sanctuary.

Local Economy and Demand Trends

The primary industries in the Authority's service area are related to tourism. Other industries include military operations and commercial fishing. The permanent year-round population of Monroe County is approximately 74,000 residents. The average functional population, defined as the sum of the permanent population and the peak seasonal population estimated by the Monroe County Growth Management Division to be approximately 150,000. Due to this difference in population, the demands on the water and wastewater systems are highly seasonal.



Demographic and Economic Information

For fiscal year 2020

FLORIDA KEYS

ESTIMATED POPULATION

Year	Resident Population
------	---------------------

2018	73,940
2017	79,077
2016	76,047
2015	74,205
2014	74,044
2013	73,560
2012	72,897
2011	72,670
2010	73,090
2000	79,589
1990	79,300
1980	63,188

PERCENTAGE OF POPULATION BY AGE

% under 18
years of age
18.68%

% 65 years of
age and over
16.33%

DEMOGRAPHICS

Average household size	2.47
Median household income	\$ 63,030
Per capital income	\$ 39,176
Personas below the poverty level	11.80%
Total housing units	53,631
Median single family home value	\$ 429,000
median travel time to work (minutes)	17.8

Demographic and Economic Information (continued)

For fiscal year 2020

LOCAL UNEMPLOYMENT

2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
3.3%	3.0%	3.2%	3.7%	3.6%	4.0%	5.4%	7.6%	7.9%	6.3%	3.4%

ANNUAL RAINFALL FOR THE LAST 10 FISCAL YEARS

Year	Key West International Airport
2018	39.80
2017	33.49
2016	40.80
2015	37.88
2014	33.94
2013	44.43
2012	60.58
2011	35.05
2010	41.47
2009	36.84
2008	36.52

AVERAGE MONTHLY TEMPERATURES IN KEY WEST

	Average high	Average Low
October	85	76
November	80	72
December	76	67
January	74	64
February	76	66
March	78	68
April	81	72
May	85	76
June	88	79
July	89	80
August	89	80
September	88	79

Demographic and Economic Information (continued)

For fiscal year 2020

Water Availability and Sales

The Authority is permitted by the South Florida Water Management District (SFWMD) to withdraw its supply of water from the Biscayne Aquifer at the Authority's wellfield in Florida City. The Authority's water use permit was approved for a twenty-year term in 2008, allowing the Authority to withdraw an annual daily average of 17.79 million gallons per day (mgd) from the Biscayne Aquifer. The permit also allows for the Authority to withdraw up to 8 mgd from the brackish Floridan Aquifer for treatment through reverse osmosis. This withdrawal should support an additional 6 mgd of treated water supply.

Due to severe drought conditions that occur in South Florida from time to time, mandatory water use restrictions are now being imposed by the SFWMD. With permanent restrictions in place, reduced consumption level remained consistent and is considered the "new normal" for budgeting purposes. As the economy improved in recent years, water use is trending upward slightly. Volume growth in the 2020 budget is estimated at 3% over previous budgets based on recent trends.

The U.S. Navy remains the Authority's largest water customer. The Navy's presence in the lower keys and Key West remains strong due in part to the large amount of unrestricted air space available for pilot training. Hotels, resorts and government make up most of the Authority's other top ten customers. Economic conditions have improved over previous years. Tourism and tourism-related development is strong, with occupancy rates high and water using increasing.

Workforce Issues

The Authority's linear geography requires sufficient staff in all areas to respond to operational and customer needs. This makes staff levels and staffing costs higher than in a centrally located system. Service personnel and customer service offices are located in three areas of the Keys in addition to the Authority's administrative headquarters in Key West (southern end of the system) and its water treatment plant in Florida City (northern end of the system).

Demographic and Economic Information (continued)

For fiscal year 2020

Workforce Issues (continued)

The cost of living in Monroe County is the highest in the state of Florida, mainly due to the cost of housing. This makes recruiting and retaining staff a challenge. This high cost of living has forced some employees to relocate. Therefore, overall compensation must be carefully considered each year in order to assure a sufficient workforce.

10 largest customers-year ended september 30, 2018

2018	Total Gallons Consumed (000)	Total Water Revenues	% of Water Revenue
1 United States Navy	270,839	\$ 1,110,979	4.2%
2 City of Key West	58,242	604,943	2.3%
3 Monroe County Detention Center	29,741	350,809	1.3%
4 Monroe County School Board	33,585	326,405	1.2%
5 Ocean Reef Club	31,948	314,283	1.2%
6 Resort Hotels of Key West	21,618	252,278	1.0%
7 Anglers Club Inc	19,006	210,863	0.8%
8 SH5 LTD (Spottswood Properties)	18,552	206,168	0.8%
9 Cheeca Holdings LLC	15,839	181,520	0.7%
10 Marina Village Condo	15,278	161,241	0.6%

10 largest customers-year ended september 30, 2009

2009	Total Gallons Consumed (000)	Total Water Revenues	% of Water Revenue
1 United States Navy	242,906	\$ 845,972	2.0%
2 Monroe County	96,773	890,985	2.1%
3 BH/NW Hawks Cay Property Holding	81,840	745,144	1.7%
4 Caloosa Cove	35,582	562,294	1.3%
5 Heartland Hotel	26,996	259,903	0.6%
6 Ocean Reef Club Inc.	26,793	234,010	0.5%
7 KW Beach Suites LTD PA	22,800	227,246	0.5%
8 NHC FL 13 LP (Sunshine Key RV Resort)	20,714	212,713	0.5%
9 Venture Out of Cudjoe	20,216	183,332	0.4%
10 Angler's Club	17,426	169,419	0.4%

SYSTEM OVERVIEW

**24 MGD LIME SOFTENING WATER
TREATMENT PLANT**

10 BISCAYNE AQUIFER SUPPLY WELLS

5 FLORIDAN AQUIFER SUPPLY WELLS

**6 MGD BRACKISH WATER REVERSE OSMOSIS
PLANT**

**2 SEAWATER REVERSE OSMOSIS PLANTS
(3MGD TOTAL CAPACITY)**

**187 MILES OF STEEL AND DUCTILE IRON
TRANSMISSION MAIN (18"-36") AT UP TO
250 PSI**

**6 TRANSMISSION BOOSTER AND BACK PUMP
STATIONS**

43 BRIDGE CROSSINGS

49 MG CAPACITY IN 33 STORAGE TANKS

**690 MILES OF POTABLE WATER
DISTRIBUTION MAIN AT UP TO 55 PSI**

26 PUMPING STATIONS

5 WASTEWATER TREATMENT PLANTS

**195 MILES OF WASTEWATER COLLECTION
AND FORCE MAIN LINES**

**14 APPROXIMATE MILES OF RECLAIMED
DISTRIBUTION WATER LINES**



Profile of the Authority

For fiscal year 2020

History and Purpose

In 1937, the legislature of the state of Florida created the Florida Keys Aqueduct Commission, the predecessor to the Authority. The Commission purpose, working with the US Navy, the City of Key West and Monroe County was obtaining, supplying and distributing potable water to the Florida Keys. In 1970, the Authority was established by the state legislature to succeed the Commission as the sole provider of water. The Authority currently operates under Special Legislation 76-441, Laws of Florida, as amended.

The Authority is the sole provider of potable water for all the residents of the Florida Keys. The Authority also provides wastewater collection and treatment in certain areas of the Florida Keys. The Authority provides service to over 50,000 customers throughout the Florida Keys. The reporting entity consists of the operations of the water and wastewater utility.

The Authority is governed by a five-member board of directors appointed by the Governor of the State of Florida from districts identical to the county commission districts in Monroe County. Members serve four-year terms. The Board employs an executive director who is the chief executive officer of the Authority.

The Authority's Facilities

The Authority has made significant improvements to the infrastructure of the water system over the years to accommodate increased demand. The initial phase of the transmission pipeline replacement was completed in the early 1980s. The Authority then established a long-range capital improvement master plan to address anticipated future water demands. This master plan is currently being updated based on a prioritization methodology designed to identify the criticality of all currently identified projects.

An overview of the Authority's facilities follows.

Wellfields

The Authority draws its primary raw water supply from the Biscayne Aquifer through ten wells with screened depths of 20 to 60 feet. The wellfield is adjacent to the outskirts of the Everglades National Park and is within an environmentally protected pine rockland. The location of the wellfield, along with restrictions enforced by state and local regulatory agencies, contribute to the unusually high quality of the raw water, which meets all federal and state finished drinking water standards prior to any treatment.

Water production and treatment facilities

The Authority's primary water production facilities are a lime softening plant that treats water withdrawn from the Biscayne Aquifer and a reverse osmosis plant that treats brackish water from the deeper Floridan Aquifer. Water treated at these facilities is then blended and disinfected before entering the transmission line. The lime softening plant has a design capacity of 24 mgd. The water treatment process consists primarily of lime softening, filtration, disinfection and fluoridation. The reverse osmosis plant treats brackish groundwater and has a design capacity of 6 mgd.

Profile of the Authority (continued)

For fiscal year 2020

Water production and treatment facilities, continued

The Authority also maintains seawater reverse osmosis facilities in Stock Island and Marathon capable of producing 2 mgd and 1 mgd, respectively. These facilities were constructed primarily for emergency operations in the event of a major transmission main break.

Water transmission and distribution systems

The Authority maintains approximately 181 miles of transmission main and approximately 680 miles of distribution lines. The transmission main ranges in size from 36 inches leaving the water treatment plant in Florida City to 18 inches at the end of the line in Key West and in areas with redundant lines. The Authority operates transmission pump stations at the water treatment plant in Florida City, Key Largo, Long Key, Marathon, Ramrod Key and Stock Island. These pump stations boost the water pressure to meet water demands throughout the service area and can also back pump in the event of a line break. The stations have pumps with electric variable speed drives as well as diesel engine drives for emergencies. The Authority also operates nineteen distribution pump stations located throughout the service area to maintain water pressure in the distribution system.

Wastewater treatment facilities

The Authority owns and operates a .054 mgd wastewater treatment facility in Bay Point, a .274 mgd facility in Duck Key and a .066 mgd facility in Layton. Additionally, the Authority operates a .84 mgd facility in Cudjoe Key and a .323 mgd facility in Big Coppitt that are owned by Monroe County. The Authority and Monroe County are parties to a 99-year lease agreement that grants the Authority the right to operate and maintain county-owned wastewater systems, including setting rates sufficient to fund those operations.

Wastewater transmission and collection systems

The Authority's wastewater collection systems are comprised of gravity, low-pressure and vacuum systems. There are also transmission force mains that carry the effluent from the collection systems to the wastewater treatment facilities.

Reclaimed water distribution systems

The Authority provides reclaimed water in certain areas that supplies non-potable irrigation water to residents and resort facilities. This reclaimed water is priced at a reduced rate to encourage customers to use it for non-potable uses rather than using potable water.

Profile of the Authority (continued)

For fiscal year 2020

The Authority's Operations

The Authority serves over 50,000 water customers in a service area that includes all the Florida Keys. Due to the geography of the Florida Keys, operations crews and facilities must be located throughout the service area. In addition to operating the water system, these crews respond to line breaks and other service interruptions, perform scheduled preventive maintenance and leak surveys, and maintain facilities and structures.

The Authority's service area for wastewater services includes all areas in unincorporated Monroe County except Ocean Reef, the Key Largo Wastewater Treatment District (Tavernier, Key Largo and Cross Key), and the area of Stock Island served by Key West Resort Utilities. The Authority also serves the City of Layton. The Authority currently serves approximately 10,500 wastewater customers.

Water quality assurance

The water quality staff is responsible for water quality assurance for the Authority. In 1996, the Safe Drinking Water Act was approved in response to improvements to the regulatory process for the protection of public health based on sound science. This law regulates the drinking water quality standard setting process, operator certification, monitoring requirements, consumer confidence reports and source water protection. The Authority strives to ensure that the Florida Keys water supply meets the highest quality standards possible for safety, aesthetics and taste. The Authority employs staff that is certified in the treatment, testing, monitoring and distribution of the water supply. Water is tested regularly, both prior to and after treatment, to ensure that it complies with or surpasses all federal and state water quality requirements. An annual consumer confidence report is provided to Authority customers in July of each year.

Protection of the groundwater source from potential pollution is a very important water quality issue. The Authority has an ongoing agreement with the Dade County Department of Environmental Resource Management (DERM) to regulate and manage issues relating to the protection of the Authority's wellfield. DERM monitors ground and surface water to establish water quality trends, enforces laws against illegal discharges, protects important aquifer recharge areas, and regulates underground storage tanks, liquid waste haulers and other hazardous waste

The Authority monitors a network of wells and structures for saltwater intrusion monthly. This network includes fourteen Authority wells and three United States Geological Survey wells. These seventeen sites provide valuable information on the location, movement and velocity of the saline/fresh water interface.

The Authority uses chloramines as its primary disinfecting agent. Chloramines are more stable than free chlorine and do not produce potentially harmful by-products. The Authority performs bacteriological testing on samples taken from approximately 90 sample sites throughout the system to ensure that appropriate disinfection is taking place.

In the state of Florida, water utilities are required to establish an ongoing cross-connection control program to detect and prevent cross-connections that may create a potential health hazard. A cross-connection is any physical connection between the water supply and any private piping arrangement that contains a foreign liquid or substance. To prevent potential backflow from such an arrangement, the Authority must either discontinue water service until the cross-connection is eliminated or require installation of an approved backflow prevention device.

Profile of the Authority (continued)

For fiscal year 2020

Awards



Distinguished Budget Presentation Award

The Government Finance Officers Association of the United States and Canada (GFOA) awarded the Distinguished Budget Presentation Award for Excellence in Budget Presentation for the Authority's 2018 budget year. This was the 12th consecutive year that the Authority has achieved this prestigious award. The award represents a significant achievement by The Authority. It reflects the commitment of The Authority's staff to meet the highest principles of governmental budgeting. To receive the award The Authority had to satisfy nationally recognized guidelines for effective budget presentation. A Distinguished Budget Presentation Award is valid for a period of one year only. We believe that our current budget and financial plan for the fiscal year ending September 2016 continues to meet the Distinguished Budget Presentation Award's requirements and we have submitted it to the GFOA to determine its eligibility for another award.

Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Authority for its Comprehensive Annual Financial Report for the fiscal year ended September 30, 2017. This was the 27th consecutive year that the Authority has achieved this prestigious award. To be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and it has been submitted to the GFOA to determine its eligibility for another certificate.



Profile of the Authority (continued)

For fiscal year 2020

Acknowledgements

The preparation of the budget and financial plan for the year ending September 30, 2020 was made possible by the dedicated service of the entire staff of the Florida Keys Aqueduct Authority. Each participant has our sincere appreciation for the contributions made in support of this effort.

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Profile of the Authority (continued)

For fiscal year 2020

Milestones

1937

State of Florida creates the Florida Keys Aqueduct Commission, the only water utility in Florida at the time that reported directly to the governor's office.

1941

First water supply system is completed by the U.S. Navy and the Commission. Shortly thereafter, a water treatment plant is built at Florida City having an original capacity of 2.4 mgd.

Mid 40s-60s

Water transmission and distribution systems are upgraded to meet rising demand, the Florida City WTP is expanded, booster pumping stations are strategically built along the Keys to boost water pressures, storage tanks are built. By 1962, water system capacity is 6.5 mgd.

1966

A flash desalination facility is constructed to supplement water supply and pressure in Key West due to increased water demands that exceeded the pipeline capacity.

1974

State of Florida amends enabling legislation changing Florida Keys Aqueduct Commission to Florida Keys Aqueduct Authority.

1976

U.S. Navy sells the water system to the Authority for \$2.1 million. The Authority board becomes elected rather than appointed by the governor.

1979

A 3 mgd reverse osmosis plant is built on Stock Island replacing the flash desalination facility to supplement water supply and pressure in Key West until the new, large-diameter pipeline from Florida City becomes operational.

1982

New, larger diameter pipeline from Florida City to Key West is completed, financed through a loan from the Farmers Home Administration.

1989

J. Robert Dean Water Treatment Facility replaces original Navy plant in Florida City, having a design capacity of 22 mgd.

1992

In August, Hurricane Andrew, one of the worst storms of the century, slams into the J. Robert Dean Water Treatment facility causing a considerable amount of damage. The rebuilding of the facility begins immediately after the hurricane passes. Despite the damage, the plant continues to provide disinfected potable water to the Florida Keys by operating on emergency back-up generation for 21 days.

1997

Reverse osmosis facility on Stock Island is renovated. The plant's capacity is split between Stock Island (2 mgd) and Marathon (1 mgd) to provide potable water during emergencies.

2001

The lime-softening water plant is upgraded and expanded to provide more treatment and storage capacity.

2005

The Keys are impacted by four named hurricanes, culminating in October with Hurricane Wilma which caused extensive flooding throughout the Keys. The damage to the Authority from Wilma were substantial, yet water service was not interrupted.

2008

The David C. Ritz Booster Pumping Station at Key Largo is placed into service to assure adequate water pressures are maintained in the transmission pipeline for the delivery of water to the Florida Keys.

2009

The Authority completed construction of a 6 mgd reverse osmosis plant adjacent to its lime softening plant in Florida City. The facility helps the Authority meet dry season permit limitations and reduced the strain placed on the Biscayne Aquifer. The Authority also placed in service the Big Coppitt Regional Wastewater system serving approximately 1,100 customers in the lower keys.

2011

South Florida experiences severe drought conditions, with one of the driest periods in 80 years. Water conservation efforts, along with the effects of an extended financial recession, resulted in a ten-year low in water demand.

2017

In September, Hurricane Irma causes severe damage throughout the Florida Keys. Uprooted trees cause multiple breaks in the distribution lines resulting in a loss of pressure in the main pipeline and a disruption in the availability of water for much of the service area for 11 consecutive days.

2019

The Authority has completed a \$200 million wastewater system to service the lower Keys. This system is the last major wastewater treatment throughout the Keys.

Budget Highlights, Issues and Priorities

For fiscal year 2020

Key Highlights

The 2020 budget reflects the impacts of several important initiatives and internal factors as well as certain external factors. Some of the important initiatives and internal factors include:

- Increased operational costs due to additional connections to the Cudjoe Regional Wastewater System
- Extensive capital improvement plan
- Contractual salary increases

Other budget impacts that are driven by external factors include the following:

- Continued repairs and increased system hardening as a result of Hurricane Irma
- Potential reimbursements from insurance and Federal Emergency Management Agency
- Potential impacts of future hurricanes
- Impacts of high cost-of-living on recruitment and workforce retention
- Uncertainty of employee health care costs for self-retained risk

These impacts, as well as other budget drivers, are discussed in more detail below.

Operating Revenue

Utility operating revenue

After several years of reduced consumption, water sales began to show signs of recovery in recent years. Water volume sales are budgeted to increase by 3% compared with the current budget. The budget includes an approved 3% increase in water rates and a 1.2% rate adjustment for inflation effective October 1, 2019 for all fees and charges.

Other revenue and capital contributions

System development fees and interest income both remain relatively insignificant, with each comprising less than 1% of total revenue.

Operating Expenses and Operating Capital Outlay

The total overall budgeted operating expenditures, including capital outlay for ongoing operations, are about 1.6% higher than those budgeted in the current year. Some of the significant budgeted expenditures are discussed below.

Personnel costs

Salaries and benefits are budgeted at \$28,483,300 or about 1.8% higher than the current budget. A cost of living salary adjustment of 1.2% is budgeted to go into effect for all employees on October 1, 2019 along with an average estimated merit increase of about 1.1%. These amounts will vary based on actual percentages. The replacement of long-tenured employees who have retired with lower paid employees will partially offset the salary increases. No new positions were added in the 2020 budget.

Budget Highlights, Issues and Priorities (continued)

For fiscal year 2020

Other operating expenses

Operating costs, such as materials and maintenance are budgeted to increase, mainly due to increased costs of materials and operational changes at the wastewater treatment plant on Cudjoe Key to accommodate new connections and increased flows. Increases in outsourced operations and consulting costs relate to instrumentation upgrades and support for cloud-based applications that were previously support in-house.

Capital outlay

Capital outlay is budgeted at \$4,793,600, an increase of \$628,100 over the current year. These costs are for replacement of aging vehicles and heavy equipment, system, upgrades at the water treatment plant and AMI collectors for approximately 55 new locations.

Capital Improvement Projects

The 2020 capital improvement plan is centered around projects that are critical to sustaining continued reliable operations. The 2020 portion of the plan calls for \$38,720,000 in capital expenditures and includes costs for distribution and transmission line replacements in areas identified as vulnerable to breaks. Also included are funds to begin construction of a new headquarters building in Key West that will replace the current structure that was damaged during Hurricane Irma and upgrades to a critical pump station. See a detailed discussion of capital projects under the section entitled Capital and Debt.

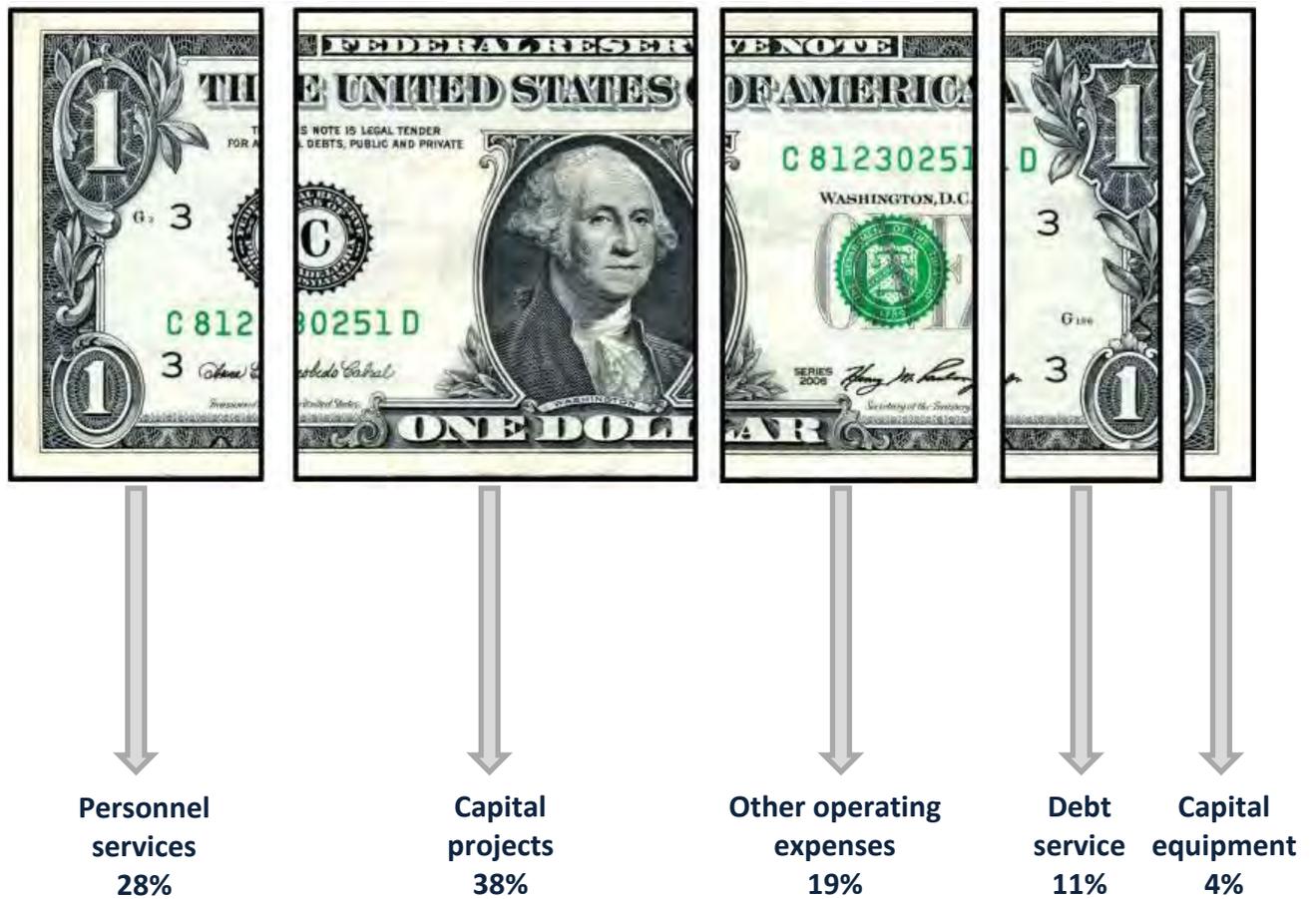
Capital Financing and Debt Service

The Authority may issue debt for constructing and maintaining the system's infrastructure or for refunding previously issued debt by pledging the revenue of the individual systems. No legal debt limit exists. However, revenue must be sufficient to fund operations, service the debt payments and provide a coverage factor as defined in the bond covenants.

Debt service is budgeted at approximately \$11.2 million, an increase of about 26%. The increase relates to debt service for a \$50 million bond issue in June 2019. The proceeds from this bond issue will be used to fund projects included in the capital improvement plan discussed above.

The finance team continually evaluates the cash requirements of the capital improvement plan and proposes financing alternatives to the Board for consideration throughout the budget year.

HOW EACH DOLLAR OF THE BUDGET WILL BE SPENT



FINANCIAL STRUCTURE, POLICY AND PROCESS

Organization Chart

Financial Policies that Impact the Budget

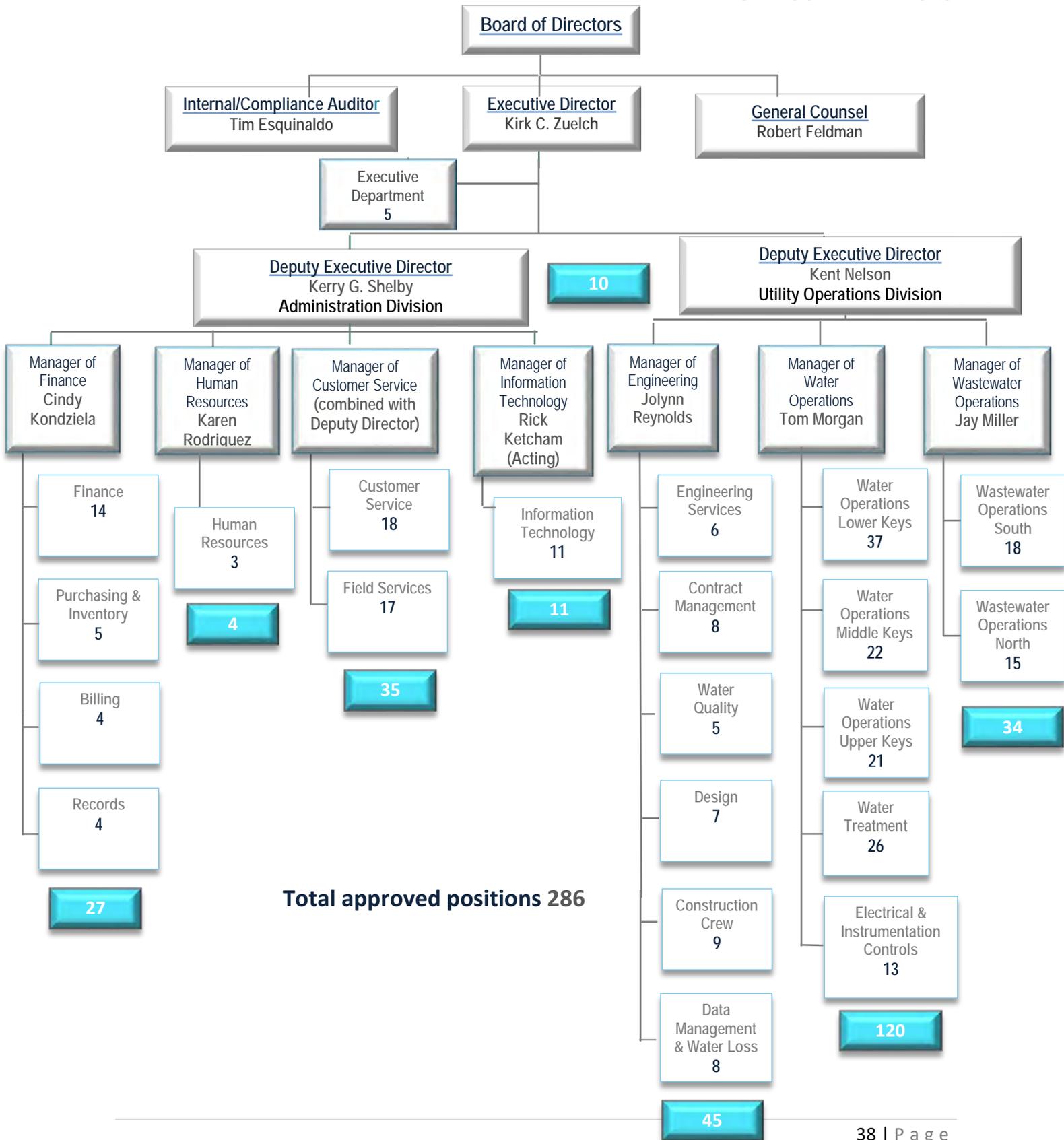
Budget Process



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ORGANIZATION CHART

FOR FISCAL YEAR 2020



CONTACT INFORMATION

FOR FISCAL YEAR 2019

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Financial Policies That Impact The Budget

For fiscal year 2020

Performance Measurement Policies

The Authority will update its strategic plan that identifies the strategic initiatives each year as part of the budget process.

Annually, each department will develop departmental performance measures that support successful results in achieving its strategic initiatives. Goals should be related to core services of the department and should reflect customer needs. The measures should be a mix of different types, including effectiveness, efficiency, demand and workload.

Performance measures will be used as a basis for preparing the Authority's budget. All budgeted amounts should be directly or indirectly linked to accomplishing the department's and the Authority's strategic initiatives.

Planning

The Authority will prepare and maintain an ongoing five-year financial plan. The plan will include projections of existing revenue and expenses as well as operating costs and revenue of future capital improvements included in the capital budget.

Interim Financial Reporting

The Authority will prepare and distribute interim budget reports comparing actual versus budgeted revenue and expense activity. The Authority will establish and maintain accounting practices that can relate budget amounts to actual results.

Capital Improvement Policies

The Authority will develop and maintain a multi-year plan for capital improvements. The Authority will enact an annual capital budget based on the multi-year capital improvement plan.

The Authority will develop the capital improvement budget along with the operating budget. Future operating costs associated with new capital improvements will be projected and included in operating budget forecasts.

The Authority will maintain all its assets at a level adequate to protect the Authority's capital investment and to minimize future maintenance and replacement costs.

The Authority will identify the estimated costs and potential funding sources for each capital project proposal before it is submitted to the Authority board for approval.

The Authority will determine the most favorable financing method for all new projects.

Debt Management Policies

The Authority will continually review its outstanding debt to evaluate whether the financial marketplace will afford the Authority the opportunity to lessen its debt service costs.

The Authority will confine long-term borrowing to capital improvements or projects that cannot be financed from current revenues.

Financial Policies That Impact The Budget (continued)

For fiscal year 2020

When the Authority finances capital projects by issuing bonds, it will pay back the bonds within a period not to exceed the estimated useful life of the project. The Authority will strive to have the final maturity of revenue bonds at or below thirty years.

The Authority will not use long-term debt proceeds for current operations.

The Authority will maintain good communications with bond rating agencies regarding its financial condition.

The Authority will follow a policy of full disclosure on every financial report and borrowing prospectus.

Revenue Policies

The Authority will maintain a diversified and stable revenue system to shelter it from unforeseeable short-run fluctuations in any revenue source.

The Authority will estimate its annual revenue by an objective, analytical process, wherever practical. Each existing and potential revenue source will be re-examined annually.

Each year the Authority will evaluate the full costs of activities supported by user fees for rate recovery sufficiency.

The Authority will automatically revise user fees annually to adjust for the effects of inflation.

Investment Policies

The Authority will adhere to the investment policies adopted by its Board of Directors. These policies apply to the investment of short-term operating funds of the Authority available after meeting current expenditures. These policies do not apply to longer-term funds and proceeds from bond issues. Topics included in the investment policies include information on:

- Investment objectives
- Safety
- Liquidity
- Yield
- Prudence and ethical standards
- Authorized investments
- Risk and diversification
- Authorized investment institutions and dealers
- Internal controls
- Reporting

Working Capital

The Authority will strive to maintain operating reserves in an amount greater than or equal to three months of basic operating expenses.

The Authority will strive to maintain a reserve of at least \$12,000,000 for working capital in the event of a natural disaster or operating emergency.

Financial Policies That Impact The Budget (continued)

For fiscal year 2020

Surplus Policies

It is the intent of the Authority to use all surpluses generated to accomplish these goals:

- Meeting reserve policies
- Avoidance of future debt
- Capital replacement
- Retirement or refinancing of existing debt
- Cash payments for capital improvement program project

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Budget Process

For fiscal year 2020

Budget Preparation

The Authority begins the budgeting process in January of each year by updating its strategic initiatives and identifying specific goals to be accomplished during the upcoming budget year. Based on those initiatives, each department prepares a preliminary summary of significant budget items and changes from the previous year, including staffing changes, major capital purchases, technology needs, capital projects and changes in debt service requirements. These summaries are reviewed with the board's budget committee in a public workshop or board meeting to get preliminary feedback from the Board on the final development of the budget.

Acting on the input from the Board, staff prepares a detailed draft budget for each cost center within the Authority. This draft budget is reviewed by the budget committee or the entire board in three public hearings, each of which will provide an opportunity for input from the public. The budget committee may schedule additional meetings during this process as necessary. A draft budget must be advertised in newspapers of general circulation in the Florida Keys no later than August 1st to comply with the Authority's enabling legislation. At a public board meeting prior to September 1st, after all comments have been received from members of the public, the board must adopt a final budget.

Budget Monitoring

Compliance with the budget is monitored on a continuing basis. Monthly budget reports are prepared and distributed to the members of the board, the Authority's staff and others to ensure ongoing analysis. The total budget may not be changed during the fiscal year without specific action by the board to do so. Any line item transfers may be approved by the staff.

The Authority's budget is designed to fund operations, capital expenditures and debt service. A balanced budget is one that provides current year sources that, along with past years' reserves, are sufficient to fund the current year's expenditures.

Budget Presentation

The Authority's operations are accounted for in an enterprise fund. The fund is budgeted on the accrual basis of accounting. Rates for water and wastewater service are established by the Board. The revenue generated by these rates is used to fund the Authority's operations.

The budget summary is presented as budgeted sources and uses so that the reader can see all aspects of the budget in one place. Although the budget is prepared on the accrual basis, sources and uses are approximations of cash flows. The budget summary shows the budgeted excess or shortfall of sources over uses and the estimated ending reserve position. This reserve position differs from ending net position (which is presented in the five-year financial plan). Ending net position is essentially the Authority's net equity (assets less liabilities).

Budgeted expenditures are characterized as operating expenses, capital expenditures or debt service. Capital expenditures are those expenditures for assets costing over \$5,000 and having a useful life of at least three years. Routine capital expenditures are assets purchased as a part of ongoing operations. Non-routine capital expenditures are referred to as capital improvement projects and are defined in the 20-year capital improvement master plan. Debt service includes the payment of principal and interest on outstanding debt issues which, in the Authority's case, take the form of revenue bonds.

Budget Process (continued)

For fiscal year 2020

Budget Preparation Timeline

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strategic Planning												
Board and customer input (informal)												
Staff input (informal)												
Update vision, mission and strategic goals												
Update policies, demographics and economics												
Develop goals and objectives												
Capital Improvement and Financing Plan												
Review projects and priorities												
Estimate five-year operational impact												
Review plan with budget team												
Develop proposed financing strategy												
Review draft with Executive Director												
Operating Budget												
Update budget formats												
Update revenue assumptions and proposed rate changes												
Estimate impacts of salary increases, retirements, etc.												
Develop detailed cost center expenditure budgets												
Prepare roll-forward of staff and fleet												
Review budgets with budget team												
Review draft with Executive Director												
Five-Year Financial Plan												
Review and update sales and expenditure projections												
Project necessary borrowings for next five years												
Prepare schedule of necessary rates for five years												
Project debt service coverage based on projections												
Board and Public Input												
Budget committee workshops												
Public hearings												
Budget advertised												
Budget adopton												

Budget Process (continued)

For fiscal year 2020

Budget Calendar

Dates for Preparation of the 2020 Budget

January 2019							May 2019										
S	M	T	W	T	F	S	S	M	T	W	T	F	S				
		1	2	3	4	5					1	2	3	4			
6	7	8	9	10	11	12	5	6	7	8	9	10	11				
13	14	15	16	17	18	19	12	13	14	15	16	17	18				
20	21	22	23	24	25	26	19	20	21	22	23	24	25				
27	28	29	30	31			26	27	28	29	30	31					
<p>Informal input from our Board of Directors, staff and customer's year around. Prepare budget sheets for distribution to Departments.</p>							<p>May 29th budget workshop</p>										
February 2019							June 2019										
S	M	T	W	T	F	S	S	M	T	W	T	F	S				
						1	2							1			
3	4	5	6	7	8	9	2	3	4	5	6	7	8				
10	11	12	13	14	15	16	9	10	11	12	13	14	15				
17	18	19	20	21	22	23	16	17	18	19	20	21	22				
24	25	26	27	28			23	24	25	26	27	28	29				
<p>In February, Departments are working on their budgets.</p>							<p>June 26th, 1st budget public hearing Tavernier</p>										
						1	2	30									
3	4	5	6	7	8	9											
10	11	12	13	14	15	16											
17	18	19	20	21	22	23											
24	25	26	27	28	29	30											
31																	
<p>Week 3 budget meetings with Deputy Executive Director</p>							<p>July 24th, 2nd budget public hearing Marathon</p>										
<p>Week 4 budget meetings with Executive Director</p>							<p>August 28th, 3rd and final budget public hearing Key West. Budget adoption planned for regular board meeting agenda.</p>										
March 2019							July 2019										
S	M	T	W	T	F	S	S	M	T	W	T	F	S				
						1	2			1	2	3	4	5	6		
3	4	5	6	7	8	9	7	8	9	10	11	12	13				
10	11	12	13	14	15	16	14	15	16	17	18	19	20				
17	18	19	20	21	22	23	21	22	23	24	25	26	27				
24	25	26	27	28	29	30	28	29	30	31							
31																	
April 2019							August 2019										
S	M	T	W	T	F	S	S	M	T	W	T	F	S				
						1	2	3							1	2	3
	1	2	3	4	5	6	4	5	6	7	8	9	10				
7	8	9	10	11	12	13	11	12	13	14	15	16	17				
14	15	16	17	18	19	20	18	19	20	21	22	23	24				
21	22	23	24	25	26	27	25	26	27	28	29	30	31				
28	29	30															
<p>April 24th an overview of the 2020 budget is presented at the board meeting</p>																	

FINANCIAL SUMMARIES

Summary of Budget Sources and Uses

Summary of Revenue Sources

Rate Structure

Operating Budget by Expenditure Type

Five-Year Financial Plan



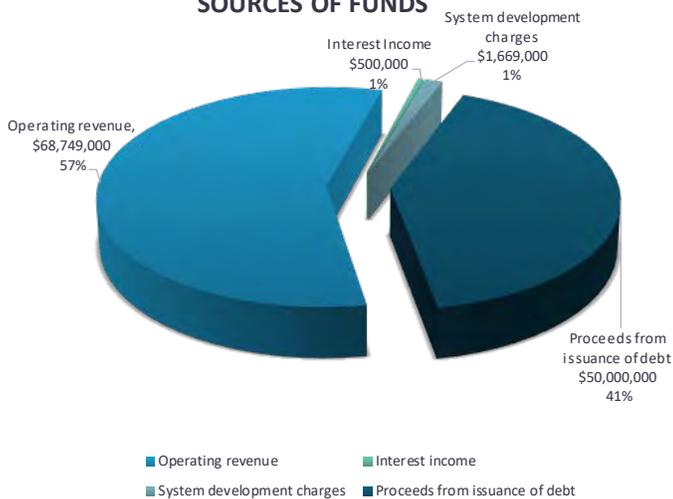
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Summary of Budgeted Sources and Uses

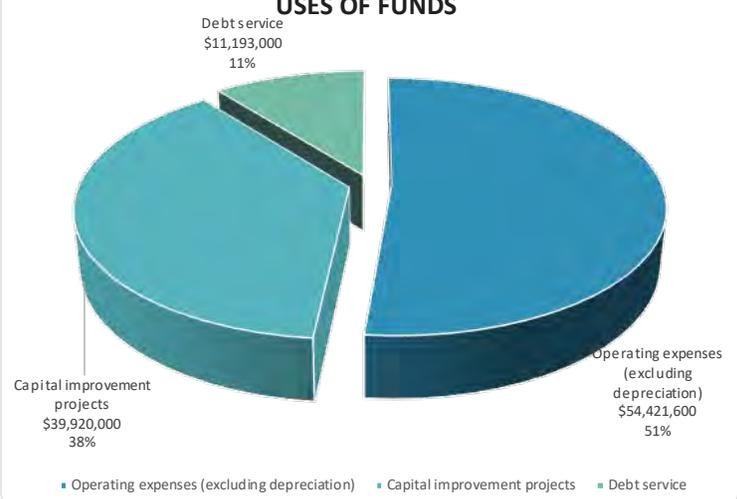
For fiscal year 2020

	2018	2019 Budget (amended)			2020 budget			% Change
	Actual	Water	Wastewater	Total	Water	Wastewater	Total	
Total budgeted sources of funds								
Utility operating revenue	\$ 62,934,223	\$ 55,024,000	\$ 9,562,000	\$ 64,586,000	\$ 58,782,000	\$ 9,967,000	\$ 68,749,000	6.5%
Interest income	690,101	500,000	-	500,000	500,000	-	500,000	0.0%
System development fees and other income	4,641,792	1,526,000	138,000	1,664,000	1,531,000	138,000	1,669,000	0.3%
Special assessments and appropriations	-	-	-	-	-	-	-	-
Proceeds from issuance of debt, net of issue costs	-	-	-	-	50,000,000	-	50,000,000	-
Total budgeted sources of funds	68,266,116	57,050,000	9,700,000	66,750,000	110,813,000	10,105,000	120,918,000	81.2%
Total budgeted uses of funds								
Operating expenditures (excluding depreciation)	49,529,349	45,203,500	8,372,100	53,575,600	45,943,500	8,478,100	54,421,600	1.6%
Capital improvement projects	15,515,687	8,830,000	733,500	9,563,500	38,720,000	1,200,000	39,920,000	317.4%
Debt service	8,677,447	8,016,000	858,000	8,874,000	10,340,000	853,000	11,193,000	26.1%
Total budgeted uses of funds	73,722,483	62,049,500	9,963,600	72,013,100	95,003,500	10,531,100	105,534,600	46.6%
Excess (deficit) sources over uses	(5,456,367)	(4,999,500)	(263,600)	(5,263,100)	15,809,500	(426,100)	15,383,400	
Adjustments to cash basis from accrual	(2,940,761)	-	-	-	-	-	-	
Change in cash and investments	(8,397,128)	(4,999,500)	(263,600)	(5,263,100)	15,809,500	(426,100)	15,383,400	
Beginning cash and investments	50,634,745	41,097,600	1,140,000	42,237,600	36,098,100	876,400	36,974,500	-12.5%
Ending cash and investments	42,237,617	36,098,100	876,400	36,974,500	51,907,600	450,300	52,357,900	41.6%
Reserves and restricted cash and investments	(28,335,281)	(27,932,000)	(71,000)	(28,003,000)	(50,780,000)	(71,000)	(50,851,000)	81.6%
Estimated ending unrestricted cash and investmer	\$ 13,902,336	\$ 8,166,100	\$ 805,400	\$ 8,971,500	\$ 1,127,600	\$ 379,300	\$ 1,506,900	-83.2%

SOURCES OF FUNDS



USES OF FUNDS



Summary of Revenue Sources

For fiscal year 2020

	2018			2019 Budget			2020 budget			Increase / Decrease	% change from prior budget
	Actual	Water	Wastewater	Total	Water	Wastewater	Total	Water	Wastewater		
Number of locations											
Estimated locations billed	51,626	50,600	10,500				51,600	10,500			
Volume											
Estimated gallons (000s) billed at retail rates	4,650,651	4,948,000					5,096,000				
Estimated gallons (000s) billed to US Navy	270,840	254,000					254,000				
Total estimated gallons(000s) sold	4,921,491	5,202,000					5,350,000				
Operating revenue											
Fees for service											
Retail water rate revenue	\$ 48,659,692	\$ 49,869,000		\$ 49,869,000	\$ 53,541,000		\$ 53,541,000		\$ 53,541,000	\$ 3,672,000	7.4%
US Navy water rate revenue	1,455,590	1,107,000		1,107,000	1,189,000		1,189,000		1,189,000	82,000	7.4%
US Navy distribution system charge	2,456,208	2,487,000		2,487,000	2,487,000		2,487,000		2,487,000	-	0.0%
Retail reclaimed water rate revenue	124,160	61,000		61,000	65,000		65,000		65,000	4,000	6.6%
Retail wastewater rate revenue	7,376,779		8,037,000	8,037,000		\$ 8,377,000	8,377,000		8,377,000	340,000	4.2%
US Navy wastewater revenue	1,464,000		1,525,000	1,525,000		1,590,000	1,590,000		1,590,000	65,000	4.3%
Total fees for service	61,536,429	53,524,000	9,562,000	63,086,000	57,282,000	9,967,000	67,249,000		67,249,000	4,163,000	6.6%
Other operating revenue	1,822,824	1,500,000	-	1,500,000	1,500,000	-	1,500,000		1,500,000	-	0.0%
Total operating revenue	63,359,253	55,024,000	9,562,000	64,586,000	58,782,000	9,967,000	68,749,000		68,749,000	4,163,000	6.5%
Non-operating revenue											
Interest income	447,002	500,000	-	500,000	500,000	-	500,000		500,000	-	0.0%
Grant proceeds	-	-	-	-	-	-	-		-	-	-
Charges to other utilities for billing services	348,632	406,000	-	406,000	411,000	-	411,000		411,000	5,000	1.2%
Other income	256,560	120,000	-	120,000	120,000	-	120,000		120,000	-	0.0%
Total non-operating revenue	1,052,194	1,026,000	-	1,026,000	1,031,000	-	1,031,000		1,031,000	5,000	0.5%
Total budgeted revenue	64,411,447	56,050,000	9,562,000	65,612,000	59,813,000	9,967,000	69,780,000		69,780,000	4,168,000	6.4%
System development fees (including assessments)	2,194,021	1,000,000	138,000	1,138,000	1,000,000	138,000	1,138,000		1,138,000	-	0.0%
State appropriations	-	-	-	-	-	-	-		-	-	0.0%
Total revenue and system development fees	\$ 66,605,468	\$ 57,050,000	\$ 9,700,000	\$ 66,750,000	\$ 60,813,000	\$ 10,105,000	\$ 70,918,000		\$ 70,918,000	\$ 4,168,000	6.2%

Budget assumptions:

Water volume sales increase	3.0%	3.0%
Rate inflation index	1.2%	1.2%
Additional water rate increase (decrease)	3.0%	
Additional wastewater rate increase (decrease)		0.0%
Average interest rate (applied to average cash balance)	1.5%	
System development fee growth factor	0.0%	0.0%

Rate Structure

For fiscal year 2020

The Authority's current water rate structure is an inverted block structure intended to encourage conservation. The rates for monthly water service includes a monthly base facility charge that varies by meter size bill and a consumption charge based on metered water usage.

The wastewater rate structure is similar to the one used for water, with monthly base facility charges and flow charges based on water flow. Single family residential customers are capped at 10,000 gallons of water flow for wastewater billing purposes.

User charges are indexed annually on October 1 of each year to adjust for inflationary impacts on the cost of operations based on the Consumer Price Index for Miami-Ft. Lauderdale published by the US Bureau of Labor Statistics.

SUMMARY OF WATER, RECLAIMED AND WASTEWATER RATES

The following table summarizes the Authority's existing rates for water and wastewater service and projected rates after annual indexing for inflation.

	Rates in effect on October 1, 2018		After October 1, 2019 index and 3% rate increase	
Potable Water Rates				
Base facilities charge				
5/8-inch or 3/4-inch	\$	15.45	\$	16.10
1-inch		38.65		40.29
1½-inch		77.27		80.54
2-inch		123.64		128.88
3-inch		231.81		241.63
4-inch		383.56		399.81
6-inch		774.17		806.96
8-inch		1,236.28		1,288.65
Consumption charge ^[1]				
Block 1	\$	6.49	\$	6.76
Block 2		9.48		9.88
Block 3		10.63		11.08
Block 4		11.86		12.36
Block 5		13.02		13.57
Reclaimed Water Rates				
Consumption charge ^[1]				
Block 1	\$	3.25	\$	3.38
Block 2		4.74		4.94
Block 3		5.32		5.54
Block 4		5.93		6.18
Block 5		6.51		6.79

Rate Structure (continued)

For fiscal year 2020

	Rates in effect on October 1, 2018	After October 1, 2019 index
Wastewater Rates		
Base facilities charge		
½-inch or ¾-inch	\$ 25.70	\$ 26.01
1-inch	96.40	97.56
1½-inch	192.80	195.11
2-inch	308.49	312.19
3-inch	578.40	585.34
4-inch	964.00	975.57
6-inch	1,928.94	1,952.09
8-inch	2,643.17	2,674.89
Flow collection charge		
Residential (up to 10,000 gallons)	\$ 9.72	\$ 9.84
Non-residential (all consumption)	9.72	9.84

Note: Block 1 for 5/8" meter customers, which includes the majority of FCAA customers, is 6,000 gallons. Consumption blocks for customers with larger meters increase based on meter equivalents.

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Operating Expenditure Budget By Expenditure Type

For fiscal year 2020

SCHEDULE OF BUDGETED EXPENDITURES FOR THE YEAR ENDING SEPTEMBER 30, 2020 Total Company

	BUDGETED 2020						Increase /Decrease	% change from prior budget
	2018 Actual	2019 Budget	Water	Wastewater	Total			
Operating capital expenditures								
Additions to utility plant	\$ 3,078,994	\$ 4,165,500	\$ 4,629,000	\$ 164,600	\$ 4,793,600	\$ 628,100	15%	
Capitalized salaries	588,985	1,033,600	1,094,500	-	1,094,500	60,900	6%	
Capitalized overtime	27,174	-	-	-	-	-	-	
Total operating capital expenditures	3,695,153	5,199,100	5,723,500	164,600	5,888,100	689,000	13.3%	
Operating expenses								
Personnel services								
Salaries	19,306,145	19,854,600	17,831,900	2,109,200	19,941,100	86,500	0%	
Overtime	738,103	580,800	430,800	150,000	580,800	-	0%	
Retirement	2,038,082	2,064,300	1,987,600	194,000	2,181,600	117,300	6%	
Payroll taxes	1,518,895	1,642,400	1,481,000	172,800	1,653,800	11,400	1%	
Employee health insurance	3,566,119	3,600,000	3,600,000	-	3,600,000	-	0%	
Other benefits	184,718	244,700	255,700	14,400	270,100	25,400	10%	
Total personnel services	27,352,062	27,986,800	25,587,000	2,640,400	28,227,400	240,600	0.9%	
Other operating expenses								
Electricity	2,932,893	3,154,000	2,887,500	466,800	3,354,300	200,300	6%	
Fuel for power production	126,773	107,700	126,900	12,500	139,400	31,700	29%	
Chemicals	1,789,748	2,188,400	1,757,600	527,800	2,285,400	97,000	4%	
Maintenance and materials	4,724,517	4,595,700	4,418,300	601,300	5,019,600	423,900	9%	
Engineering services	243,359	740,600	410,000	-	410,000	(330,600)	-45%	
Accounting and auditing services	105,944	93,000	96,000	-	96,000	3,000	3%	
Legal services	25,853	30,000	30,000	-	30,000	-	0%	
Outsourced operations	1,368,325	1,467,100	1,659,400	187,700	1,847,100	380,000	26%	
Other consulting and support services	1,606,625	1,772,700	2,150,300	-	2,150,300	377,600	21%	
Sludge removal	140,528	240,800	82,000	170,100	252,100	11,300	5%	
Rental of building - real property	19,619	25,500	6,000	6,000	12,000	(13,500)	-53%	
Rent expense - equipment	28,071	54,200	53,300	6,700	60,000	5,800	11%	
Transportation expense	552,606	528,200	540,200	500	540,700	12,500	2%	
Insurance - vehicles	90,185	110,000	110,000	-	110,000	-	0%	
Insurance - general liabilities	147,028	140,000	120,000	-	120,000	(20,000)	-14%	
Insurance - workers' compensation	325,967	300,000	300,000	-	300,000	-	0%	
Insurance - property and flood	709,314	1,162,000	1,150,000	-	1,150,000	(12,000)	-1%	
Advertising	64,431	66,700	67,000	-	67,000	300	0%	
Bad debt expense	68,952	81,000	81,000	-	81,000	-	0%	
Office supplies	91,489	147,200	140,800	6,400	147,200	-	0%	
Other utilities and technical services	747,340	945,000	760,100	-	760,100	(184,900)	-20%	
Postage	32,436	45,000	55,000	1,000	56,000	11,000	24%	
Travel	83,976	164,500	189,100	8,900	198,000	33,500	20%	
Training	79,426	190,400	239,400	14,600	254,000	63,600	33%	
Miscellaneous	142,969	162,700	182,500	3,400	185,900	23,200	14%	
Bank charges	575,975	550,000	600,000	-	600,000	50,000	9%	
Public information and outreach	30,904	102,000	70,000	-	70,000	(32,000)	-31%	
Freight charges	4,730	10,000	10,000	-	10,000	-	0%	
Total other operating expenses	16,859,983	19,174,400	18,292,400	2,013,700	20,306,100	1,131,700	5.9%	
Total operating budget	\$ 44,212,045	\$ 47,161,200	\$ 43,879,400	\$ 4,654,100	\$ 48,533,500	\$ 1,372,300	2.9%	
Allocation of administrative expenses			\$ (3,659,400)	\$ 3,659,400	\$ -			
Total operating expenses after allocation	44,212,045	47,161,200	40,220,000	8,313,500	48,533,500	1,372,300	2.9%	
Total operating budget	\$ 47,907,198	\$ 52,360,300	\$ 45,943,500	\$ 8,478,100	\$ 54,421,600	\$ 2,061,300	3.9%	
Amendments to current year budget		1,215,300						
Total operating budget as amended		\$ 53,575,600			\$ 54,421,600	\$ 846,000	1.6%	

Five Year Financial Plan

For fiscal year 2020

PROJECTED CHANGES IN NET POSITION

FOR FISCAL YEARS 2020 - 2024

	2020	2021	2022	2023	2024
Projected operating results					
Operating revenue	\$ 68,749,000	\$ 72,592,000	\$ 76,651,000	\$ 78,579,000	\$ 80,556,000
Operating expenses (before depreciation)	(54,421,600)	(54,966,000)	(55,516,000)	(56,071,000)	(56,632,000)
Net operating income (before depreciation)	14,327,400	17,626,000	21,135,000	22,508,000	23,924,000
Interest income	500,000	500,000	500,000	500,000	500,000
Other income	531,000	537,000	543,000	549,000	555,000
Interest expense	(6,638,000)	(6,540,000)	(8,791,000)	(8,672,000)	(8,541,000)
Projected net income before depreciation	8,720,400	12,123,000	13,387,000	14,885,000	16,438,000
System development fees (including assessments)	1,138,000	1,138,000	1,138,000	1,138,000	1,138,000
State appropriations (Key Haven and East Long Key)	-	-	-	-	-
Projected increase (decrease) in net position before depreciation	9,858,400	13,261,000	14,525,000	16,023,000	17,576,000
Projected beginning net position	139,600,000	135,028,400	133,859,400	133,954,400	135,547,400
Projected net position before depreciation	149,458,400	148,289,400	148,384,400	149,977,400	153,123,400
Estimated depreciation	(14,430,000)	(14,430,000)	(14,430,000)	(14,430,000)	(14,430,000)
Projected ending net position after depreciation	\$ 135,028,400	\$ 133,859,400	\$ 133,954,400	\$ 135,547,400	\$ 138,693,400

PROJECTED SOURCES AND USES OF FUNDS

FOR FISCAL YEARS 2020-2024

	2020	2021	2022	2023	2024
Total projected sources of funds					
Utility operating revenue	\$ 68,749,000	\$ 72,592,000	\$ 76,651,000	\$ 78,579,000	\$ 80,556,000
Interest income	500,000	500,000	500,000	500,000	500,000
System development fees and other income	1,669,000	1,675,000	1,681,000	1,687,000	1,693,000
Special assessments and appropriations	-	-	-	-	-
Proceeds from issuance of debt, net of issue costs	50,000,000	-	50,000,000	-	-
Total projected sources of funds	120,918,000	74,767,000	128,832,000	80,766,000	82,749,000
Total projected uses of funds					
Operating expenditures (excluding depreciation)	54,421,600	54,966,000	55,516,000	56,071,000	56,632,000
Capital improvement projects	39,920,000	37,550,000	33,044,000	19,040,000	13,300,000
Debt service	11,193,000	11,135,000	14,456,000	14,617,000	14,746,000
Total projected uses of funds	105,534,600	103,651,000	103,016,000	89,728,000	84,678,000
Additions to (uses of) cash	\$ 15,383,400	\$ (28,884,000)	\$ 25,816,000	\$ (8,962,000)	\$ (1,929,000)

Five Year Financial Plan (continued)

For fiscal years 2020-2023

PROJECTED REVENUE AND CONTRIBUTIONS

	FOR FISCAL YEARS 2020 - 2024				
	2020	2021	2022	2023	2024
Estimated gallons (000s) sold to customers at retail rates	5,096,000	5,147,000	5,198,000	5,250,000	5,303,000
Estimated gallons (000s) sold to US Navy	254,000	257,000	260,000	263,000	266,000
Total estimated sales gallons (000s)	5,350,000	5,404,000	5,458,000	5,513,000	5,569,000
Operating revenue					
Fees for service					
Retail water rate revenue	\$ 53,541,000	\$ 56,534,000	\$ 59,695,000	\$ 61,196,000	\$ 62,735,000
US Navy water rate revenue	1,189,000	1,255,000	1,325,000	1,358,000	1,392,000
US Navy distribution system charge	2,487,000	2,626,000	2,773,000	2,843,000	2,915,000
Retail reclaimed water rate revenue	65,000	69,000	73,000	75,000	77,000
Retail wastewater rate revenue	8,377,000	8,845,000	9,339,000	9,574,000	9,815,000
US Navy wastewater revenue	1,590,000	1,679,000	1,773,000	1,818,000	1,864,000
Total fees for service	67,249,000	71,008,000	74,978,000	76,864,000	78,798,000
Other operating revenue	1,500,000	1,584,000	1,673,000	1,715,000	1,758,000
Total operating revenue	68,749,000	72,592,000	76,651,000	78,579,000	80,556,000
Non-operating revenue					
Interest income	500,000	500,000	500,000	500,000	500,000
Grant proceeds	-	-	-	-	-
Charges to other utilities for billing services	411,000	417,000	423,000	429,000	435,000
Other income	120,000	120,000	120,000	120,000	120,000
Total non-operating revenue	1,031,000	1,037,000	1,043,000	1,049,000	1,055,000
Total budgeted revenue	69,780,000	73,629,000	77,694,000	79,628,000	81,611,000
System development fees (including assessments)	1,138,000	1,138,000	1,138,000	1,138,000	1,138,000
State appropriations	-	-	-	-	-
Total revenue and contributions	\$ 70,918,000	\$ 74,767,000	\$ 78,832,000	\$ 80,766,000	\$ 82,749,000

Budget assumptions					
Water volume growth sales increase	3.0%	1.0%	1.0%	1.0%	1.0%
Rate index increase	1.2%	1.5%	1.5%	1.5%	1.5%
Additional water rate increase (decrease)	3.0%	3.0%	3.0%	0.0%	0.0%
Additional wastewater rate increase (decrease)	0.0%	0.0%	0.0%	0.0%	0.0%
Average interest rate (applied to average cash balance)	1.5%	1.5%	1.5%	1.5%	1.4%
System development fee growth factor	0.0%	0.0%	0.0%	0.0%	0.0%

Five Year Financial Plan (continued)

For fiscal years 2020-2023

FIVE YEAR CAPITAL IMPROVEMENT AND CAPITAL FINANCING PLAN

Description	2020	2021	2022	2023	2024	Estimated five-year expenditures
Water Projects						
Key West administrative building	\$ 9,000,000	\$ 9,000,000	\$ 4,364,000			\$ 22,364,000
Stock Island RO facility	3,000,000	14,000,000	18,000,000	15,000,000		50,000,000
Grassy Key transmission line replacement	8,000,000					8,000,000
Transmission Terminus rehabilitation				840,000	3,360,000	4,200,000
Simonton, Front and Whitehead distribution	750,000				1,250,000	2,000,000
Islamorada transmission line replacement	2,670,000	13,350,000	10,680,000			26,700,000
Ocean Reef distribution and storage improvements				3,200,000	3,900,000	7,100,000
New distribution system at No Name Key	2,600,000					2,600,000
Stock Island garage replacement					420,000	420,000
Box girder bridge coating/coupling replacement					3,870,000	3,870,000
Generator control panel replacement at Florida City					500,000	500,000
Stock Island pump station and generator replacement	7,000,000					7,000,000
Repair/upgrade subaqueous crossing	2,000,000					2,000,000
Repair/upgrade cathodic protection	2,700,000					2,700,000
Repair/Upgrade electrical and instrumentation	1,000,000					1,000,000
Total water projects	38,720,000	36,350,000	33,044,000	19,040,000	13,300,000	140,454,000
Wastewater projects						
Decentralized Program (Cross Key, Pigeon Key and On-site)	1,200,000	1,200,000				2,400,000
Total wastewater projects	1,200,000	1,200,000	-	-	-	2,400,000
Total capital improvement projects	\$ 39,920,000	\$ 37,550,000	\$ 33,044,000	\$ 19,040,000	\$ 13,300,000	\$ 142,854,000
Funding sources						
Funds from retail rates and cash on hand	\$ 17,250,000	\$ 1,200,000	\$ -	\$ 4,040,000	\$ 13,300,000	\$ 35,790,000
Navy water rates	-	-	-	-	-	-
Federal and state appropriations	-	-	-	-	-	-
Bond proceeds	22,670,000	36,350,000	33,044,000	15,000,000	-	107,064,000
Total	\$ 39,920,000	\$ 37,550,000	\$ 33,044,000	\$ 19,040,000	\$ 13,300,000	\$ 142,854,000

Five Year Financial Plan (continued)

For fiscal years 2020-2023

PROJECTED NEW DEBT ISSUES AND DEBT SERVICE

FOR FISCAL YEARS 2020 - 2024

	2020	2021	2022	2023	2024
Bond issuance assumptions:					
Projected principal amount of new bonds issued	\$ 50,000,000	\$ -	\$ 50,000,000	\$ -	\$ -
Available for construction fund	\$ 50,000,000	\$ -	\$ 50,000,000	\$ -	\$ -
Estimated issue costs					
Projected interest rate					
Amortization period (years)					
Projected Debt Service					
Principal					
Series 2008 water refunding and revenue bonds	-	-	2,745,000	2,905,000	3,045,000
Series 2012 wastewater revenue bonds	360,000	365,000	370,000	370,000	370,000
Series 2013A water refunding bonds	2,615,000	2,640,000	-	-	-
Series 2013B water revenue bonds	335,000	350,000	360,000	375,000	385,000
Series 2014A water revenue bonds	120,000	120,000	125,000	130,000	135,000
Series 2015A water refunding bonds	245,000	240,000	1,690,000	1,890,000	1,980,000
Series 2015B water refunding bonds	640,000	630,000	115,000	-	-
Series 2016 wastewater bonds	240,000	250,000	260,000	275,000	290,000
Series 2019 water revenue bonds	-	-	-	-	-
Series 2021 water revenue bonds	-	-	-	-	-
Total principal	4,555,000	4,595,000	5,665,000	5,945,000	6,205,000
Interest					
Series 2008 water refunding and revenue bonds [1]	1,992,000	1,997,000	2,036,000	2,036,000	2,036,000
Series 2012 wastewater revenue bonds	91,000	81,000	71,000	60,000	50,000
Series 2013A water refunding bonds	86,000	43,000	-	-	-
Series 2013B water revenue bonds	209,000	198,000	186,000	173,000	160,000
Series 2014A water revenue bonds	73,000	69,000	65,000	60,000	56,000
Series 2015A water refunding bonds	1,340,000	1,327,000	1,314,000	1,231,000	1,137,000
Series 2015B water refunding bonds	372,000	355,000	340,000	337,000	337,000
Series 2016 wastewater bonds	162,000	157,000	153,000	149,000	139,000
Series 2019 water revenue bonds	2,313,000	2,313,000	2,313,000	2,313,000	2,313,000
Series 2021 water revenue bonds	-	-	2,313,000	2,313,000	2,313,000
Total interest	6,638,000	6,540,000	8,791,000	8,672,000	8,541,000
Total projected debt service	\$ 11,193,000	\$ 11,135,000	\$ 14,456,000	\$ 14,617,000	\$ 14,746,000

[1] Includes ancillary costs of remarketing and letter of credit fees

Five Year Financial Plan (continued)

For fiscal years 2020-2023

ESTIMATED RATE ADJUSTMENTS AND AVERAGE MONTHLY BILL

Potable water			
	Estimated percentage increase	Average monthly bill (for 4,500 gallons)	
Current bill		\$	44.66
2020	4.2%	\$	46.53
2021	4.5%	\$	48.62
2022	4.5%	\$	50.81
2023	1.5%	\$	51.57
2024	1.5%	\$	52.35

Reclaimed water			
	Estimated percentage increase	Average monthly bill (for 1,100 gallons)	
Current bill		\$	3.57
2020	4.2%	\$	3.72
2021	4.5%	\$	3.89
2022	4.5%	\$	4.06
2023	1.5%	\$	4.12
2024	1.5%	\$	4.18

Wastewater			
	Estimated percentage increase	Average monthly bill (for 4,500 gallons)	
Current bill		\$	69.44
2020	1.2%	\$	70.27
2021	1.5%	\$	71.33
2022	1.5%	\$	72.40
2023	1.5%	\$	73.48
2024	1.5%	\$	74.59

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CAPITAL AND DEBT

Capital Improvement Budget

Project Summaries

Capital Outlay Budget Detail

Capital Financing Plan Summary

Debt Service Requirements

Debt Service Coverage Analysis



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Capital Improvement Budget

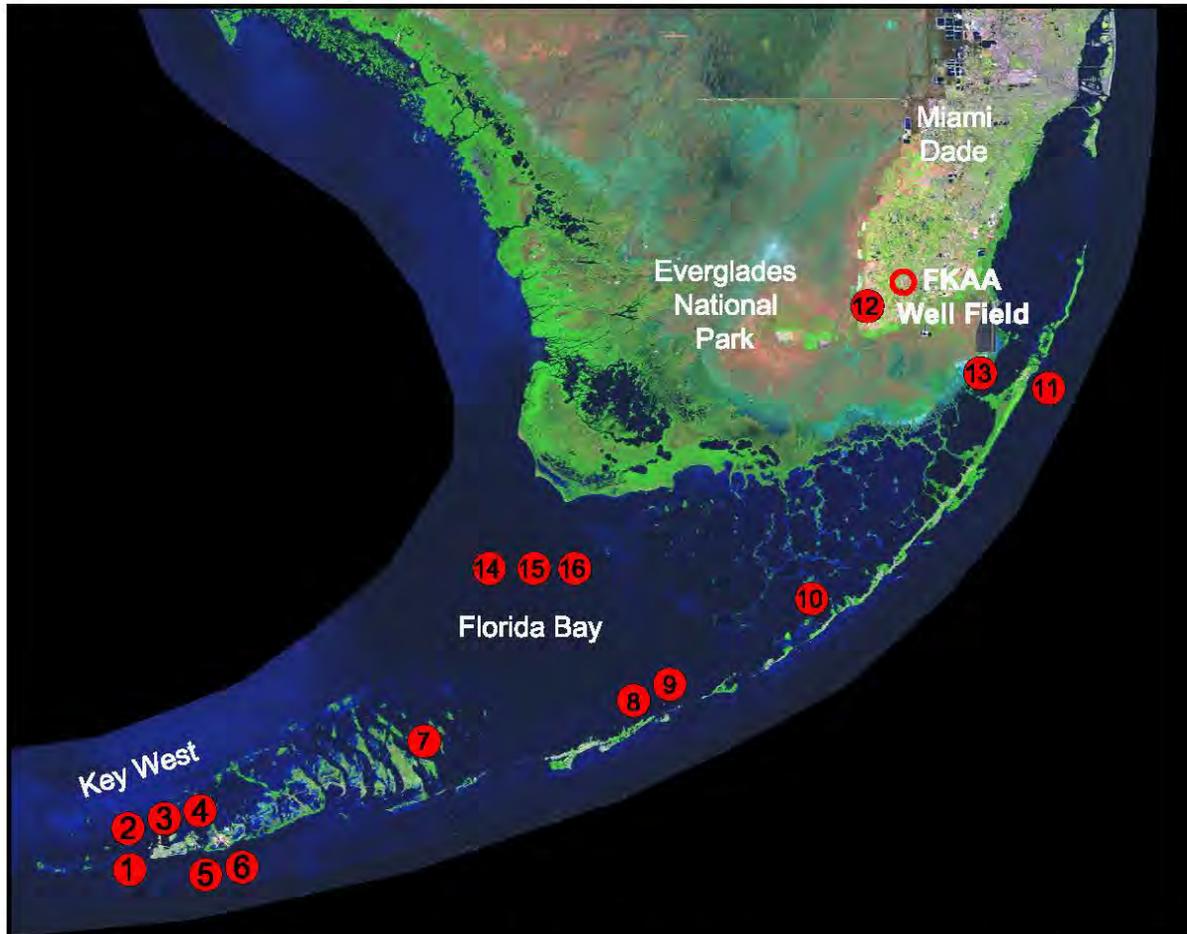
For fiscal years 2020-2023

Description	2020	2021	2022	2023	2024	Estimated five-year expenditures
Water Projects						
Key West administrative building	\$ 9,000,000	\$ 9,000,000	\$ 4,364,000			\$ 22,364,000
Stock Island RO facility	3,000,000	14,000,000	18,000,000	15,000,000		50,000,000
Grassy Key transmission line replacement	8,000,000					8,000,000
Transmission Terminus rehabilitation				840,000	3,360,000	4,200,000
Simonton, Front and Whitehead distribution	750,000				1,250,000	2,000,000
Islamorada transmission line replacement	2,670,000	13,350,000	10,680,000			26,700,000
Ocean Reef distribution and storage improvements				3,200,000	3,900,000	7,100,000
New distribution system at No Name Key	2,600,000					2,600,000
Stock Island garage replacement					420,000	420,000
Box girder bridge coating/coupling replacement					3,870,000	3,870,000
Generator control panel replacement at Florida City					500,000	500,000
Stock Island pump station and generator replacement	7,000,000					7,000,000
Repair/upgrade subaqueous crossing	2,000,000					2,000,000
Repair/upgrade cathodic protection	2,700,000					2,700,000
Repair/Upgrade electrical and instrumentation	1,000,000					1,000,000
Total water projects	38,720,000	36,350,000	33,044,000	19,040,000	13,300,000	140,454,000
Wastewater projects						
Decentralized Program (Cross Key, Pigeon Key and On-site)	1,200,000	1,200,000				2,400,000
Total wastewater projects	1,200,000	1,200,000	-	-	-	2,400,000
Total capital improvement projects	\$ 39,920,000	\$ 37,550,000	\$ 33,044,000	\$ 19,040,000	\$ 13,300,000	\$ 142,854,000
Funding sources						
Funds from retail rates and cash on hand	\$ 17,250,000	\$ 1,200,000	\$ -	\$ 4,040,000	\$ 13,300,000	\$ 35,790,000
Navy water rates	-	-	-	-	-	-
Federal and state appropriations	-	-	-	-	-	-
Bond proceeds	22,670,000	36,350,000	33,044,000	15,000,000	-	107,064,000
Total	\$ 39,920,000	\$ 37,550,000	\$ 33,044,000	\$ 19,040,000	\$ 13,300,000	\$ 142,854,000

Project Summaries

For fiscal years 2020-2023

Florida Keys Aqueduct Authority Projects



Project Legend

1 Administration Building Replacement-Key West	9 Duck Key Collection System Rehabilitation
2 Transmission System Terminus Replacement Key West	10 Islamorada Transmission Line Replacement
3 Simonton, Front, & Whitehead Streets Distribution Line Replacement-Key West	11 Ocean Reef Distribution System and Storage Improvements
4 RO Facility-Stock Island	12 Generator Control Panel Replacement at Florida City
5 Pump Station and Generator Replacement-Stock Island	13 Repair/Upgrade Subaqueous Crossing-18 Mile Stretch
6 Garage Replacement-Stock Island	14 Box Girder Bridge Coating/ Coupling Replacement
7 No Name Key New Distribution System	15 Repair/Upgrade Cathodic Protection
8 Grassy Key Transmission line Replacement	16 Repair/Upgrade Electrical and Instrumentation

Project Summaries (continued)

For fiscal years 2020-2023

KEY WEST ADMINISTRATION BUILDING REPLACEMENT

Administration Division

Project Information

Location	1100 Kennedy Drive, Key West
Project Type	Administration
Category	Replacement
Project Number	7054-18
Design Engineer	Thomas E. Pope, PA
Project Manager	Kent Nelson, P.E.
Contractor	To be determined
Start Date	2018
Completion Date	2021
Bond Funded	Yes
Facilities Master Plan Project	Yes



Description/Justification:

Following Hurricane Irma, an evaluation of the building by an independent engineering firm concluded the building does not appear to be in satisfactory structural condition. There is a considerable amount of evidence indicating that the building has experienced damage associated with the storm. The building has deflected in an inelastic manner and structural cracks have opened up and have not closed. This signifies that the steel and/or concrete have exhibited non-recoverable movement which results in a reduced structural capacity. It was estimated that the building repairs required to bring the building to a condition consistent with the original design conditions, or improved to meet current applicable building codes, would not be practical and, if possible, would be cost prohibitive.

Status/Recent Developments:

Architect, Thomas E. Pope, PA, has recently completed the design for the new building and the bids will be received in July 2019. FCAA staff is pursuing federal grant-funding, under the Stafford Disaster Relief and Emergency Assistance Act, Sandy Recovery Improvement Act, and other federal sources.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$9,000,000	\$9,000,000	\$4,364,000		\$ -	\$22,364,000
	-	-	-	-	-	
Total Costs	\$9,000,000	\$9,000,000	\$4,364,000	\$ -	\$ -	\$22,364,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2020-2023

KEY WEST TRANSMISSION MAIN TERMINUS REPLACEMENT

Transmission

Project Information

Location	Key West
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1153-17
Design Engineer	David Hackworth, P.E.
Project Manager	David Hackworth, P.E.
Contractor	To Be Determined
Start Date	2021
Completion Date	2023
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project includes the final section of transmission in Key West that needs to be replaced. This section is the remaining original 18" pipeline that was installed in the 1940's which has pressure limitations and poses a high risk of failure.

Status/Recent Developments:

This project will be designed by the FCAA engineering department. The 30 percent design will be completed by October 2019 in order to obtain low interest funding from a federal loan administered by the Water Infrastructure Finance and Innovation Act (WIFIA).

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ 840,000	\$ 3,360,000	\$ 4,200,000
Total Costs	\$ -	\$ -	\$ -	\$ 840,000	\$ 3,360,000	\$ 4,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2020	2021	2022	2023	2024	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	50,000	50,000	50,000	50,000	(50,000)	150,000
Other Operating Costs						
Total Operating Costs	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ (50,000)	\$ 150,000

Project Summaries (continued)

For fiscal years 2020-2023

KEY WEST DISTRIBUTION LINE REPLACEMENT

Distribution System

Project Information

Location	Key West
Project Type	Water Distribution Replacement
Category	Renewal and Replacement
Project Number	2349-18
Design Engineer	David Hackworth, P.E.
Project Manager	David Hackworth, P.E.
Contractor	FCAA Construction Crew
Start Date	2019
Completion Date	2024
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project includes the assessment of existing 5,468 feet of 12" distribution pipe, located in Downtown Key West, for replacement. The area of pipe is located from Simonton St to Front St and Whitehead St in a very congested area.

Status/Recent Developments:

Suspected pipe throughout this area is the focus of replacement due to multiple leaks within this area. This project will partially be funded by a low interest federal loan administered by the Water Infrastructure Finance and Innovation Act (WIFIA).

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ 750,000	\$ -	\$ -	\$ -	\$ 1,250,000	\$ 2,000,000
Total Costs	\$ 750,000	\$ -	\$ -	\$ -	\$ 1,250,000	\$ 2,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	30,000	30,000	30,000	30,000	(30,000)	90,000
Total Operating Costs	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ (30,000)	\$ 90,000

Project Summaries (continued)

For fiscal years 2020-2023

UPGRADED SEAWATER TREATMENT - STOCK ISLAND

Water Supply and Treatment

Project Information

Location	Kermit H. Lewin Seawater Desalination Facility, Stock Island
Project Type	Water Supply and Treatment
Category	Resiliency
Project Number	1150-17/7050-18
Design Engineer	Carollo Engineers, Inc.
Project Manager	David Hackworth, P.E.
Contractor	To be determined
Start Date	2019
Completion Date	2023
Bond Funded	Yes
Facilities Master Plan Project	Yes



Description/Justification:

The existing 2 Million Gallon per Day (MGD) Stock Island Reverse Osmosis (SIRO) is maintenance intensive, lacks reliability, and fails to meet production goals. To promote public health and safety, the goal of this project is develop a water production facility on Stock Island that will provide sufficient capacity during emergency conditions, provide system reliability, new equipment, and membrane technology.

Status/Recent Developments:

FCAA is currently in the process of negotiating a design contract with Carollo Engineers to perform the design of the new facility. This project will partially be funded by a low interest federal loan administered by the Water Infrastructure Finance and Innovation Act (WIFIA). Staff is also pursuing other federal grant-funding sources.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ 3,000,000	\$ 14,000,000	\$ 18,000,000	\$ 15,000,000	\$ -	\$ 50,000,000
Total Costs	\$ 3,000,000	\$ 14,000,000	\$ 18,000,000	\$ 15,000,000	\$ -	\$ 50,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2020-2023

STOCK ISLAND DISTRIBUTION SYSTEM AND STORAGE IMPROVEMENTS

Renewal & Replacement

Project Information

Location	Stock Island Distribution Station
Project Type	Water
Category	Renewal and Replacement
Project Number	7052-18
Design Engineer	Carollo Engineers, Inc.
Project Manager	David Hackworth, P.E.
Contractor	To be determined
Start Date	2018
Completion Date	2021
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The distribution pump station serving Key Haven, Stock Island, and Key West is approaching the end of its life and is also unable to fully utilize the storage capacity available in the storage tanks. This project would replace the existing pump station with an EFI-style pump station, which has been successfully used at other FCAA facilities.

Status/Recent Developments:

FCAA is currently requesting a proposal from Carollo Engineers to perform the design of the new prefabricated pump station.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ 7,000,000	\$ -	\$ -	\$ -	\$ -	\$ 7,000,000
Total Costs	\$ 7,000,000	\$ -	\$ -	\$ -	\$ -	\$ 7,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2020	2021	2022	2023	2024	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2020-2023

STOCK ISLAND GARAGE REPLACEMENT

Renewal and Replacement

Project Information

Location	Stock Island Maintenance Garage
Project Type	Building Replacement
Category	Renewal and Replacement
Project Number	3233-19
Design Engineer	To be determined
Project Manager	Jolynn Reynolds, P.E.
Contractor	To be determined
Start Date	2024
Completion Date	2025
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The existing maintenance garage at Stock Island is in poor condition and needs to be replaced.

Status/Recent Developments:

FKAA will retain a design engineer in 2024.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ -	\$ 420,000	\$ 420,000
Total Costs	\$ -	\$ -	\$ -	\$ -	\$ 420,000	\$ 420,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2020	2021	2022	2023	2024	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2020-2023

NO NAME KEY DISTRIBUTION INSTALLATION

Distribution System

Project Information

Location	No Name Key
Project Type	Distribution System
Category	Water Main Extension
Project Number	2332-17
Design Engineer	David Hackworth, P.E.
Project Manager	David Hackworth, P.E.
Contractor	FCAA Construction Crew
Start Date	2020
Completion Date	2021
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

Residents of No Name Key are not currently served by FCAA with potable water. Residents in these areas are reliant upon cisterns and non-potable water deliveries for water and have expressed interest in connecting to the FCAA distribution system to improve their water quality. The purpose of this project is to install approximately 11,000 linear feet of distribution mains to serve No Name Key and connect to the existing distribution system serving Big Pine Key.

Status/Recent Developments:

FCAA's in-house engineering department is currently preparing the design for the distribution system.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ 2,600,000	\$ -	\$ -	\$ -	\$ -	\$ 2,600,000
Total Costs	\$ 2,600,000	\$ -	\$ -	\$ -	\$ -	\$ 2,600,000

Operating Impact:

	Annual Operating Costs (Savings)					Total Cost
	2020	2021	2022	2023	2024	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	5,000	5,000	5,000	5,000	20,000
Total Operating Costs	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 20,000

Project Summaries (continued)

For fiscal years 2020-2023

GRASSY KEY TRANSMISSION MAIN REPLACEMENT

Renewal and Replacement

Project Information

Location	Grassy Key
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1154-17
Design Engineer	Carollo Engineering, Inc.
Project Manager	Justin Dacey, E.I.
Contractor	To be determined
Start Date	2017
Completion Date	2020
Bond Funded	Yes
Facilities Master Plan Project	Yes



Description/Justification:

There have been several leaks on the transmission system in Grassy Key. A condition assessment has been performed and an area of approximately 1 to 2-miles has been identified for replacement (MM58-60). This area has a maximum pressure limitation which reduces the flow capacity needed to supply demands downstream of the area. In addition, the operation of Long Key Pump Station requires the operation of Marathon Pump Station which increases electrical costs.

Status/Recent Developments:

The design is complete and bids for construction will be received in June 2019. This project will partially be funded by a low interest federal loan administered by the Water Infrastructure Finance and Innovation Act (WIFIA).

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ 8,000,000	\$ -	\$ -	\$ -	\$ -	\$ 8,000,000
Total Costs	\$ 8,000,000	\$ -	\$ 0	\$ -	\$ -	\$ 8,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2020	2021	2022	2023	2024	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	100,000	(100,000)	(100,000)	(100,000)	(100,000)	(300,000)
Total Operating Costs	\$ 100,000	\$ (100,000)	\$ (100,000)	\$ (100,000)	\$ (100,000)	\$ (300,000)

Project Summaries (continued)

For fiscal years 2020-2023

DUCK KEY COLLECTION SYSTEM REHABILITATION

Project Information

Location	Duck Key
Project Type	Sewer
Category	Renewal and Replacement
Project Number	4077-18
Design Engineer	In-House
Project Manager	Stephanie Bruno
Contractor	TBD
Start Date	2019
Completion Date	2019
Bond Funded	No
Facilities Master Plan Project	No



Description/Justification:

This project includes the Hawk's Cay manhole rehabilitation/repair (20 in total) plus station rehabilitation; replacement of 300' of 8" clay pipe. Duck Key manholes need to have leaks repaired around inverts, rings etc. and be relocated. The station is 8' x 8' with 7.5 HP pumps.

Status/Recent Developments:

In house analysis of existing system and necessary project scope to begin late 2019.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	-	-	\$ -	\$ -	\$ -	\$ -
Total Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	5,000	(5,000)	(5,000)	(5,000)	(5,000)	(15,000)
Total Operating Costs	\$ 5,000	\$ (5,000)	\$ (5,000)	\$ (5,000)	\$ (5,000)	\$ (15,000)

Project Summaries (continued)

For fiscal years 2020-2023

ISLAMORADA TRANSMISSION MAIN REPLACEMENT

Transmission

Project Information

Location	Islamorada
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1163-18
Design Engineer	Black and Veatch
Project Manager	David Hackworth, P.E.
Contractor	To Be Determined
Start Date	2019
Completion Date	2022
Bond Funded	Yes
Facilities Master Plan Project	Yes



Description/Justification:

As transmission pipe condition assessments are performed, sections of transmission main that pose the highest risk of failure are identified for future replacement. A portion of transmission main in Islamorada has been determined as one of these high risk areas. This area has a maximum pressure limitation which reduces the flow capacity needed to supply demands downstream of the area. In addition, it restricts the operation of Key Largo Pump Station to boost flow and pressure.

Status/Recent Developments:

FKAA has retained Black and Veatch to perform a corridor study to recommend the alignment for the replacement transmission main. The 30 percent design will be completed by October 2019 in order to obtain low interest funding from a federal loan administered by the Water Infrastructure Finance and Innovation Act (WIFIA).

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	2,670,000	13,350,000	10,680,000			\$26,700,000
Total Costs	\$ 2,670,000	\$ 13,350,000	10,680,000	\$ -	\$ -	\$26,700,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	80,000	80,000	80,000	(80,000)	(80,000)	80,000
Total Operating Costs	\$ 80,000	\$ 80,000	\$ 80,000	\$ (80,000)	\$ (80,000)	\$ 80,000

Project Summaries (continued)

For fiscal years 2020-2023

OCEAN REEF DISTRIBUTION SYSTEM AND STORAGE IMPROVEMENTS

Renewal & Replacement

Project Information

Location	Ocean Reef Distribution Station
Project Type	Water
Category	Renewal and Replacement
Project Number	2352-18
Design Engineer	To be determined
Project Manager	Justin Dacey, E.I.
Contractor	To be determined
Start Date	2023
Completion Date	2024
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The distribution pumps serving Ocean Reef Club are approaching their end-of-life. The goals of this project are to determine the future needs of the Ocean Reef Club and add the storage and pumping capacity to meet those needs.

Status/Recent Developments:

FKAA retained Carollo Engineers to perform a hydraulic analysis of the Ocean Reef system to recommend a solution to improve the storage volume and system pressures in Ocean Reef.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ 3,200,000	\$ 3,900,000	\$ 7,100,000
Total Costs	\$ -	\$ -	\$ -	\$ 3,200,000	\$ 3,900,000	\$ 7,100,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2020	2021	2022	2023	2024	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2020-2023

GENERATOR CONTROL PANEL REPLACEMENT AT FLORIDA CITY

Renewal and Replacement

Project Information

Location	J.R. Dean WTF, Florida City
Project Type	Water
Category	Renewal and Replacement
Project Number	1170-19
Design Engineer	To be determined
Project Manager	Emmy Koenig, E.I.
Contractor	To be determined
Start Date	2024
Completion Date	2025
Bond Funded	No
Facilities Master Plan	
Project	Yes



Description/Justification:

This project would replace the existing panel for the three main plant generators at Florida City.

Status/Recent Developments:

FKAA will retain the services of an electrical engineer in 2024 to perform the design of the replacement panel.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ 500,000
Total Costs	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ 500,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2020-2023

REPAIR/UPGRADE SUBAQUEOUS CROSSING

Renewal and Replacement

Project Information

Location	Various Locations
Project Type	Transmission System
Category	Renewal
Project Number	7067-18
Design Engineer	Mathews Consulting
Project Manager	Justin Dacey, E.I.
Contractor	To be determined
Start Date	2018
Completion Date	2020
Bond Funded	No
Facilities Master Plan Project	No



Description/Justification:

This project includes new foundation supports for sections of FKAA's transmission pipeline at locations where the bedding was washed out during Hurricane Irma, leaving the pipeline suspended and vulnerable to breaking. This project includes remediation and placement of additional concrete mats to protect the transmission pipeline from scour and displacement caused by tidal and storm-induced water movement. There are eight locations that require support remediation and 16 locations where signage needs to be addressed.

Status/Recent Developments:

FKAA retained Mathews Consulting to perform the design of the repairs. FKAA plans to improve the anchoring system to prevent damage caused by future storms. FKAA has applied for FEMA reimbursement and is currently awaiting final determination.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ 2,000,000	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000
Total Costs	\$ 2,000,000	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2020-2023

TRANSMISSION MAIN REHABILITATION

Transmission

Project Information

Location	Various Locations
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1169-19
Design Engineer	To Be Determined
Project Manager	Jolynn Reynolds, P.E.
Contractor	To Be Determined
Start Date	2024
Completion Date	2025
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The expansion joints and dresser couplings on the transmission main located within the box girder bridges at Channel 5, Long Key, 7-Mile and Niles Channel need to be replaced.

Status/Recent Developments:

FKAA Engineering and Operations staff are collaborating in the development of a work plan to make the necessary repairs while maintaining water service to the Lower Keys.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	-	-	-	\$ -	\$ 3,870,000	\$3,870,000
Total Costs	\$ -	\$ -	-	\$ -	\$ 3,870,000	\$3,870,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2020-2023

REPAIR/UPGRADE ELECTRICAL AND INSTRUMENTATION

Renewal and Replacement

Project Information

Location	Various Locations
Project Type	Wastewater System
Category	Renewal and Replacement
Project Number	7062-18A/7064-18A/7057-18A
Design Engineer	Carollo Engineers, Inc.
Project Manager	David Hackworth, P.E.
Contractor	To be determined
Start Date	2018
Completion Date	2020
Bond Funded	No
Facilities Master Plan Project	No



Description/Justification:

This project will replace the electrical and instrumentation components that were damaged as a result of Hurricane Irma at the Big Coppitt WWTP, Duck Key WWTP, and Cudhoe AWRF.

Status/Recent Developments:

FCAA retained Carollo to perform the design of the repairs and the bids for the repair and replacement work should be received in August 2019. FCAA has applied for FEMA reimbursement and is currently awaiting final determination.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2020	2021	2022	2023	2024	
Capital Engineering & Construction Costs	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$1,000,000
Total Costs	\$ 1,000,000	\$ -	\$0	\$ -	\$ -	\$1,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2020	2021	2022	2023	2024	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Capital Outlay Budget Detail

For fiscal years 2020

			Amount	Water cost centers	Wastewater cost centers	Total
Executive Division						
<u>Executive</u>						
1011	Executive Office	None	\$ -	\$ -		
1012	Public Information	None	-	-		\$ -
Administration Division						
<u>Customer Service</u>						
3030	Customer Service Administration	None	-	-		
3031	Central Payment Processing	None	-	-		
3032	Customer Service-Key West	None	-	-		
3034	Customer Service-Marathon	None	-	-		
3035	Customer Service-Tavernier	None	-	-		
3037	Field Services-Key West	None	-	-		
3038	Field Services-Marathon	Hydro Vac Trailer	28,000	28,000		
3039	Field Services-Tavernier	Hydro Vac Trailer	28,000	28,000		
						56,000
<u>Finance</u>						
6010	Finance	None	-	-		
6020	Billing	None	-	-		
6030	Purchasing and Inventory	None	-	-		
6040	Records	None	-	-		
<u>Human Resources</u>						
7010	Human Resources	None	-	-		
<u>Information Technology</u>						
8010	Information Technology	Network Cabinet Upgrade (2)	54,000			
		Network switches (10)	50,000			
		Printers (3)	30,000			
					134,000	
						134,000
Utility Operations Division						
<u>Engineering</u>						
2021	General Engineering	None	-	-		
2022	Contract Management	Sewer camera (2)	25,000	25,000		
2023	Water Quality	None	-	-		
2024	Design	GPS hardware and software (2)	19,000	19,000		
2025	Construction Crew	Backhoe (replacement)	86,000			
		Valve replacements (12)	100,000	186,000		
2027	Water Data Management and Loss Division	Meters (new service)	180,000			
		New leak detection equipment (middle keys)	30,000			
		Small meter replacement	35,000			
		Large meter replacement	40,000			
		AMI collectors (approximately 55 locations)	900,000			
		Tank flow control replacements	40,000			
		Backflow meter change out program	80,000	1,305,000		
						1,535,000

Capital Outlay Budget Detail (continued)

For fiscal years 2020

Water Operations				
4001	Operations Office Key West	None	-	-
4101	Operations Office Stock Island/lower keys	Genie towable high lift (replacement)	45,000	
		16" Tideflex valve	48,000	93,000
4102	Distribution/Maintenance-Area I	6" mobile pump	39,000	
		Roll-up garage door for KW plant	6,000	45,000
4103	Distribution/Maintenance-Area II	Replacement pump and motor	20,000	
		NAS 229 tank fill valve replacement	17,000	
		Summerland VFD (2)	12,000	49,000
4104	Distribution Pump Station-Key West	Paint facility	25,000	25,000
4105	Distribution Pump Station-Stock Island	Back pump control valve	16,000	16,000
4108	Fleet Maintenance-lower keys	Vehicles (see below)	230,000	
		Forklift (replace # 270)	23,200	253,200
4110	Stock Island Reverse Osmosis Plant	John Crane seals (3)	15,000	
		High service pump rebuild	15,000	30,000
4201	Operations Marathon/Middle keys	Fence for Marathon Booster Pump Station	12,000	12,000
4202	Distribution/Maintenance-Area III	Carport for equipment	83,000	
		4" SS cla-valves (4)	20,800	
		Dump trailer (replace # 867)	8,100	
		Variable message sign board	21,900	
		6" SS cla-valves (2)	12,200	
		Air conditioner for Vaca Cut EFI station	8,000	154,000
4203	Transmission Maintenance-Area III	LED light tower	11,900	11,900
4204	Transmission Pump Station-Marathon	None	-	-
4205	Transmission Pump Station-Ramrod	None	-	-
4208	Fleet Maintenance-middle keys	Vehicles (see below)	560,700	560,700
4210	Reverse Osmosis Plant-Marathon	Mechanical seals (2)	10,000	10,000
4301	Operations Key Largo and upper keys	Air conditioner for Tavernier Customer Service	6,200	
		Air conditioner duct work for Tavernier Customer Service	11,000	
		Ice machine for Tavernier Field Services	6,000	
		Mower	9,000	
4302	Distribution Maintenance Area IV	Air conditioner for Islamorada yard	6,100	32,200
		Pump and motor rebuild	44,000	
		Vertical turbine pump	35,000	
		Steel building for bridge truck	45,500	130,600
4303	Distribution Maintenance Area V	Wacker compactor (replacement)	10,300	
		Tavernier tank air vent	6,200	
		Ice machine for Rock Harbor	5,800	
		Rebuild motor for Ocean Reef	21,300	
		Air conditioner for Ocean Reef Pump Station	5,400	49,000
4304	Transmission Maintenance Areas IV and V	Shop Welder/Mig (replacement)	5,900	
		Horizontal press	8,800	
		Hydraulic cart	8,400	
		Asphalt and stripe for Key Largo Yard	7,100	
		Ice machine for Key Largo Yard	5,800	
		Garage door opener	5,900	41,900
4308	Fleet Maintenance-upper keys	Vehicles (see below)	277,600	
		Air compressor	8,600	
		Tire changer	10,900	
		4 post lift	31,000	
		Garage door opener	5,900	334,000
5010	Water Treatment Plant-Florida City	24" flange butterfly valve	21,300	
		Refurbish slaker room floor	95,500	
		Coriolis flow meter	14,000	
		Elevator replacement	80,400	211,200
5020	Transmission Pump Station-Florida City	Flush ring for sludge thickener	42,500	
		Wall unit air conditioner	6,300	
		Mechanical seals (3)	8,100	
		Stuffing boxes (5)	36,000	
		Air compressor	6,700	
		Quonset hut repair	15,000	
		Hurricane windows and doors (K2, K3, & K4)	50,000	
		Paint facilities (K2, K3, K4, & K5)	45,000	209,600

Capital Outlay Budget Detail (continued)

For fiscal years 2020

5030	Transmission Pump Station-Long Key	Cooling tower	48,800		
		Air conditioner	14,300		
		Long Key pumps 1 & 2 rebuild	25,200		
		Check valves w/top assembly (3)	134,700	223,000	
5040	Transmission Pump Station-Key Largo	36" ball valve actuator	60,000	60,000	
5050	Florida City RO Plant	Outside instrumentation for degasifier & scrubber	6,000		
		Acid injectors (2)	12,000	18,000	
5060	Electrical and Instrumentation Controls	Power meterr for FL City RO	10,500		
		FL City genset load sharing control upgrade	181,000		
		FL City K5 high service pump motor protection relays (5)	132,300		
		DFS TCU to Fleming Key lift stations	10,900	334,700	
					2,904,000
	Wastewater Operations				
4112	Bay Point Wastewater Treatment Plant	None	-	-	
4113	Bay Point Collection	None	-	-	
4114	Big Coppitt Wastewater Treatment	Isolation valve	5,600		
		Filter feed pump (replacement) (1)	8,200	13,800	
4115	Big Coppitt Collection	None	-	-	
4116	Key Haven Wastewater Treatment	None	-	-	
4117	Key Haven Collection	None	-	-	
4118	Cudjoe Regional Wastewater Treatment	None	-	-	
4119	Cudjoe Regional Collection	Transmission station roofing for rain events (2)	21,000	21,000	
4120	Navy Wastewater System	Large grinder pump (replacement 2%) (2)	11,900	11,900	
4213	Wastewater Treatment Plant-Duck Key	None	-	-	
4214	Wastewater Operations and Maintenance	Liquid tight drying box (new) (1)	18,000		
		Dump trailer (new)	11,200		
		Cat Jackhammer for mini-excavator	10,600		
		Drain camera	8,900		
		Shoring set	23,000		
		Confined space manlift	7,600	79,300	
4216	Duck Key Collection	Resort manhole repair (4)	24,000		
		Grinder pump replacement (1)	5,100	29,100	
4312	Wastewater Treatment Plant-Layton	Jet motive pump (spare)	9,500	9,500	
4313	Layton Collection	None	-	-	
					164,600

Total Capital Outlay

\$ 4,793,600

Capital Outlay Budget Detail (continued)

For fiscal years 2020

Fleet details				
4108	Fleet Maintenance-lower keys	1/2 ton (replace vehicle # 122)	27,000	
		1/2 ton (replace vehicle # 191)	27,000	
		1/2 ton (replace vehicle # 335)	27,000	
		1 ton (replace vehicle # 132)	42,000	
		F550 w/crane (replace # 188)	75,000	
		Van (replace # 340)	32,000	
4208	Fleet Maintenance-middle keys	1/2 ton (replace vehicle # 136)	27,000	230,000
		1/2 ton (replace vehicle # 300)	27,000	
		1 ton (replace vehicle # 305)	42,000	
		Van (replace # 330)	32,000	
		Van (replace # 518)	32,000	
		Dump truck (replacement #123)	160,700	
		Mid-size SUV (replacement # 197)	30,000	
		3 one ton's w/cranes for WW existing positions (new)	210,000	560,700
4308	Fleet Maintenance-upper keys	1/2 ton (replace vehicle # 447)	27,000	
		1/2 ton (replace vehicle # 500)	27,000	
		1/2 ton (replace vehicle # 523)	27,000	
		1/2 ton (replace vehicle # 601)	27,000	
		1 ton (replace vehicle # 503)	42,000	
		F750 (replace vehicle # 508)	127,600	277,600
		Total fleet capital		

Capital Financing Plan Summary

For fiscal years 2020

Background

The Authority has developed a long-range capital financing plan that is intended to identify when bonds must be issued to fund capital projects. Since Monroe County will be funding all future capital costs relating to wastewater, this plan centers around the water system capital improvement plan.

The Authority's ratings for water bonds are Aa3, A+, and AA- from Moody's Investor Services, Standard and Poor's, and Fitch Ratings, respectively. The Authority has no legal debt limits.

Summary of Debt

Anticipated Budget Year Bond Issues

No water bond issues are anticipated for the 2020 budget year. Water capital projects will be funded using proceeds from the Series 2019A bonds issued in June 2019 as well as available cash reserves and revenue from a dedicated source such as assessments, insurance and FEMA reimbursements, state appropriations and rate revenue from U.S. Navy.

Wastewater projects will be funded by a combination of rate revenue and existing cash reserves.

Total projected outstanding debt at the end of budget year 2020 is estimated to be approximately \$173 million and debt service is approximately \$11.2 million.

Existing Outstanding Bond Issues

Water Revenue and Revenue Refunding Bonds

In June 2008 the Authority issued \$52,625,000 in water revenue refunding bonds. The 2008 bonds bear interest at a variable rate that is set each week when the bonds are remarketed (.07% at June 10, 2015). The proceeds from these bonds were used to refund Series 2006 bonds, which were insured by a failed bond insurer. The refunding was necessary to replace the bond insurer with a letter of credit. The interest rate swap executed at the issuance of the Series 2006 bonds in place with the notional amount now tied to the Series 2008 bonds.

In July 2013, the Authority issued \$19,900,000 in Series 2013A refunding revenue bonds to a bank. The proceeds from this issue were used to refund Series 2003 water revenue bonds. The bonds bear interest at a fixed rate of 1.64%. This issue resulted in an economic benefit to the Authority of about \$2.6 million in savings.

In November 2013, the Authority issued \$7,700,000 in Series 2013B revenue bonds to a bank to partially fund water distribution line replacements that are being accelerated by wastewater line construction. In January 2014, the Authority issued \$2,670,000 in Series 2014B bonds to the same bank to fully fund the project. Both series bear interest at a fixed rate of 3.52%.

In April 2015, the Authority issued \$34,560,000 in Series 2015A bonds and \$16,435,000 in Series 2015B bonds to advance-refund outstanding Series 2007 bonds maturing after 2019. The 2015A bonds have an effective interest rate of approximately 3.75% and the Series 2015B bonds bear interest at a rate of 2.52%.

In June 2019, the Authority issued \$50,000,000 in Series 2019A water revenue bonds to finance certain critical projects in the capital improvement plan. The bonds have an effective interest rate of 4.18%.

Capital Financing Plan Summary (continued)

For fiscal years 2020

Water revenue and revenue refunding bonds are issued under the Authority's Resolution No. 03-12. The payment of the principal and interest on these bonds is collateralized by a pledge of and lien upon the net revenues derived from the operation of the Authority's water utility and other monies including investments held in certain accounts established by the bond resolution. Under the bond resolution, the Authority will fix, establish, maintain and collect the water rates and revise the same from time to time, whenever necessary, that will always provide in each fiscal year, (a) net revenues adequate at all times to pay in each fiscal year at least one hundred ten percent (110%) of the annual debt service requirement becoming due in such fiscal year on each series of outstanding bonds and at least one hundred percent (100%) of any amounts required by the terms of the bond resolution to be deposited in the reserve account or reserve account insurance policy in such fiscal year, and (b) net revenues, together with impact fees deposited in the current account in the impact fees fund, adequate to pay at least one hundred twenty percent (120%) of the current annual debt service requirement becoming due in such fiscal year on the outstanding bonds. The rates will not be reduced to a level that would be insufficient to provide net revenues fully adequate for the purposes provided by the bond resolution.

Wastewater Revenue Bonds

In September 2012, the Authority issued Series 2012 wastewater refunding revenue bonds to a bank in an amount of \$5,635,000. The proceeds were used to refund Series 2001, 2004 and 2009 wastewater revenue bonds and bear interest at a fixed rate of 2.86%. Principal payments are due annually on September 1 until 2029 at which time all outstanding principal is payable in full. Interest is payable on March 1 and September 1 of each year through 2029.

In November 2016, the Authority issued Series 2016 wastewater revenue bonds to a bank in an amount of \$10,000,000. The proceeds are being used to fund wastewater capital improvements in the lower keys. The bonds bear interest at a fixed rate of 1.72%. Principal payments are due annually on September 1 until 2036 at which time all outstanding principal is payable in full. Interest is payable on March 1 and September 1 of each year through 2036.

Wastewater revenue and revenue refunding bonds were issued under the Authority's Resolution No. 00-20 adopted October 18, 2000 and Resolution No. 01-25 adopted September 19, 2001. The payment of the principal and interest on these bonds is collateralized by a pledge of and lien upon the net revenues derived from the operation of the Authority's wastewater utility and other monies including investments held in certain accounts established by the bond resolution. Under the bond resolution, the Authority will fix, establish, maintain and collect the wastewater rates and revise the same from time to time, whenever necessary, that will always provide in each fiscal year, (a) net revenues adequate at all times to pay in each fiscal year at least one hundred ten percent (110%) of the annual debt service requirement becoming due in such fiscal year on each series of outstanding bonds or (b) net revenues, together with impact fees collected, adequate to pay at least one hundred twenty percent (120%) of the current annual debt service requirement becoming due in such fiscal year on the outstanding bonds. The rates will not be reduced to a level that would be insufficient to provide net revenues fully adequate for the purposes provided by the bond resolution.

Debt Service Requirements

For fiscal years 2020

SUMMARY OF OUTSTANDING PRINCIPAL OF LONG TERM DEBT

	Projected outstanding principal, 10/1/19	2020 proceeds from issuance of debt	2020 budgeted principal payments	Projected outstanding principal, 9/30/20
Series 2008 water refunding and revenue bonds ^[1]	\$ 52,625,000	\$ -	\$ -	\$ 52,625,000
Series 2012 wastewater revenue bonds	3,200,000	-	360,000	2,840,000
Series 2013A water refunding bonds	5,255,000	-	2,615,000	2,640,000
Series 2013B water revenue bonds	5,955,000	-	335,000	5,620,000
Series 2014A water revenue bonds	2,080,000	-	120,000	1,960,000
Series 2015A water refunding bonds	34,560,000	-	245,000	34,315,000
Series 2015B water refunding bonds	14,745,000	-	640,000	14,105,000
Series 2016 wastewater revenue bonds	9,615,000	-	240,000	9,375,000
Series 2019A water revenue bonds [2]	50,000,000	-	-	50,000,000
Total bonds	\$ 178,035,000	\$ -	\$ 4,555,000	\$ 173,480,000

SUMMARY OF DEBT SERVICE

	Fixed / Variable	Budgeted 2019 debt service			Budgeted 2020 debt service		
		Principal	Interest	Total	Principal	Interest	Total
Series 2008 water refunding and revenue bonds ^[1]	Variable	\$ -	\$ 1,997,000	\$ 1,997,000	\$ -	\$ 1,992,000	\$ 1,992,000
Series 2012 wastewater revenue bonds	Fixed 2.86%	355,000	102,000	457,000	360,000	91,000	451,000
Series 2013A water refunding bonds	Fixed 1.64%	2,565,000	128,000	2,693,000	2,615,000	86,000	2,701,000
Series 2013B water revenue bonds	Fixed 3.52%	325,000	221,000	546,000	335,000	209,000	544,000
Series 2014A water revenue bonds	Fixed 3.52%	115,000	77,000	192,000	120,000	73,000	193,000
Series 2015A water refunding bonds	Fixed 3.375-5.00%	-	1,340,000	1,340,000	245,000	1,340,000	1,585,000
Series 2015B water revenue bonds	Fixed 2.52%	855,000	393,000	1,248,000	640,000	372,000	1,012,000
Series 2016 wastewater revenue bonds	Fixed 1.72%	235,000	166,000	401,000	240,000	162,000	402,000
Series 2019A water revenue bonds [2]	Fixed 4.18%	-	-	-	-	2,313,000	2,313,000
Total bonds		\$ 4,450,000	\$ 4,424,000	\$ 8,874,000	\$ 4,555,000	\$ 6,638,000	\$ 11,193,000

[1] Includes ancillary costs of remarketing and letter of credit fees

[2] Assumes delivery date of June 19, 2019

Debt Service Coverage Analysis

For fiscal years 2020

PROJECTED DEBT SERVICE COVERAGE

	Budgeted 2019		Budgeted 2020	
	Water	Wastewater	Water	Wastewater
	Revenue available for debt service			
Total operating revenue	\$ 55,024,000	\$ 9,562,000	\$ 58,782,000	\$ 9,967,000
Interest income-revenue funds	500,000	-	500,000	-
Other revenue available for debt service	526,000	-	531,000	-
Less operating expenses before depreciation	(39,625,000)	(7,536,200)	(40,220,000)	(8,313,500)
Net funds available for debt coverage	16,425,000	2,025,800	19,593,000	1,653,500
Debt service requirements	\$ 8,016,000	858,000	\$ 10,340,000	853,000
Coverage factor (minimum of 1.10 for water only)	2.05		1.90	
System development fees	\$ 1,000,000	\$ 138,000	\$ 1,000,000	\$ 138,000
Coverage factor with system development fees (minimum of 1.20)	2.17	2.52	1.99	2.10

DEPARTMENTAL INFORMATION

Executive Division Summary

Administration Division Summary

Customer Service Department Summary

Finance Department Summary

Human Resources Department Summary

Information Technology Department Summary

Utility Operations Division Summary

Engineering Department Summary

Operations Department Summary

Position and Fleet Summary

**Operating Expenditure Budget by Functional
Unit**



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Executive Division



EXECUTIVE DIVISION

Kirk Zuelch, Executive Director

Responsibilities and Budget Issues

The Executive division represents the executive branch of the organization, including the executive director, general counsel, internal auditor and support staff. The budget supports all external legal services, governmental liaison management audit costs and public information. Since the department employs several specialized, professional and senior level management positions, salaries are a substantial part of its budget.

DEPARTMENTS

Executive

Public Information

Executive Division Summary

For fiscal year 2020

Executive Division

KEY DEPARTMENT INDICATORS

	Actual 2018	Budgeted 2019	Budgeted 2020
Key department indicators			
Number of full time department employees budgeted	8	8	10
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	-	-	2
Number of regular and special board meeting	14	14	14
Number of board workshop meetings	3	3	3
Number of board committee meetings	4	4	4
Number of public hearings	6	6	6

DEPARTMENTAL GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Provide leadership and support to all departments and divisions to ensure that the Authority provides safe, efficient, resilient and sustainable water and wastewater services in a fiscally responsible manner.

Evaluate the integration of Information technology processes system-wide to ensure optimization of water quality parameters, operations and maintenance activities, security measures, and customer service processes.

Initiate an evaluation and retooling of the FCAA’s Strategic Plan.

Enhance customer awareness and education programs with an emphasis on the value of water.

Strengthen partnerships and collaborations with agencies regulating wellfield protection activities.

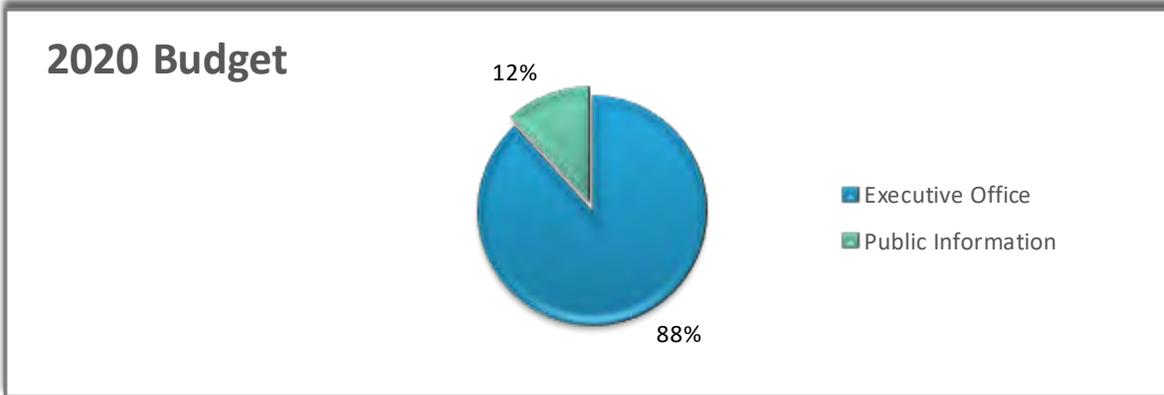
Develop an internal communications strategy.



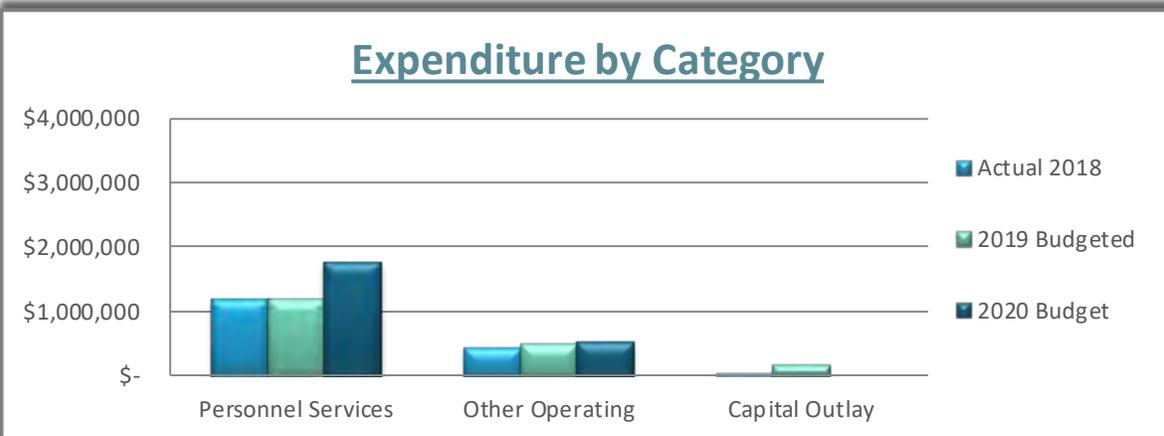
Executive Division Summary (continued)

For fiscal years 2020

Executive



Division	2020 Budget
Executive Office	\$ 2,002,100
Public Information	268,200
Total	\$ 2,270,300



Expenditure	Actual 2018	2019 Budgeted	2020 Budget
Personnel Services	\$ 1,159,322	\$ 1,182,400	\$ 1,749,600
Other Operating	425,970	487,700	520,700
Capital Outlay	1,584	160,000	-
Total	\$ 1,586,876	\$ 1,830,100	\$ 2,270,300

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Administration Division



ADMINISTRATION DIVISION

Kerry G. Shelby, Deputy Executive Director

Responsibilities and Budget Issues

The Administration Division is responsible for the business-type activities of the organization, including finance, human resources, customer service and technical services. The managers of these departments report directly to the Deputy Executive Director in charge of administration. The budgets, goals and indicators for these departments are discussed on the following pages.

DEPARTMENTS

Finance

Human Resources

Information Technology

Customer Service

Customer Service Department



ADMINISTRATION DIVISION

Responsibilities and Budget Issues

The Customer Service department establishes new accounts, receives and processes payments, researches customer inquiries, administers the contact center, collects meter readings for billing purposes, researches unusual consumption situations and handles service calls. The budget's largest component is salaries and benefits for adequate staff at three strategically located area offices.

DEPARTMENTAL TEAMS

Customer Service Key West and the Lower Keys

Customer Service Marathon and the Middle Keys

Customer Service Tavernier and the Upper Keys

Field Services Key West and the Lower Keys

Field Services Marathon and the Middle Keys

Field Services Tavernier and the Upper Keys

Customer Service Department Summary

For fiscal year 2020

**Customer Service Department
KEY DEPARTMENT INDICATORS**

	Actual 2018	Budgeted 2019	Budget 2020
Key department indicators			
Number of full time department employees budgeted	36	36	35
New positions not in prior year's budget	-	1	-
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	-	-	(1)
Number of calls received from call center	87,000	86,000	86,000
Number of meters in service	52,000	53,000	53,000
Number of automated read meters	52,000	53,000	22,000
Number of data collection units	33	33	70
Number of delinquent service orders	2,600	2,500	5,000
Number of high consumption investigations	4,700	4,700	6,000
New meter installations (not including replacements)	400	500	500
Total field service orders	31,000	38,000	39,000
Assist Customers	1,500	1,500	1,500
Total Number of data extracts performed	1,000	1,000	1,000
Number of zero read investigations	3,000	3,000	3,000
Number of MIU's changes	8,000	8,000	8,000

**DEPARTMENTAL GOALS,
OBJECTIVES, AND PERFORMANCE
MEASURES**

Pursue new processes, technologies and solutions to improve how we operate and better serve our customers and community.

Identify and foster the next generation of leaders through mentoring, professional development and educational opportunities.

Enhance customer service skills by providing employee training and certifications. i.e. Notary services, computer training, GPS training, etc.

Improve customer satisfaction through friendly, reliable, timely services and improve our customers understanding and confidence in our resources.

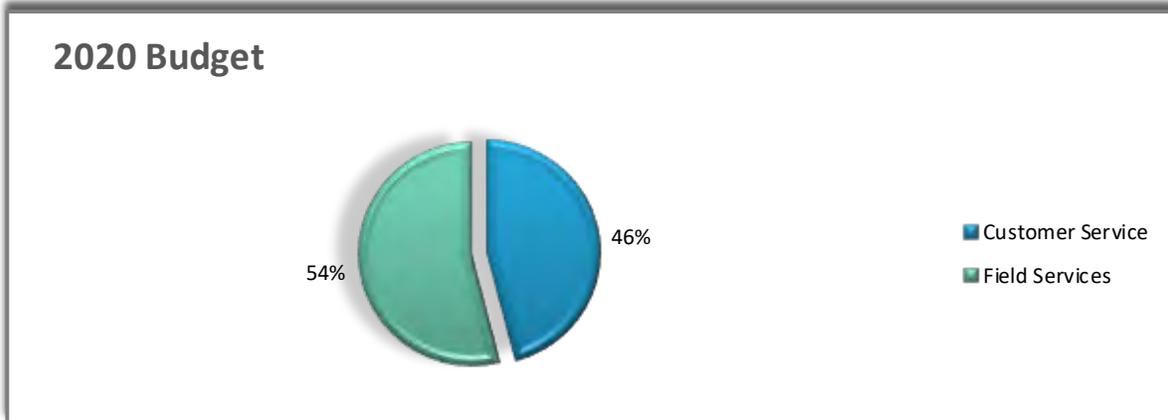
Actively mentor employees; promote and support training, continuing education, cross training (Backflow) and career development that aligns with our strategic needs.



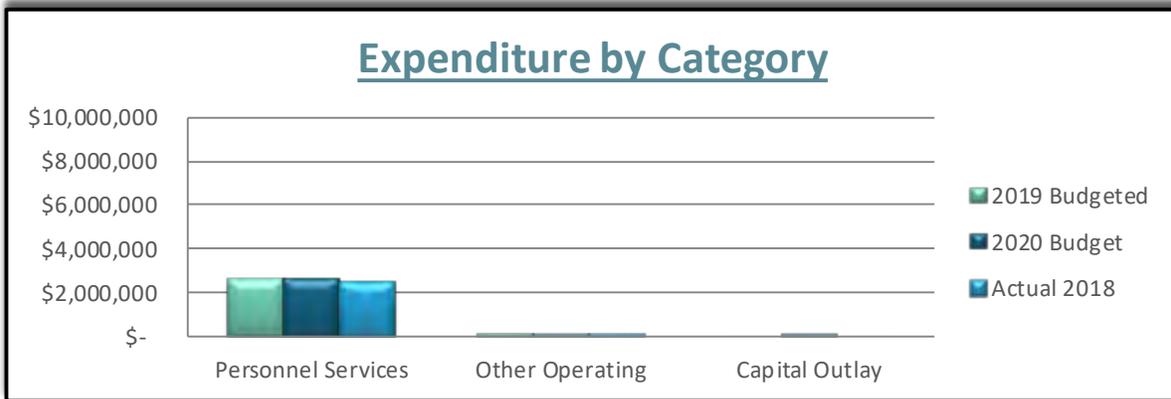
Customer Service Department Summary (continued)

For fiscal years 2020

Customer Service



Division	2020 Budget
Customer Service	1,268,300
Field Services	1,490,800
Total	\$ 2,759,100



Expenditure	Actual 2018	2019 Budgeted	2020 Budget
Personnel Services	\$ 2,495,153	\$ 2,602,100	\$ 2,612,700
Other Operating	111,515	129,800	90,400
Capital Outlay	-	-	56,000
Total	\$ 2,606,668	\$ 2,731,900	\$ 2,759,100

Finance Department



ADMINISTRATION DIVISION

Cindy Kondziela, Manager of Finance

Responsibilities and Budget Issues

The Finance department consists of finance, accounts receivable, purchasing and inventory, billing and records retention department. The department's budget supports contractual services for banking, investment services, financial and rate consultant fees and billing.

DEPARTMENTAL TEAMS

Finance

Billing

Records

Purchasing and Inventory

Finance Department Summary

For fiscal year 2020

Finance Department

KEY DEPARTMENT INDICATORS

	Actual 2018	Budgeted 2019	Budget 2020
Key department indicators			
Number of full time department employees budgeted	30	30	28
New positions not in prior year's budget	-	-	-
Positions transferred in (out)	-	-	(2)
Total bills/payments processed	609,270	610,000	610,000
Vendor payments	2,738	3,200	3,200
Customer deposit refunds	8,754	9,500	9,500
Number of purchase orders	1,648	1,680	1,680
Number of bids and RFps/RFQ's issued	20	25	25
Number of warehouses	5	5	5
Number of stock items	2,186	2,210	2,210

DEPARTMENTAL GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Expand electronic interaction capabilities to enhance customer experience and improve operational efficiencies, including interactive voice recognition, e-bill, payment kiosk and auto-pay.

Increase public awareness of excellent quality and value of tap water.

Continue to monitor debt structure to identify possible opportunities for cost savings.

Continue to monitor water and wastewater rates for sufficiency.

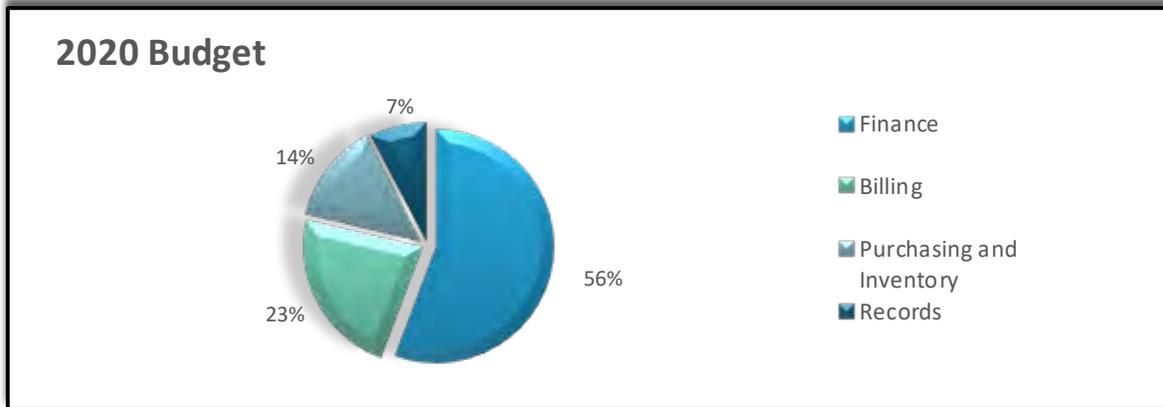
Continue to monitor internal processes to capitalize on staffing and monetary efficiencies.



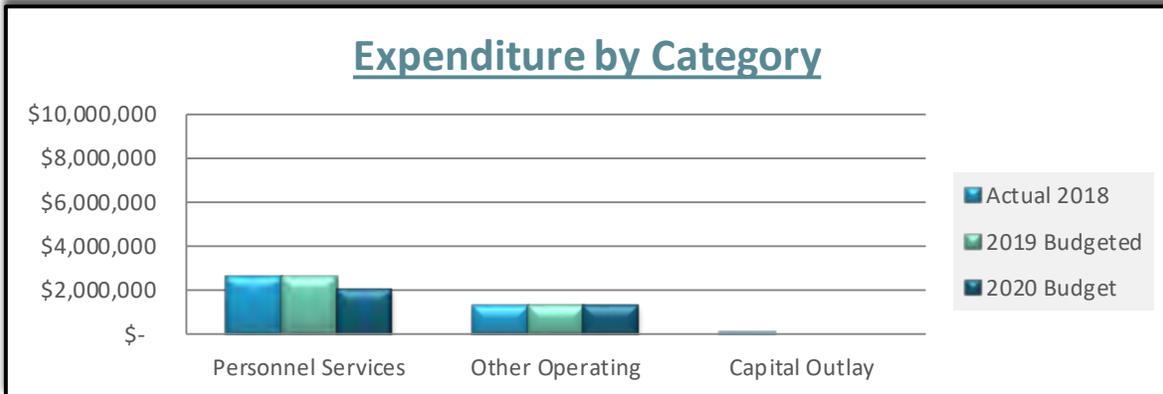
Finance Department Summary (continued)

For fiscal years 2020

Finance



Division	2020 Budget
Finance	1,884,800
Billing	778,500
Purchasing and Inventory	468,400
Records	253,200
Total	\$ 3,384,900



Expenditure	Actual 2018	2019 Budgeted	2020 Budget
Personnel Services	\$ 2,591,601	\$ 2,567,500	\$ 2,035,300
Other Operating	1,268,761	1,268,400	1,349,600
Capital Outlay	812	-	-
Total	\$ 3,861,174	\$ 3,835,900	\$ 3,384,900

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Human Resources Department



ADMINISTRATION DIVISION

Karen Rodriguez, Manager of Human Resources

Responsibilities and Budget Issues

The Human Resources department consists of human resources and risk management. The budget supports all personnel related programs as well as all types of insurance. The budget supports costs of recruitment, selection, orientation and retention of employees, employee health insurance (including estimated claims), workers' compensation insurance and property and liability insurance.

DEPARTMENTAL TEAMS

Human Resources

Risk Management

Human Resources Department Summary

For fiscal year 2020

**Human Resources Department
KEY DEPARTMENT INDICATORS**

Key department indicators			
	Actual 2018	Budgeted 2019	Budget 2020
Number of full time department employees	5	5	4
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	-	-	(1)
Number of student positions for the agency	3	3	3
Job postings for the organization	84	60	60
Number of applications received	835	1,000	750
Number of new hires	28	20	25
Number of resignations, retirements or terminations	37	20	25
Number of grievances filed	3	3	3
Number of arbitrations filed	2	2	2
Number of insurance claims (including workman's compensation and hurricane damage)	50	59	50

**DEPARTMENTAL GOALS,
OBJECTIVES, AND PERFORMANCE
MEASURES**

Enhance employee communication and development by giving employees the tools they need to stay on top of their personal growth and development.

Financial optimization by continually analyzing insurance costs and documenting potential losses.

Train supervisors and employees throughout the system on how to use the many tools available to them within the ADP Workforce Now HR Program.

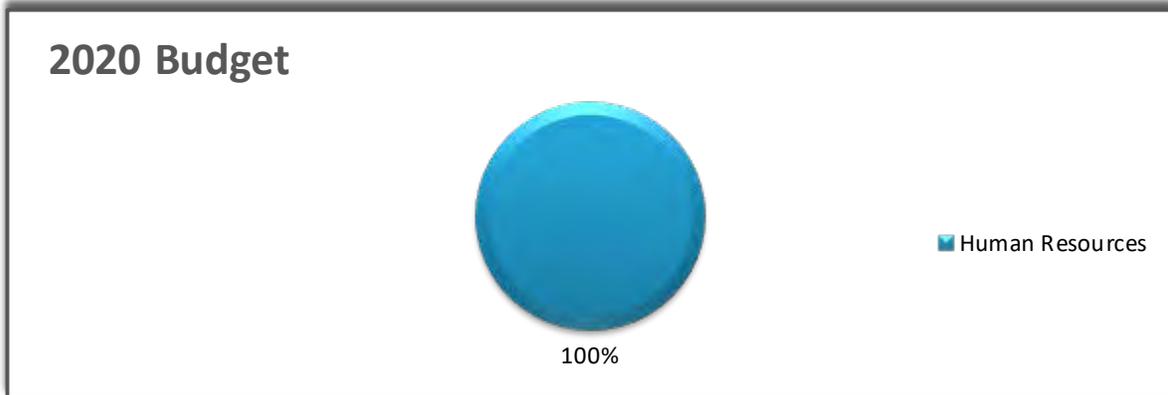
Fine tune the company property program in ADP to better track FCAA property issued to each employee and returned.



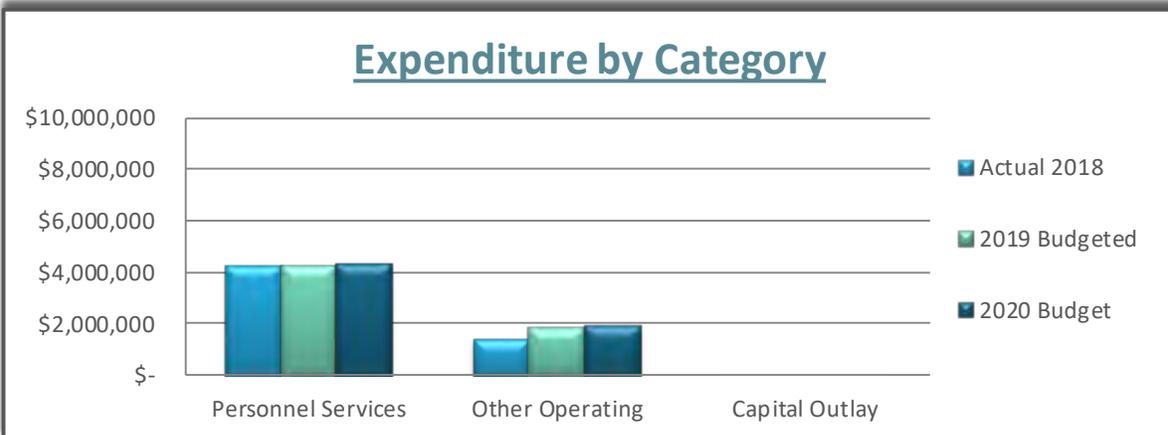
Human Resources Department Summary (continued)

For fiscal year 2020

Human Resources



Division	2020 Budget
Human Resources	\$ 6,093,300
Total	\$ 6,093,300



Expenditure	Actual 2018	2019 Budgeted	2020 Budget
Personnel Services	\$ 4,169,713	\$ 4,229,800	\$ 4,250,200
Other Operating	1,392,422	1,818,100	1,843,100
Capital Outlay	-	-	-
Total	\$ 5,562,135	\$ 6,047,900	\$ 6,093,300

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Information Technology Department



ADMINISTRATION DIVISION

Responsibilities and Budget Issues

Information Technology is responsible for planning, designing, acquiring, building, operating and maintaining technical infrastructure and for developing jointly with management, technology policies, strategies, standards, guidelines, and architectural direction. The technical architecture includes data, applications, hardware, software, networks, security and control systems. The budget supports salaries for several specialized positions as well as software licensing and maintenance costs.

DEPARTMENTAL TEAM

Information Technology

Information Technology Department Summary

For fiscal year 2020

Information Technology Department

KEY DEPARTMENT INDICATORS

	Actual 2018	Budgeted 2019	Budget 2020
Key department indicators			
Number of full time department employees	11	11	11
New positions not in prior year's budget	-	-	-
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	-	-	-
Help desk requests	4,337	4,000	4,000
Number of work stations/IPads maintained	520	350	350
Number of servers maintained	120	115	115
Routers/switches maintained	100	100	100
PBX switches maintained	-	(2)	-
Telephones maintained (includes fax & cell)	99	175	175
Radios maintained	-	-	-
PLCs maintained	-	-	-
Printers	155	155	155

DEPARTMENTAL GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

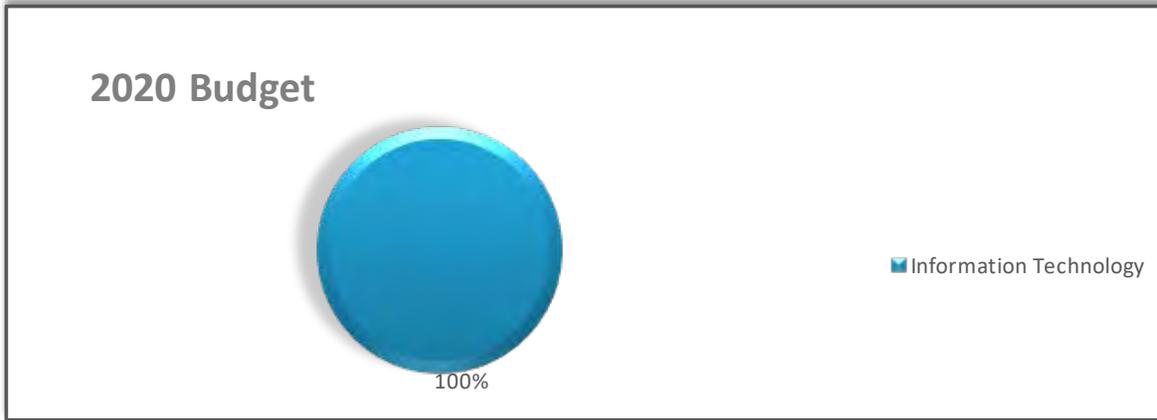
- Keep everyone educated on the long- term cost of implementation of all systems.
- Continue mobility initiative to improve efficiencies.
- Add redundancy to positions through formal and on-the-job training.
- Continue to improve technologies.
- Enhance network security to ensure utility safe operations.
- Develop a defensible utility and related infrastructure.



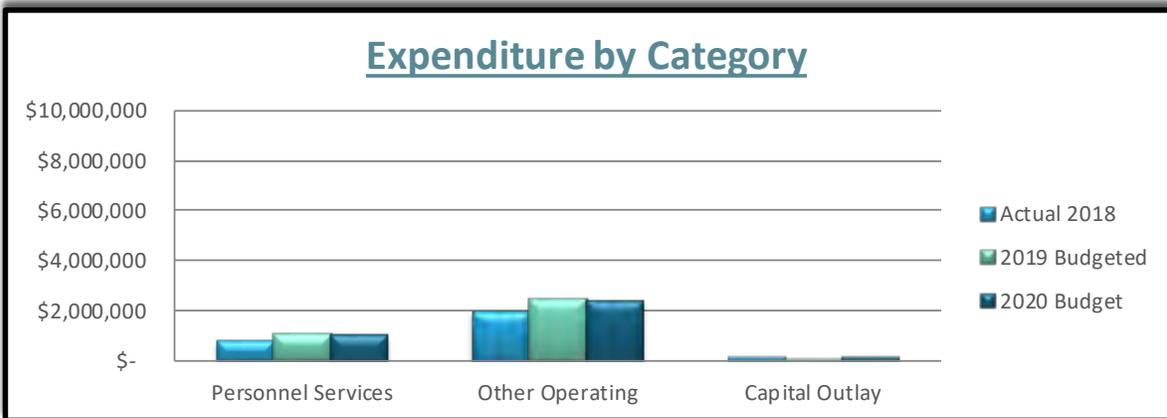
Information Technology Department Summary (continued)

For fiscal years 2020

Information Technology



Division	2020 Budget
Information Technology	\$ 3,568,700
Total	\$ 3,568,700



Expenditure	Actual 2018	2019 Budgeted	2020 Budget
Personnel Services	\$ 804,695	\$ 1,050,800	\$ 1,039,800
Other Operating	1,944,401	2,434,900	2,394,900
Capital Outlay	132,986	71,000	134,000
Total	\$ 2,882,082	\$ 3,556,700	\$ 3,568,700

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Utility Operations Division



Kent Nelson, Deputy Executive Director

Responsibilities and Budget Issues

The Utility Operations division is responsible for the operational activities of the organization, including engineering, plant operations and system maintenance. The managers of these departments report directly to the Deputy Executive Director in charge of utility operations. The budgets, goals and indicators for these departments discussed on the following pages.

DEPARTMENTS

Engineering

Water Operations

Wastewater Operations

Engineering Department



UTILITY OPERATIONS DIVISION

Jolynn Reynolds, Manager of Engineering

Responsibilities and Budget Issues

The Engineering Department consists of general engineering, contract management, water quality, design, and construction crew. The department's budget supports the development of capital project plans, project inspection, distribution project design and finished water testing, reporting and compliance, and wastewater project design and management. The department is responsible for designing, coordination and implementing the Authority's capital improvement budget, (see the Capital and Debt section) and developing future initiatives to maintain and improve system operations and sustainability. Future efforts will be concentrated on system renewal and replacement of aging assets and greenhouse footprint reduction.

DEPARTMENTAL TEAMS

General Engineering

Contract Management

Water Quality

Design

Water Data Management &
Loss Division

Construction Crew

Engineering Department Summary

For fiscal year 2020

Engineering Department

KEY DEPARTMENT INDICATORS

	Actual 2018	Budgeted 2019	Budget 2020
Key department indicators			
Number of full time department employees budgeted	58	45	59
New positions not in prior year's budget	-	-	1
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	15	1	-
Number of construction design projects underway	12	14	14
Number of construction projects underway	10	14	14
Number of general engineering task orders	11	12	12
Number of fixture reviews	444	250	250
Number of plan reviews	61	90	90
Feet of designed distribution	55,890	42,080	42,080
Number of Fire line/hydrant	37	60	60
Number of backflow inspections completed	273	225	225
Number of backflow prevention tests	3,779	3,000	3,000
Number of water quality samples	15,234	16,800	16,800
Feet of distribution pipe installed by in-house crew	27,474	27,000	27,000
Number of meter change outs	1,395	2,000	2,000
Number of meter tests	1,530	2,000	2,000

DEPARTMENTAL GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Complete wastewater system projects in Monroe County.

Recover lost revenue and reduce lost water to meet industry goals.

Strengthen wellfield protection program by enforcing existing cooperative agreement with Miami-Dade.

Work with South Florida Water Management District on plans to prevent or mitigate saltwater intrusion.

Engage experts to assist with condition assessment and evaluation of the integrity of the utility system.

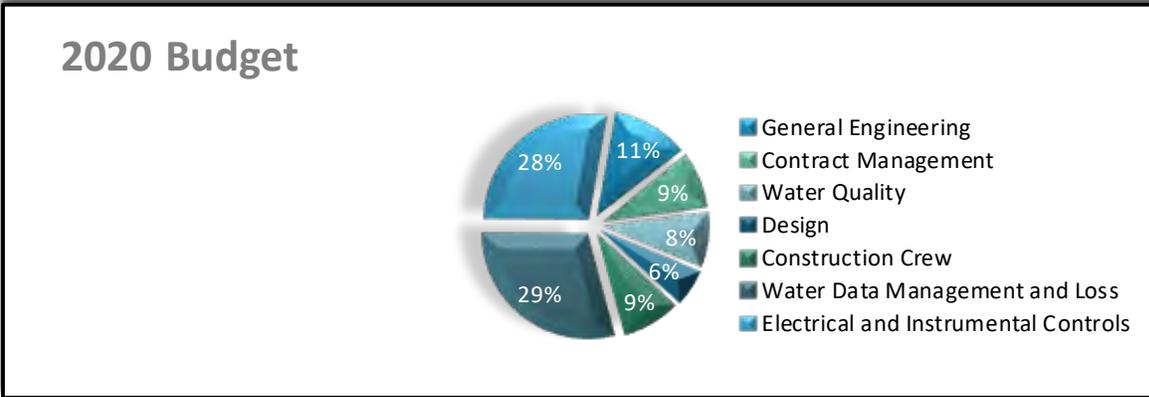
Develop and integrated and dynamic master plan to insure financial stability.



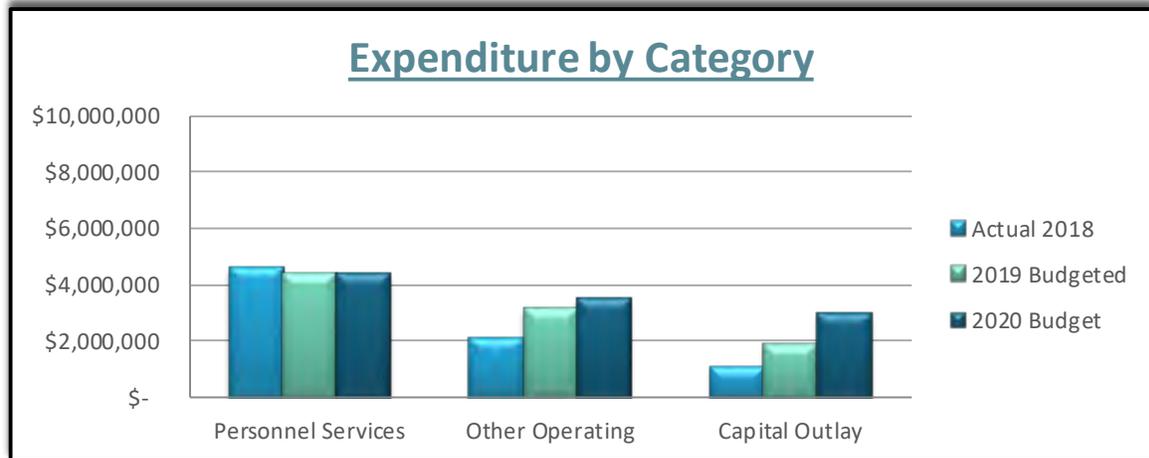
Engineering Department Summary (continued)

For fiscal years 2020

Engineering



Division	2020 Budget
General Engineering	\$ 1,245,200
Contract Management	928,800
Water Quality	902,900
Design	614,700
Construction Crew	961,200
Water Data Management and Loss	3,164,100
Electrical and Instrumental Controls	2,985,100
Total	\$ 10,802,000



Expenditure	Actual 2018	2019 Budgeted	2020 Budget
Personnel Services	\$ 4,573,200	\$ 4,370,900	\$ 4,357,900
Other Operating	2,102,262	3,148,000	3,479,900
Capital Outlay	1,092,241	1,890,200	2,964,200
Total	\$ 7,767,703	\$ 9,409,100	\$ 10,802,000

Water Operations Department



UTILITY OPERATIONS DIVISION

Tom Morgan, Water Operations Manager

Responsibilities and Budget Issues

The Operations department is charged with the operations and maintenance of the Authority's transmission, distribution, water treatment and source of supply facilities throughout the system as well as collection and treatment of wastewater. The department's budget provides funding to maintain crews in all parts of the Authority's 130-mile service area. The department is also responsible for the operation and maintenance of two seawater reverse osmosis plants, four wastewater treatment plants, fleet vehicles and heavy equipment. Salaries and benefits are the major driver of the department's budget, along with electricity, chemicals and non-routine maintenance projects.

DEPARTMENTAL TEAMS

Area 1 Distribution System Operations (Key West)
 Area 2 Distribution System Operations (Lower Keys)
 Area 3 Distribution System Operations (Marathon)
 Areas 1, 2 and 3 Transmission System Operations (Marathon)
 J. Robert Dean Water Treatment Facility (Florida City)

Area 4 Distribution System Operations (Key Largo/Islamorada)
 Area 5 Distribution System Operations (Ocean Reef)
 Areas 4 and 5 Transmission System Operations (Key Largo)
 Fleet Maintenance

Transmission System Control (Florida City)
 Middle Keys Emergency Water Supply Treatment Facility (Marathon)
 Lower Keys Emergency Water Supply Treatment Facility (Stock Island)
 Electrical and Instrumentation Technical Support

Water Operations Department Summary

For fiscal year 2020

Water Operations Department

KEY DEPARTMENT INDICATORS

	Actual 2018	Budgeted 2019	Budget 2020
Key department indicators			
Number of full time department employees	107	120	107
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	(15)	-	(15)
Number of vehicles in the department	109	110	109
Water treated (billions of gallons)	6,454	6,454	6,454
Transmission line maintained (in feet)	3,987,360	987,360	987,360
Distribution lines maintained (in feet)	3,643,200	3,643,200	3,643,200
Reclaimed water lines maintained (feet)	19,000	19,000	19,000
Internal support service orders performed	100	100	100
Line locations performed	10,000	10,000	10,000
Water quality tests performed	82,050	82,050	82,050
Total fleet maintained	201	201	204

DEPARTMENTAL GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Continue to engage experts to assist with assessment of the integrity of the transmission system.

Continue the implementation of the Authority's new asset management system Cityworks.

Maximize effectiveness of existing RO plant on Stock Island.

Evaluate impact on operations from proposed Capital Improvement Plan (CIP) projects.

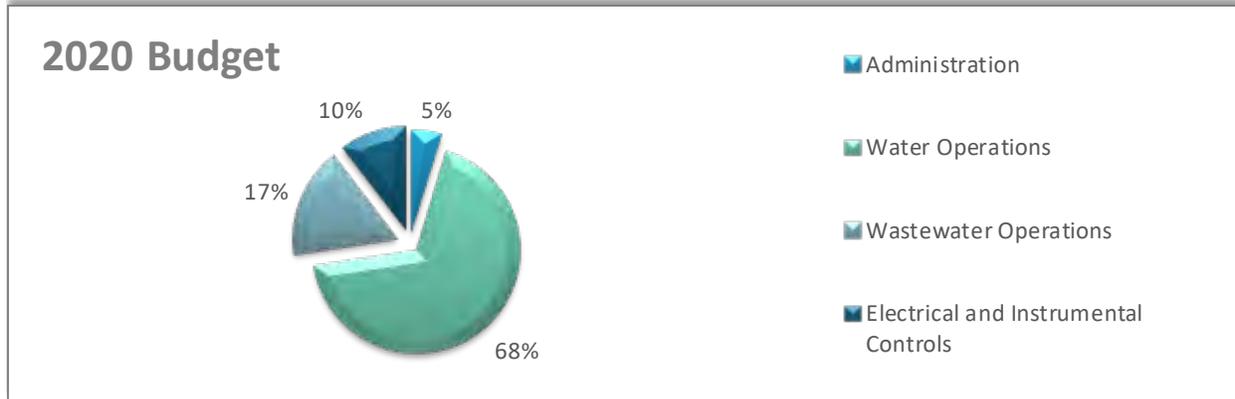
Meet and exceed all SDWA regulatory requirements.



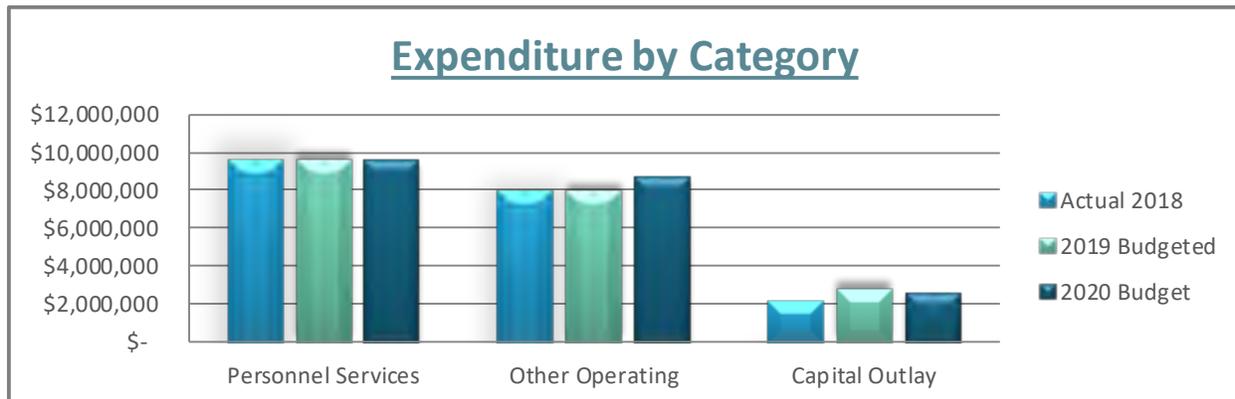
Water Operations Department Summary (continued)

For fiscal years 2020

Water Operations



Division	2020 Budget
Administration	\$ 1,312,900
Water Operations	19,411,700
Wastewater Operations	4,818,700
Electrical and Instrumental Controls	2,985,100
Total	\$ 28,528,400



Expenditure	Actual 2018	2019 Budgeted	2020 Budget
Personnel Services	\$ 9,505,527	\$ 9,588,300	\$ 9,541,500
Other Operating	7,985,788	7,918,700	8,613,800
Capital Outlay	2,165,852	2,754,700	2,569,300
Total	\$ 19,657,167	\$ 20,261,700	\$ 20,724,600

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Wastewater Operations Department



UTILITY OPERATIONS DIVISION

Jay Miller, Wastewater Operations Manager

Responsibilities and Budget Issues

The Wastewater Operations department's primary objective is to provide safe and effective treatment and conveyance of wastewater, thus enabling The Aqueduct to convert it into an effluent that can be safely redistributed or returned to the water cycle with minimal impact on the environment. The budget supports the operation and maintenance of wastewater treatment facilities and collection systems along with training, licensing and salaries for staff.

DEPARTMENTAL TEAMS

Wastewater Treatment Plant - Bay Point
Bay Point Collection
Big Coppitt Wastewater Treatment
Big Coppitt Collection
Key Haven Wastewater Treatment
Key Haven Collection

Cudjoe Regional Wastewater Treatment
Cudjoe Regional Collection
Navy Wastewater Systems (Collection and Treatment)
Wastewater Treatment Plant - Duck Key

Wastewater Operations and Maintenance
Duck Key Collection
Wastewater Treatment Plant - Layton
Layton Collection

Wastewater Operations Department Summary

For fiscal year 2020

**Wastewater Operations Department
KEY DEPARTMENT INDICATORS**

	Actual 2018	Budgeted 2019	Budget 2020
Key department indicators			
Number of full time department employees	32	32	34
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	-	-	2
Number of vehicles in the department	24	24	27
Wastewater treatment plants operated	5	5	5
Reclaimed water pump stations operated	2	2	2

**DEPARTMENTAL GOALS,
OBJECTIVES, AND PERFORMANCE
MEASURES**

Continue to allocate staff resources to implement Monroe County wastewater systems.

Continue to progress with the contractually proposed wastewater repairs and upgrades for all Navy facilities.

Continue to grow the Wastewater Department in a measured and responsible fashion that meets the needs of our customers while also benefitting the organization.

Maintain numbers below FDEP mandated parameters at all wastewater facilities.

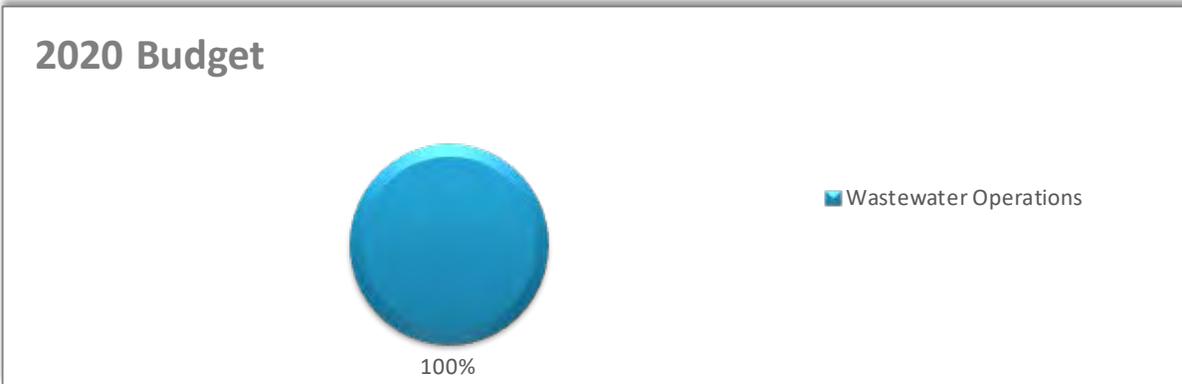
Complete the transition to ezDMR reporting for all wastewater facilities.



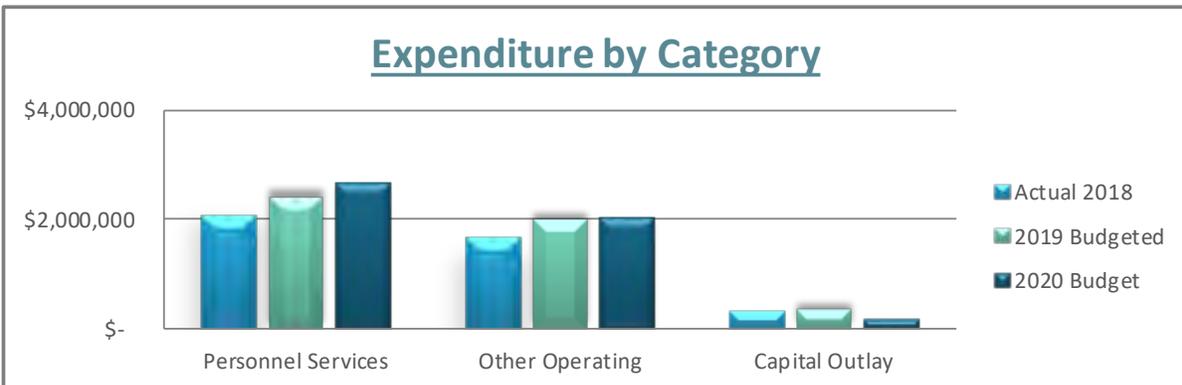
Wastewater Operations Department Summary (continued)

For fiscal years 2020

Wastewater Operations



Division	2020 Budget
Wastewater Operations	4,818,700
Total	\$ 4,818,700



Expenditure	Actual 2018	2019 Budgeted	2020 Budget
Personnel Services	\$ 2,053,335	\$ 2,395,000	\$ 2,640,400
Other Operating	1,628,864	1,968,800	2,013,700
Capital Outlay	301,194	323,200	164,600
Total	\$ 3,983,393	\$ 4,687,000	\$ 4,818,700

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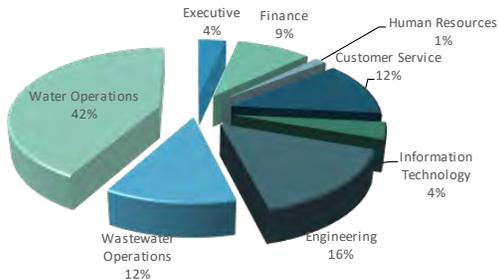
Position and Fleet

For fiscal years 2020

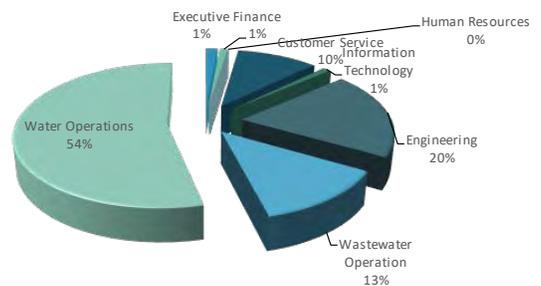
Positions	Executive	Finance	Human Resources	Customer Service	Information Technology	Engineering	Wastewater Operations	Water Operations	Total
Budgeted positions in 2018	8	30	4	35	11	44	26	119	277
New positions									
Field Representative				1					1
Distribution System Operator								2	2
Wastewater Maintenance Mechanic							5		5
Field Office Clerical Assistant							1		1
Contract Field Representative						1			1
Journeyman Electrician								1	1
Transferred positions									
GIS Coordinator						1		(1)	
Eliminated positions									
Advanced Metering Specialist						(1)			(1)
Water Treatment Plant Manager								(1)	(1)
Budgeted positions in 2019	8	30	4	36	11	45	32	120	286
New positions									
None									-
Transferred positions									
Customer Service Rep		(1)		1					-
Deputy Executive Director	2	(1)				(1)			-
Electricians Admin				(1)		1			-
Wastewater Mechanic		(1)		(1)			2		-
Eliminated positions									
Budgeted positions in 2020	10	27	4	35	11	45	34	120	286

Fleet	Executive	Finance	Human Resources	Customer Service	Information Technology	Engineering	Wastewater Operation	Water Operations	Total
Budgeted vehicles in 2018	3	2	-	21	2	39	-	127	194
Added vehicles									
Truck with crane							2	2	4
Bridge truck								1	1
Electrical van								1	1
Inspector SUV						1			1
Eliminated vehicles									
None									-
Transferred vehicles									
Wastewater							21	(21)	-
Budgeted vehicles in 2019	3	2	-	21	2	40	23	110	201
Added vehicles									
One ton							3		3
Eliminated vehicles									
None									-
Transferred vehicles									
None									-
Budgeted vehicles in 2020	3	2	-	21	2	40	26	110	204

BUDGETED POSITIONS BY DEPARTMENT



BUDGETED VEHICLES BY DEPARTMENT



Operating Expenditure By Functional Unit

For fiscal years 2020

2020 Budget Summary

	2018 Actual	2019 Budget	2020 Budget	Increase/Decrease Amount	Change from previous year budget
<u>Executive Division</u>					
Executive Office	\$ 1,365,703	\$ 1,413,700	\$ 2,002,100	\$ 588,400	
Public Information	221,173	\$ 416,400	268,200	(148,200)	
Totals	1,586,876	1,830,100	2,270,300	440,200	24.1%
<u>Finance Department</u>					
Finance	2,227,558	2,213,200	1,884,800	(328,400)	-14.8%
Billing	901,767	910,500	778,500	(132,000)	-14.5%
Purchasing and Inventory	478,681	463,400	468,400	5,000	1.1%
Records	253,149	248,800	253,200	4,400	1.8%
Totals	3,861,155	3,835,900	3,384,900	(451,000)	-11.8%
<u>Human Resources Department</u>					
Human Resources	5,562,135	6,047,900	6,093,300	45,400	0.8%
Totals	5,562,135	6,047,900	6,093,300	45,400	0.8%
<u>Customer Service Department</u>					
Customer Service	2,606,668	2,731,900	2,759,100	27,200	1.0%
Totals	2,606,668	2,731,900	2,759,100	27,200	1.0%
<u>Information Technology Department</u>					
Information Technology	2,882,082	4,150,400	3,568,700	(581,700)	-14.0%
Totals	2,882,082	4,150,400	3,568,700	(581,700)	-14.0%
<u>Engineering Department</u>					
General Engineering	1,420,342	2,373,000	1,245,200	(1,127,800)	-47.5%
Contract Management	629,660	632,800	928,800	296,000	46.8%
Water Quality	815,175	940,900	902,900	(38,000)	-4.0%
Design	434,731	607,000	614,700	7,700	1.3%
Construction Crew	771,704	938,300	961,200	22,900	2.4%
Water Data Management and Loss	1,987,381	2,110,200	3,164,100	1,053,900	49.9%
Electrical and Instrumental Controls	1,708,710	2,323,900	2,985,100	661,200	28.5%
Totals	7,767,703	9,926,100	10,802,000	875,900	8.8%
<u>Water Operations</u>					
Water Operations	19,657,167	20,366,300	20,724,600	358,300	1.8%
Totals	19,657,167	20,366,300	20,724,600	358,300	1.8%
<u>Wastewater Operations</u>					
Wastewater Operations	3,983,393	4,687,000	4,818,700	131,700	2.8%
Totals	3,983,393	4,687,000	4,818,700	131,700	2.8%
Grand Totals	\$ 47,907,179	\$ 53,575,600	\$ 54,421,600	\$ 846,000	1.6%

GLOSSARY



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Glossary fo Terms and Acronyms

For fiscal years 2020

Accrual Basis of Accounting - The recording of expenses or charges incurred but not paid and revenue earned but not received within the same period. This method is intended to match revenue and expenses independent of the dates on which settlements of such items are made.

Amortization - The spreading of costs over time, usually the life of an intangible asset or the term of a debt.

Annual Water Rate Index - The formula by which the Authority annually adjusts the base facility charge and the consumption charge to reflect inflationary increases in the cost of providing services.

Assessment – A charge or special assessment (sometimes characterized as a non-ad valorem assessment) imposed by the Authority to fund the capital cost of utility improvements or the operating cost of related services.

Authority – Represents the Florida Keys Aqueduct Authority, unless a different intent clearly appears from the context.

AWWA - The American Water Works Association, an international water association of which the Authority is a member.

Balanced Budget – A budget with revenues equal to expenditures.

Biscayne Aquifer – An underground aquifer that serves as the Authority’s primary water source.

Bond - An interest-bearing certificate of debt; a written contract by the issuer to pay to the lender a fixed principal amount on a stated future date, and a series of interest payments (usually semiannually) during its life.

Capital Asset – An asset having a useful life of more than one year, and costing \$1,500 or more which includes additions, improvements, or replacements to buildings, facilities, land, and structures.

Capital Budget - The portion of the Budget devoted to the construction of new utility plant (additions, improvements, and replacements) and expenditures for the purchase or acquisition of existing utility plant facilities and capital assets.

Consumptive Use Permit – A permit issued by the South Florida Water Management District that regulates the amount of water that can be withdrawn from its water source.

Collection System – A system of pipes, manholes, pumps, etc. that collects wastewater and delivers it to a treatment plant.

Debt Service – The amounts necessary to pay principal, interest and other financing fees.

Depreciation - The specific allocation of the cost of a fixed asset due to usage or the passage of time. Depreciation is a non-cash expense and is not a budgeted expenditure. However, it must be considered in rate development to assure that the rates are sufficient to recover the cost of the asset.

DERM – Miami-Dade County Department of Environmental Resource Management, an agency that contracts with the Authority to monitor its wellfield for contaminants.

Glossary fo Terms and Acronyms (continued)

For fiscal years 2020

Enterprise Fund – A fund used to account for the business activities of a government. The Authority’s utility activities are accounted for in a single enterprise fund.

Expense – A use of financial resources to acquire goods or services consumed in a single year’s current operation.

Fiscal Year – A 12-month period that determines the time frame for the financial budget. At the end of the fiscal year, the financial position and results of operations are determined. The Authority’s fiscal year runs from October 1 through September 30.

FKAA or the Authority – Florida Keys Aqueduct Authority

Fleet – Any vehicle that requires a license for operation on a public highway, such as automobiles, trucks, vans, tractors, etc. Fleet does not refer to heavy equipment.

FSAWWA-The Florida section of the American Water Works Association, a state water association of which the Authority is a member

GAAP – Generally Accepted Accounting Principles

GFOA – Government Finance Officers Association

GIS – Geographic information system

MGD or mgd – Million gallons per day. Term usually used to define capacity of water and wastewater systems and their production.

Operating Expenses – Labor, materials and other expenses incurred for production, transmission and distribution of water, customer service, administrative overhead and other general expenses.

Potable Water – Water that meets all requirements and regulations for human consumption.

PSI-Pounds per square inch.

Reclaimed Water – Wastewater that has been treated and is available to reuse for irrigation or other non- potable purposes.

Revenue Bond – A bond that is payable from the revenue generated from the operation of the Utility. Any other revenue the Board of Directors decides to pledge can also secure a revenue bond.

Reverse Osmosis – A process through which chlorides are removed from ground water or sea water.

Service Area – The area within which water and wastewater service is provided. The Authority’s service area includes that section of Monroe County, Florida located in the Florida Keys.

SDWA – Federal Safe Drinking Water Act

FWMD – The South Florida Water Management District, a water use regulator that issues the Authority’s consumptive use permit.

Glossary fo Terms and Acronyms (continued)

For fiscal years 2020

Strategic Planning – The process used to determine the Authority’s mission, vision, values, goals, objectives, roles and responsibilities, etc.

Transmission Force Mains – Pipes through with water is forcibly pumped under pressure to deliver it to distribution systems. The transmission line is usually under much higher pressure than a distribution line.