

2021

FLORIDA KEYS AQUEDUCT AUTHORITY



2021 BUDGET AND FINANCIAL PLAN

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FLORIDA KEYS AQUEDUCT AUTHORITY

BUDGET AND FINANCIAL PLAN
2021

305.296.2454

1100 Kennedy Drive

Key West, FL 33040

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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

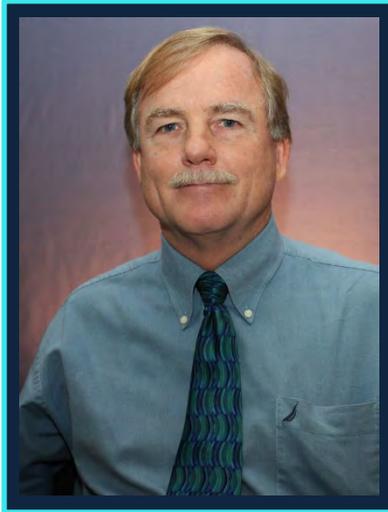
District 4- Current term expires December 31, 2020
Highly Qualified Paraprofessional with the
Monroe County School District, Retired

CARA HIGGINS BOARD MEMBER

District 1- Current term expires December 31, 2022
Owner, Cara Higgins Law

Message from the Executive Director

TOM WALKER



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, 2021, as adopted by the Board of Directors on August 26, 2020, 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, 2021 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 slightly over the current year due to a .7% inflation index effective October 1, 2020. Sales volumes are projected to remain the same as 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 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, including the remaining proceeds from the Series 2019A Water Revenue Bond issue, in 2021 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. The COVID-19 pandemic has also impacted revenue as the economy slowed and closures of businesses limited activity. It has also impacted some customers' ability to stay current on their utility bills.

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, 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,

Tom Walker
Executive Director

August 26, 2020

VISION, MISSION, VALUES AND GUIDING PRINCIPLES

For fiscal year 2021



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 2021

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 2021

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 2021

	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 2021

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 75,000. 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 2021

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 2021

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. Although the permanent population of Monroe County is estimated at approximately 74,000 residents, the average functional population, defined as the sum of the permanent population and the peak seasonal population is 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 2021

FLORIDA KEYS

ESTIMATED POPULATION

Year	Resident Population
2019	75,027
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
18.0%

% 65 years of
age and over
10.1%

DEMOGRAPHICS

Average household size	2.47
Median household income	\$ 67,023
Per capital income	\$ 92,119
Personas below the poverty level	12.00%
Total housing units	53,378
Median single family home value	\$ 510,000
median travel time to work (minutes)	17.6

Demographic and Economic Information (continued)

For fiscal year 2021

LOCAL UNEMPLOYMENT

2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
1.8%	3.3%	3.0%	3.2%	3.7%	3.6%	4.0%	5.4%	7.6%	7.9%	6.3%

ANNUAL RAINFALL FOR THE LAST 10 FISCAL YEARS

Fiscal Year	Key West International Airport
2019	38.77
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

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 2021

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 the Authority to maintain 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 2021

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, 2019

2019	Total Gallons Consumed (000)	Total Water Revenues	% of Water Revenue
1 United States Navy	260,264	\$ 1,148,752	2.0%
2 City of Key West	111,485	738,074	1.3%
3 Monroe County School Board	73,818	464,525	0.8%
4 Ocean Reef Club	61,386	320,779	0.6%
5 NWCL LLC	55,948	333,529	0.6%
6 Monroe County Detention Center	54,999	347,370	0.6%
7 Keys Hotel Operator	54,356	308,170	0.5%
8 Resort Hotels of Key West	43,880	274,982	0.5%
9 Casa Marina Owner LLC	41,136	226,099	0.4%
10 NHC FL 13 LP	38,842	242,187	0.4%

10 largest customers-year ended September 30, 2010

2010	Total Gallons Consumed (000)	Total Water Revenues	% of Water Revenue
1 United States Navy	239,671	\$ 851,247	2.4%
2 Monroe County	52,248	517,301	1.4%
3 BH/NW Hawks Cay Property Holding	35,304	237,378	0.7%
4 Board of Public Instruction	30,971	267,145	0.7%
5 City of Key West	28,405	121,068	0.3%
6 Ocean Reef Club Inc.	25,971	225,976	0.6%
7 KW Beach Suites LTD PA	23,038	234,705	0.7%
8 Heartland Hotel	23,002	224,863	0.6%
9 Cheeca Holdings LLC	21,858	215,817	0.6%
10 CHL Partnership	20,292	184,754	0.5%

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)**

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

**6 TRANSMISSION BOOSTER AND BACK PUMP
STATIONS**

42 BRIDGE CROSSINGS

46 MG CAPACITY IN 33 STORAGE TANKS

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

19 DISTRIBUTION 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 2021

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 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 2021

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 684 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 2021

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 11,000 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 2021

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 2019 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, 2018. This was the 28th 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 2021

Acknowledgements

The preparation of the budget and financial plan for the year ending September 30, 2021 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 2021

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.

2020

The COVID-19 pandemic struck the entire planet, with south Florida becoming the global epicenter of the disease for a time. The significant disruption of the economy and society in general impacted the Authority's customers both financially and emotionally, with many businesses permanently closing and residents relocating to other parts of the country.

Budget Highlights, Issues and Priorities

For fiscal year 2021

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:

- Extensive capital improvement plan based on long-range capital needs analysis
- Receipt of \$36 million federal grant for refurbishment and expansion of reverse osmosis facility
- Contractual salary increases

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

- Continued impacts of the COVID-19 pandemic
- 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

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

Operating Revenue

Utility operating revenue

After several years of steadily increasing consumption, water sales were sharply impacted by the COVID-19 pandemic in 2020. The future effects of this ongoing global crisis are unknown and may continue to weaken water demand. Water volume sales are budgeted to remain flat compared with the current budget. The budget includes a .7% rate adjustment for inflation effective October 1, 2020 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 3.5% 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 \$29,112,600 or about 3.1% higher than the current budget. A cost of living salary adjustment of 1% 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. Two new permanent positions and two new temporary positions are being added to the 2021 budget.

Budget Highlights, Issues and Priorities (continued)

For fiscal year 2021

Other operating expenses

Operating costs, such as materials and maintenance are budgeted to increase, mainly due to increased costs of materials needed for major repair and replacement projects the costs of migrating several applications to a cloud-based format. The latter will reduce the capital needs for servers in the future. Legal costs are also budgeted to increase due to FEMA appeals and litigation. Bank charges are increasing as more customers are opting to pay electronically, which will also save customer service costs in the future.

Capital outlay

Capital outlay is budgeted at \$4,549 100, which is consistent with the current year. These costs are for replacement of aging vehicles and equipment, system upgrades at the water treatment plant and AMI data collectors.

Capital Improvement Projects

The capital improvement plan is centered around projects that are critical to sustaining continued reliable operations. The 2021 portion of the plan calls for \$46,340,000 in capital expenditures and includes costs for distribution and transmission line replacements in areas identified as vulnerable to breaks. The plan also includes funds for construction of a new headquarters building in Key West that will replace the current structure that was damaged during Hurricane Irma and rehabilitation of the reverse osmosis facility on Stock Island. See a detailed discussion of capital projects under the section entitled Capital and Debt.

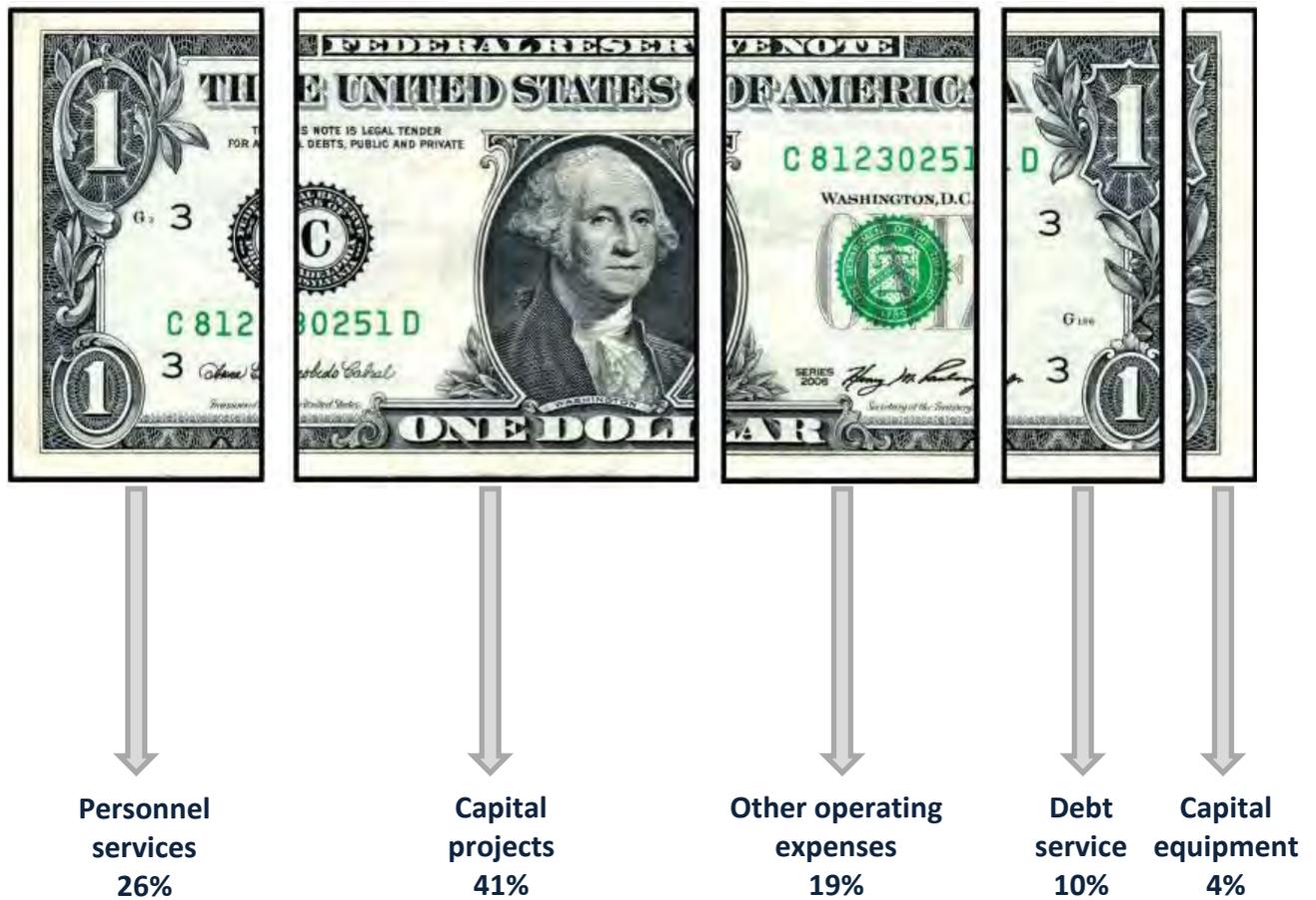
Capital Financing and Debt Service

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 \$11.1 million, about the same as the current year. Remaining proceeds from the Series 2019A Water Revenue Bond issue will be used in 2021 for ongoing capital improvements. No new debt is included in the 2021 budget.

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

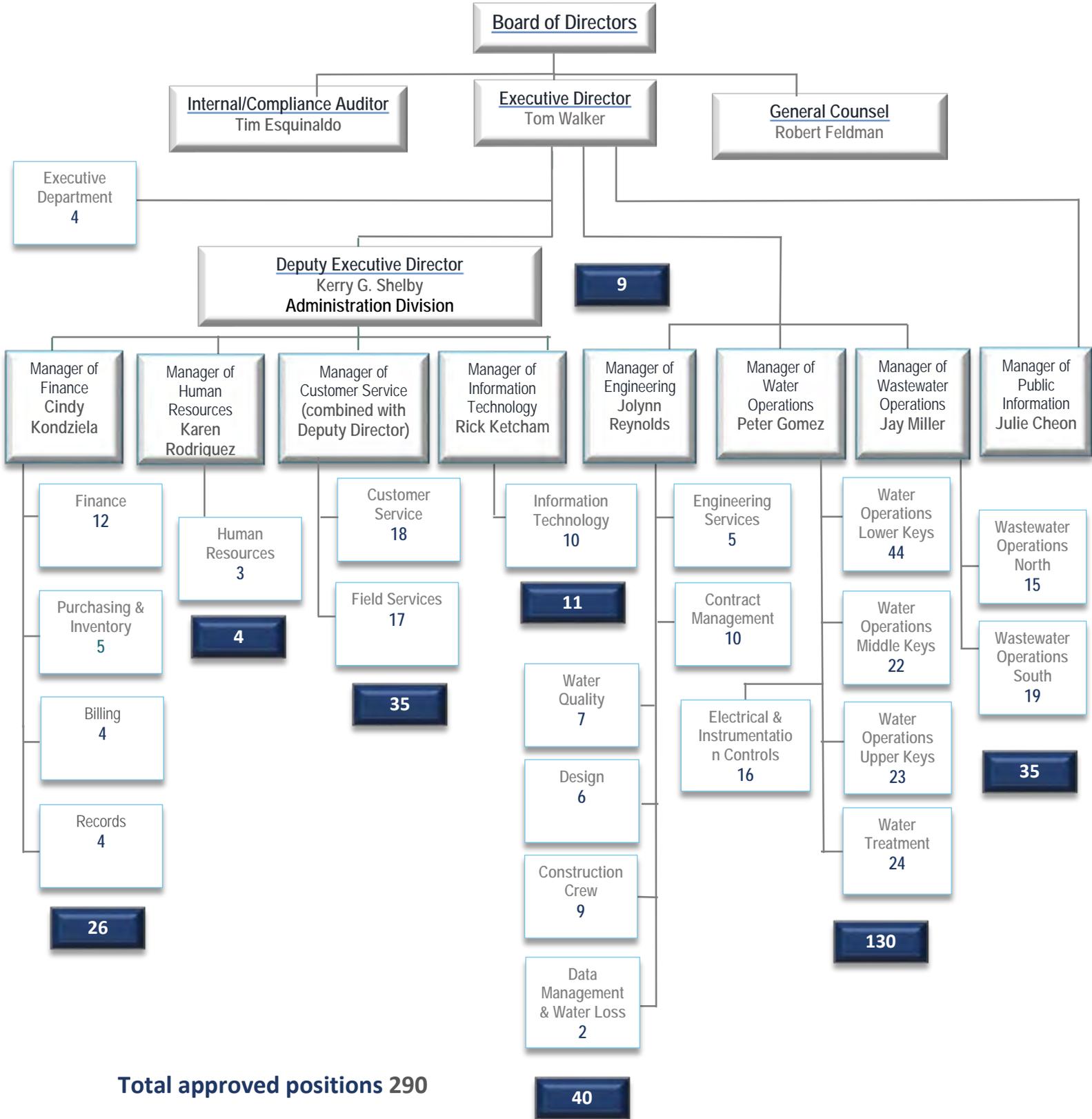
Budget Process



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ORGANIZATION CHART

FOR FISCAL YEAR 2021



CONTACT INFORMATION

FOR FISCAL YEAR 2021

Executive Division

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Financial Policies That Impact The Budget

For fiscal year 2021

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 2021

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 2021

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 2021

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 and the entire board before a public hearing is held to provide an opportunity for input from the public. The budget committee may schedule additional meetings or hearings 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 2021

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 2021

Budget Calendar

Dates for Preparation of the 2021 Budget

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

Informal input from our Board of Directors, staff and customer's year around. Prepare budget sheets for distribution to Departments.

New positions are presented

In February, Departments are working on their budgets.

The first final draft of the budget is presented to the Executive Director

Week 3 budget meetings with Deputy Executive Director

July 22th, the budget is presented to the Board at the virtual Board meeting

Week 4 budget meetings with Executive Director

CIP is discussed

August 19th, final budget public hearing. Budget adoption planned for regular board meeting agenda.

FINANCIAL SUMMARIES

**Summary of Budget Sources and
Uses**

Summary of Revenue Sources

Rate Structure

**Operating Budget by Expenditure
Type**

Five-Year Financial Plan

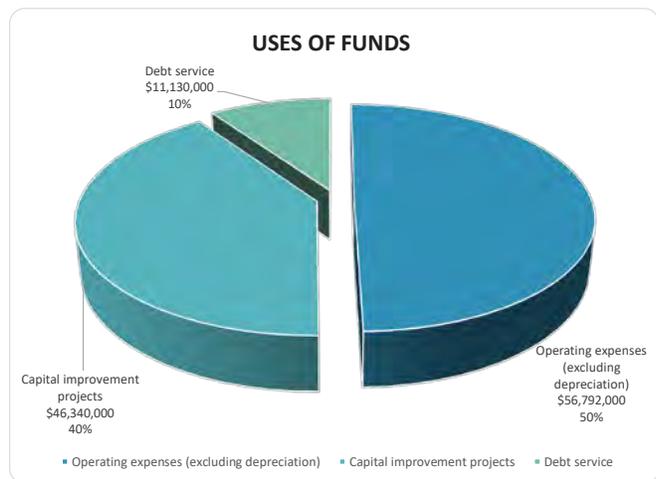
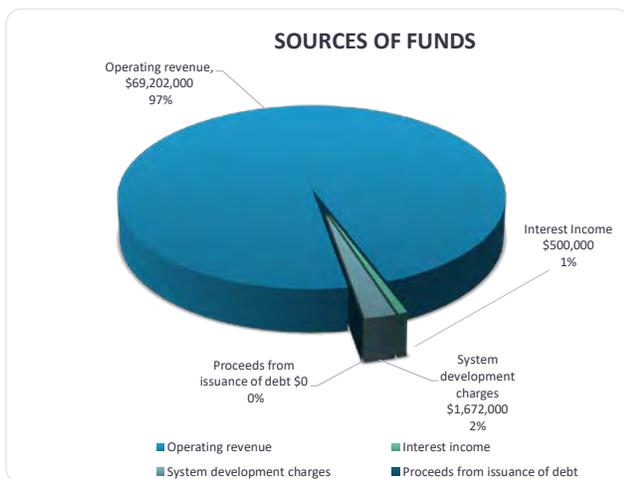


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Summary of Budgeted Sources and Uses

For fiscal year 2021

	2019	2020 Budget (amended)			2021 budget			% Change
	Actual	Water	Wastewater	Total	Water	Wastewater	Total	
Total budgeted sources of funds								
Utility operating revenue	\$ 71,591,395	\$ 58,782,000	\$ 9,967,000	\$ 68,749,000	\$ 59,165,000	\$ 10,037,000	\$ 69,202,000	0.7%
Interest income	1,135,051	500,000	-	500,000	500,000	-	500,000	0.0%
System development fees and other income	6,936,464	1,531,000	138,000	1,669,000	1,534,000	138,000	1,672,000	0.2%
Grant proceeds and state appropriations	-	-	-	-	6,000,000	-	6,000,000	-
Proceeds from issuance of debt, net of issue costs	50,590,250	-	-	-	-	-	-	-
Total budgeted sources of funds	130,253,160	60,813,000	10,105,000	70,918,000	67,199,000	10,175,000	77,374,000	9.1%
Total budgeted uses of funds								
Operating expenditures (excluding depreciation)	50,033,123	46,237,700	8,372,100	54,609,800	47,805,000	8,987,000	56,792,000	4.0%
Capital improvement projects	18,407,737	38,720,000	1,200,000	39,920,000	39,340,000	7,000,000	46,340,000	16.1%
Debt service	8,680,734	8,011,000	858,000	8,869,000	10,277,000	853,000	11,130,000	25.5%
Total budgeted uses of funds	77,121,594	92,968,700	10,430,100	103,398,800	97,422,000	16,840,000	114,262,000	10.5%
Excess (deficit) sources over uses	53,131,566	(32,155,700)	(325,100)	(32,480,800)	(30,223,000)	(6,665,000)	(36,888,000)	
Adjustments to cash basis from accrual	6,780,935	-	-	-	-	-	-	
Change in cash and investments	59,912,501	(32,155,700)	(325,100)	(32,480,800)	(30,223,000)	(6,665,000)	(36,888,000)	
Beginning cash and investments	27,237,617	85,750,100	1,400,000	87,150,100	53,594,400	1,074,900	54,669,300	-37.3%
Ending cash and investments	87,150,118	53,594,400	1,074,900	54,669,300	23,371,400	(5,590,100)	17,781,300	-67.5%
Reserves and restricted cash and investments	(72,378,000)	(45,967,000)	(71,000)	(46,038,000)	(20,250,000)	(71,000)	(20,321,000)	-55.9%
Estimated ending unrestricted cash and investmen	\$ 14,772,118	\$ 7,627,400	\$ 1,003,900	\$ 8,631,300	\$ 3,121,400	\$ (5,661,100)	\$ (2,539,700)	-129.4%



Summary of Revenue Sources

For fiscal year 2021

	2019			2020 Budget			2021 budget			Increase / Decrease	% change from prior budget
	Actual	Water	Wastewater	Total	Water	Wastewater	Total	Water	Wastewater		
Number of locations											
Estimated locations billed	52,085	51,600	10,500				51,600	10,500			
Volume											
Estimated gallons (000s) billed at retail rates	4,952,780	5,096,000					5,249,000				
Estimated gallons (000s) billed to US Navy	259,772	254,000					254,000				
Total estimated gallons(000s) sold	5,212,552	5,350,000					5,503,000				
Operating revenue											
Fees for service											
Retail water rate revenue	\$ 56,608,392	\$ 53,541,000		\$ 53,541,000	\$ 53,916,000		\$ 53,916,000		\$ 375,000	0.7%	
US Navy water rate revenue	1,142,156	1,189,000		1,189,000	1,197,000		1,197,000		8,000	0.7%	
US Navy distribution system charge	2,437,580	2,487,000		2,487,000	2,487,000		2,487,000		-	0.0%	
Retail reclaimed water rate revenue	165,351	65,000		65,000	65,000		65,000		65,000	0.0%	
Retail wastewater rate revenue	9,680,298		8,377,000	8,377,000		\$ 8,436,000	8,436,000		59,000	0.7%	
US Navy wastewater revenue	1,564,948		1,590,000	1,590,000		1,601,000	1,601,000		11,000	0.7%	
Total fees for service	71,598,725	57,282,000	9,967,000	67,249,000	57,665,000	10,037,000	67,702,000		453,000	0.7%	
Other operating revenue	1,198,032	1,500,000	-	1,500,000	1,500,000	-	1,500,000		-	0.0%	
Total operating revenue	72,796,757	58,782,000	9,967,000	68,749,000	59,165,000	10,037,000	69,202,000		453,000	0.7%	
Non-operating revenue											
Interest income	1,135,051	500,000	-	500,000	500,000	-	500,000		-	0.0%	
Grant proceeds	2,430,657	-	-	-	6,000,000		6,000,000		6,000,000	-	
Charges to other utilities for billing services	305,672	411,000	-	411,000	414,000	-	414,000		3,000	0.7%	
Other income	1,716,996	120,000	-	120,000	120,000	-	120,000		-	0.0%	
Total non-operating revenue	5,588,376	1,031,000	-	1,031,000	7,034,000	-	7,034,000		6,003,000	582.3%	
Total budgeted revenue	78,385,133	59,813,000	9,967,000	69,780,000	66,199,000	10,037,000	76,236,000		6,456,000	9.3%	
System development fees (including assessments)	2,733,791	1,000,000	138,000	1,138,000	1,000,000	138,000	1,138,000		-	0.0%	
State appropriations	-	-	-	-	-	-	-		-	0.0%	
Total revenue and system development fees	\$ 81,118,924	\$ 60,813,000	\$ 10,105,000	\$ 70,918,000	\$ 67,199,000	\$ 10,175,000	\$ 77,374,000		\$ 6,456,000	9.1%	

Budget assumptions:

Water volume sales increase	0.0%	0.0%
Rate inflation index	0.7%	0.7%
Additional water rate increase (decrease)	0.0%	
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 2021

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, 2019		After October 1, 2020 index and 3% rate increase	
Potable Water Rates				
Base facilities charge				
¾-inch or ¾-inch	\$	16.10	\$	16.21
1-inch		40.29		40.57
1½-inch		80.54		81.10
2-inch		128.88		129.78
3-inch		241.63		243.32
4-inch		399.81		402.61
6-inch		806.96		812.61
8-inch		1,288.65		1,297.67
Consumption charge ^[1]				
Block 1	\$	6.76	\$	6.81
Block 2		9.88		9.95
Block 3		11.08		11.16
Block 4		12.36		12.45
Block 5		13.57		13.66
Reclaimed Water Rates				
Consumption charge ^[1]				
Block 1	\$	3.38	\$	3.40
Block 2		4.94		4.97
Block 3		5.54		5.58
Block 4		6.18		6.22
Block 5		6.79		6.83

Rate Structure (continued)

For fiscal year 2021

	Rates in effect on October 1, 2019	After October 1, 2020 index
Wastewater Rates		
Base facilities charge		
3/4-inch or 3/4-inch	\$ 26.01	\$ 26.19
1-inch	97.56	98.24
1½-inch	195.11	196.48
2-inch	312.19	314.38
3-inch	585.34	589.44
4-inch	975.57	982.40
6-inch	1,952.09	1,965.75
8-inch	2,674.89	2,693.61
Flow collection charge		
Residential (up to 10,000 gallons)	\$ 9.84	\$ 9.91
Non-residential (all consumption)	9.84	9.91

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 2021

SCHEDULE OF BUDGETED EXPENDITURES FOR THE YEAR ENDING SEPTEMBER 30, 2021 Total Company

	BUDGETED 2021						
	2019 Actual	2020 Budget	Water	Wastewater	Total	Increase /Decrease	% change from prior budget
Operating capital expenditures							
Additions to utility plant	\$ 3,767,688	\$ 4,981,800	\$ 4,659,500	\$ 164,800	\$ 4,824,300	\$ (157,500)	-3%
Capitalized salaries	976,056	1,094,500	1,186,200	-	1,186,200	91,700	8%
Capitalized overtime	23,800	-	-	-	-	-	-
Total operating capital expenditures	4,767,544	6,076,300	5,845,700	164,800	6,010,500	(65,800)	-1.1%
Operating expenses							
Personnel services							
Salaries	19,469,042	19,941,100	17,939,100	2,226,800	20,165,900	224,800	1%
Overtime	762,724	580,800	430,800	155,000	585,800	5,000	1%
Retirement	2,051,357	2,181,600	2,307,800	233,201	2,541,001	359,401	16%
Payroll taxes	1,568,733	1,653,800	1,496,200	182,200	1,678,400	24,600	1%
Employee health insurance	3,873,873	3,600,000	3,900,000	-	3,900,000	300,000	8%
Other benefits	201,971	270,100	224,600	16,900	241,500	(28,600)	-11%
Total personnel services	27,927,700	28,227,400	26,298,500	2,814,101	29,112,601	885,201	3.1%
Other operating expenses							
Electricity	3,247,582	3,344,300	2,923,500	426,300	3,349,800	5,500	0%
Fuel for power production	82,397	149,100	115,300	12,500	127,800	(21,300)	-14%
Chemicals	1,936,874	2,285,700	1,797,500	532,300	2,329,800	44,100	2%
Maintenance and materials	5,748,582	4,966,500	4,998,900	723,300	5,722,200	755,700	15%
Engineering services	439,382	463,100	250,000	-	250,000	(213,100)	-46%
Accounting and auditing services	18,545	96,000	115,000	-	115,000	19,000	20%
Legal services	81,636	30,000	380,000	-	380,000	350,000	1167%
Outsourced operations	2,649,135	1,846,000	1,654,600	193,820	1,848,420	2,420	0%
Other consulting and support services	1,148,951	2,151,400	2,040,200	-	2,040,200	(111,200)	-5%
Sludge removal	199,592	252,100	85,000	157,600	242,600	(9,500)	-4%
Rental of building - real property	17,475	12,000	137,000	6,000	143,000	131,000	1092%
Rent expense - equipment	17,358	60,000	49,200	11,600	60,800	800	1%
Transportation expense	566,097	540,700	545,200	500	545,700	5,000	1%
Insurance - vehicles	73,466	110,000	113,000	-	113,000	3,000	3%
Insurance - general liabilities	175,549	120,000	140,000	-	140,000	20,000	17%
Insurance - workers' compensation	294,666	300,000	300,000	-	300,000	-	0%
Insurance - property and flood	361,038	1,150,000	1,185,000	-	1,185,000	35,000	3%
Advertising	57,532	67,000	74,000	-	74,000	7,000	10%
Bad debt expense	57,675	81,000	81,000	-	81,000	-	0%
Office supplies	88,490	147,200	143,500	6,400	149,900	2,700	2%
Other utilities and technical services	889,620	760,100	1,005,400	-	1,005,400	245,300	32%
Postage	24,046	56,000	49,700	3,000	52,700	(3,300)	-6%
Travel	93,852	198,000	132,300	8,900	141,200	(56,800)	-29%
Training	128,196	254,000	231,050	15,300	246,350	(7,650)	-3%
Miscellaneous	203,627	185,900	229,710	6,400	236,110	50,210	27%
Bank charges	699,021	600,000	725,000	-	725,000	125,000	21%
Public information and outreach	28,549	70,000	54,000	-	54,000	(16,000)	-23%
Freight charges	4,951	10,000	10,000	-	10,000	-	0%
Total other operating expenses	19,333,884	20,306,100	19,565,060	2,103,920	21,668,980	1,362,880	6.7%
Total operating budget	\$ 47,261,584	\$ 48,533,500	\$ 45,863,560	\$ 4,918,021	\$ 50,781,581	\$ 2,248,081	4.6%
Allocation of administrative expenses			\$ (3,904,060)	\$ 3,904,060	\$ -		
Total operating expenses after allocation	47,261,584	48,533,500	41,959,500	8,822,081	50,781,581	2,248,081	4.6%
Total operating budget	\$ 52,029,128	\$ 54,609,800	\$ 47,805,200	\$ 8,986,881	\$ 56,792,081	\$ 2,182,281	4.0%
Amendments to current year budget							
Total operating budget as amended		\$ 54,609,800			\$ 56,792,081	\$ 2,182,281	4.0%

Five Year Financial Plan

For fiscal year 2021

PROJECTED CHANGES IN NET POSITION

FOR FISCAL YEARS 2021 - 2025

	2021	2022	2023	2024	2025
Projected operating results					
Operating revenue	\$ 69,202,000	\$ 73,072,000	\$ 77,159,000	\$ 79,101,000	\$ 81,091,000
Operating expenses (before depreciation)	(56,792,000)	(57,360,000)	(57,934,000)	(58,513,000)	(59,098,000)
Net operating income (before depreciation)	12,410,000	15,712,000	19,225,000	20,588,000	21,993,000
Interest income	500,000	500,000	500,000	500,000	500,000
Other income	534,000	540,000	546,000	552,000	558,000
Interest expense	(6,575,000)	(6,477,000)	(6,415,000)	(6,296,000)	(6,165,000)
Projected net income before depreciation	6,869,000	10,275,000	13,856,000	15,344,000	16,886,000
System development fees (including assessments)	1,138,000	1,138,000	1,138,000	1,138,000	1,138,000
Grant proceeds	6,000,000	-	-	-	-
Projected increase (decrease) in net position before depreciation	14,007,000	11,413,000	14,994,000	16,482,000	18,024,000
Projected beginning net position	139,600,000	139,177,000	136,160,000	136,724,000	138,776,000
Projected net position before depreciation	153,607,000	150,590,000	151,154,000	153,206,000	156,800,000
Estimated depreciation	(14,430,000)	(14,430,000)	(14,430,000)	(14,430,000)	(14,430,000)
Projected ending net position after depreciation	\$ 139,177,000	\$ 136,160,000	\$ 136,724,000	\$ 138,776,000	\$ 142,370,000

PROJECTED SOURCES AND USES OF FUNDS

FOR FISCAL YEARS 2021-2025

	2021	2022	2023	2024	2025
Total projected sources of funds					
Utility operating revenue	\$ 69,202,000	\$ 73,072,000	\$ 77,159,000	\$ 79,101,000	\$ 81,091,000
Interest income	500,000	500,000	500,000	500,000	500,000
System development fees and other income	1,672,000	1,678,000	1,684,000	1,690,000	1,696,000
Grant proceeds	6,000,000	-	-	-	-
Proceeds from issuance of debt, net of issue costs	-	-	50,000,000	-	-
Total projected sources of funds	77,374,000	75,250,000	129,343,000	81,291,000	83,287,000
Total projected uses of funds					
Operating expenditures (excluding depreciation)	56,792,000	57,360,000	57,934,000	58,513,000	59,098,000
Capital improvement projects	46,340,000	67,400,000	29,790,000	21,150,000	25,170,000
Debt service	11,130,000	11,072,000	12,080,000	12,241,000	12,370,000
Total projected uses of funds	114,262,000	135,832,000	99,804,000	91,904,000	96,638,000
Additions to (uses of) cash	\$ (36,888,000)	\$ (60,582,000)	\$ 29,539,000	\$ (10,613,000)	\$ (13,351,000)

Five Year Financial Plan (continued)

For fiscal years 2021-2025

PROJECTED REVENUE AND CONTRIBUTIONS

	FOR FISCAL YEARS 2021 - 2025				
	2021	2022	2023	2024	2025
Estimated gallons (000s) sold to customers at retail rates	5,249,000	5,301,000	5,354,000	5,408,000	5,462,000
Estimated gallons (000s) sold to US Navy	254,000	257,000	260,000	263,000	266,000
Total estimated sales gallons (000s)	5,503,000	5,558,000	5,614,000	5,671,000	5,728,000
Operating revenue					
Fees for service					
Retail water rate revenue	\$ 53,916,000	\$ 56,930,000	\$ 60,113,000	\$ 61,625,000	\$ 63,175,000
US Navy water rate revenue	1,197,000	1,264,000	1,335,000	1,369,000	1,403,000
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	8,436,000	8,908,000	9,406,000	9,643,000	9,886,000
US Navy wastewater revenue	1,601,000	1,691,000	1,786,000	1,831,000	1,877,000
Total fees for service	67,702,000	71,488,000	75,486,000	77,386,000	79,333,000
Other operating revenue	1,500,000	1,584,000	1,673,000	1,715,000	1,758,000
Total operating revenue	69,202,000	73,072,000	77,159,000	79,101,000	81,091,000
Non-operating revenue					
Interest income	500,000	500,000	500,000	500,000	500,000
Grant proceeds	6,000,000	-	-	-	-
Charges to other utilities for billing services	414,000	420,000	426,000	432,000	438,000
Other income	120,000	120,000	120,000	120,000	120,000
Total non-operating revenue	7,034,000	1,040,000	1,046,000	1,052,000	1,058,000
Total budgeted revenue	76,236,000	74,112,000	78,205,000	80,153,000	82,149,000
System development fees (including assessments)	1,138,000	1,138,000	1,138,000	1,138,000	1,138,000
Total revenue and contributions	\$ 77,374,000	\$ 75,250,000	\$ 79,343,000	\$ 81,291,000	\$ 83,287,000

Budget assumptions					
Water volume growth sales increase	0.0%	1.0%	1.0%	1.0%	1.0%
Rate index increase	0.7%	1.5%	1.5%	1.5%	1.5%
Additional water rate increase (decrease)	0.0%	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 2021-2025

FIVE YEAR CAPITAL IMPROVEMENT AND CAPITAL FINANCING PLAN

Description	2021	2022	2023	2024	2025	Estimated five-year expenditures
Water Projects						
Repair/upgrade subaqueous crossing	1,900,000					1,900,000
Repair/upgrade cathodic protection	2,000,000					2,000,000
Rockland yard building	750,000					750,000
Grassy Key transmission line replacement	2,300,000					2,300,000
Stock Island pump station and generator replacement	3,000,000	3,000,000				6,000,000
Stock Island RO	8,000,000	25,500,000	8,000,000			41,500,000
Stock Island RO generator	500,000	9,500,000				10,000,000
Key West administration building	11,900,000	4,300,000				16,200,000
Islamorada transmission line replacement	200,000	13,000,000	13,000,000			26,200,000
Front/Whitehead/Eaton distribution line replacement	1,750,000					1,750,000
Transmission Terminus rehabilitation			1,000,000	4,500,000		5,500,000
Cross Key water distribution upgrade	200,000					200,000
South/United Straeet water distribution upgrade			1,500,000	1,500,000		3,000,000
Utility coordination relocates	1,700,000					1,700,000
Navy- connection tank feed	110,000					110,000
Navy- connection A distribution		600,000	750,000	1,500,000	1,300,000	4,150,000
Navy- connection B distribution			340,000			340,000
Navy- second feed to Boca Chica			500,000			500,000
Navy- fire system West	1,400,000					1,400,000
Navy- fire system East		1,000,000	1,000,000	950,000		2,950,000
No name Key	1,300,000					1,300,000
Stock Island garage replacement					520,000	520,000
Electrical improvement at Florida City - phase 1	2,200,000	2,000,000				4,200,000
Chemical system improvements at Florida City					950,000	950,000
Box Girder bridge coating/coupling			3,000,000	6,000,000	6,000,000	15,000,000
Transmission system valve replacement			500,000	1,000,000	1,000,000	2,500,000
Marathon pump station tank installation				500,000	3,800,000	4,300,000
Coco Plum 3					2,300,000	2,300,000
Ocean Reef distribution and storage improvements				3,200,000	4,000,000	7,200,000
Complete MIU collection system			200,000	2,000,000		2,200,000
Roof replacement- building K1	130,000					130,000
Total water projects	39,340,000	58,900,000	29,790,000	21,150,000	19,870,000	169,050,000
Wastewater projects						
Decentralized Program (Cross Key, Pigeon Key and On-site)	1,500,000	1,500,000				3,000,000
Big Coppitt treatment plant expansion	3,000,000	7,000,000				10,000,000
Big Coppitt WW treatment filters	1,300,000					1,300,000
Navy lift station rehabilitation	1,200,000					1,200,000
Duck Key collection system rehabilitation					200,000	200,000
Bay Point treatment plant decommissioning					5,100,000	5,100,000
Total wastewater projects	7,000,000	8,500,000	-	-	5,300,000	20,800,000
Total capital improvement projects	\$ 46,340,000	\$ 67,400,000	\$ 29,790,000	\$ 21,150,000	\$ 25,170,000	\$ 189,850,000
Funding sources						
Funds from retail rates and cash on hand	\$ 18,030,000	\$ 13,500,000	\$ 6,200,000	\$ 18,700,000	\$ 23,870,000	\$ 80,300,000
Navy water rates	1,510,000	1,600,000	2,590,000	2,450,000	1,300,000	9,450,000
Federal and state appropriations	6,000,000	1,000,000	-	-	-	7,000,000
Bond proceeds	20,800,000	51,300,000	21,000,000	-	-	93,100,000
Total	\$ 46,340,000	\$ 67,400,000	\$ 29,790,000	\$ 21,150,000	\$ 25,170,000	\$ 189,850,000

Five Year Financial Plan (continued)

For fiscal years 2021-2025

PROJECTED NEW DEBT ISSUES AND DEBT SERVICE

	2021	2021	2022	2023	2024
Bond issuance assumptions:					
Projected principal amount of new bonds issued	\$ -	\$ -	\$ 50,000,000	\$ -	\$ -
Available for construction fund	\$ -	\$ -	\$ 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 2019A water revenue bonds	-	-	-	-	-
Series 2021A 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 2019A water revenue bonds	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000
Series 2021A water revenue bonds	-	-	-	-	-
Total interest	6,575,000	6,477,000	6,415,000	6,296,000	6,165,000
Total projected debt service	\$ 11,130,000	\$ 11,072,000	\$ 12,080,000	\$ 12,241,000	\$ 12,370,000

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

Five Year Financial Plan (continued)

For fiscal years 2021-2025

PROJECTED DEBT SERVICE COVERAGE

	Water Operations				
	2021	2022	2023	2024	2025
Funds available for debt service					
Operating revenue	\$ 59,165,000	\$ 62,473,000	\$ 65,967,000	\$ 67,627,000	\$ 69,328,000
Interest income	500,000	500,000	500,000	500,000	500,000
Other income	534,000	540,000	546,000	552,000	558,000
Less operating expenses	(47,744,019)	(48,177,400)	(48,614,800)	(49,056,200)	(49,500,500)
Net funds available for debt coverage	\$ 12,454,981	\$ 15,335,600	\$ 18,398,200	\$ 19,622,800	\$ 20,885,500
Debt service requirements	\$ 10,277,000	\$ 10,219,000	\$ 11,226,000	\$ 11,387,000	\$ 11,521,000
Coverage factor (minimum of 1.10 required)	1.21	1.50	1.64	1.72	1.81
System development charges	\$ 1,138,000	\$ 1,138,000	\$ 1,138,000	\$ 1,138,000	\$ 1,138,000
Coverage factor with system development charges (minimum of 1.20)	1.32	1.61	1.74	1.82	1.91

	Wastewater Operations				
	2021	2022	2023	2024	2025
Funds available for debt service					
Operating revenue	\$ 10,037,000	\$ 10,599,000	\$ 11,192,000	\$ 11,474,000	\$ 11,763,000
Interest income	-	-	-	-	-
Other income	-	-	-	-	-
Less operating expenses	(8,775,981)	(8,907,600)	(9,041,200)	(9,176,800)	(9,314,500)
Net funds available for debt coverage	\$ 1,261,019	\$ 1,691,400	\$ 2,150,800	\$ 2,297,200	\$ 2,448,500
Debt service requirements	\$ 853,000	\$ 853,000	\$ 854,000	\$ 854,000	\$ 849,000
System development charges	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000
Coverage factor with system development charges (minimum of 1.20)	1.64	2.14	2.68	2.85	3.05

Note: Wastewater bonds have no requirement to meet both 1.10 and 1.20 tests. Therefore, only the 1.20 result is shown.

Five Year Financial Plan (continued)

For fiscal years 2021-2025

ESTIMATED RATE ADJUSTMENTS AND AVERAGE MONTHLY BILL

<u>Potable water</u>			
	Estimated percentage increase	Average monthly bill (for 4,500 gallons)	
Current bill		\$	46.52
2021	1.2%	\$	47.08
2022	4.5%	\$	49.20
2023	4.5%	\$	51.41
2024	1.5%	\$	52.18
2025	1.5%	\$	52.96

<u>Reclaimed water</u>			
	Estimated percentage increase	Average monthly bill (for 1,100 gallons)	
Current bill		\$	3.72
2021	1.2%	\$	3.76
2022	4.5%	\$	3.93
2023	4.5%	\$	4.11
2024	1.5%	\$	4.17
2025	1.5%	\$	4.23

<u>Wastewater</u>			
	Estimated percentage increase	Average monthly bill (for 4,500 gallons)	
Current bill		\$	70.29
2021	0.7%	\$	70.78
2022	1.5%	\$	71.84
2023	1.5%	\$	72.92
2024	1.5%	\$	74.02
2025	1.5%	\$	75.13

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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

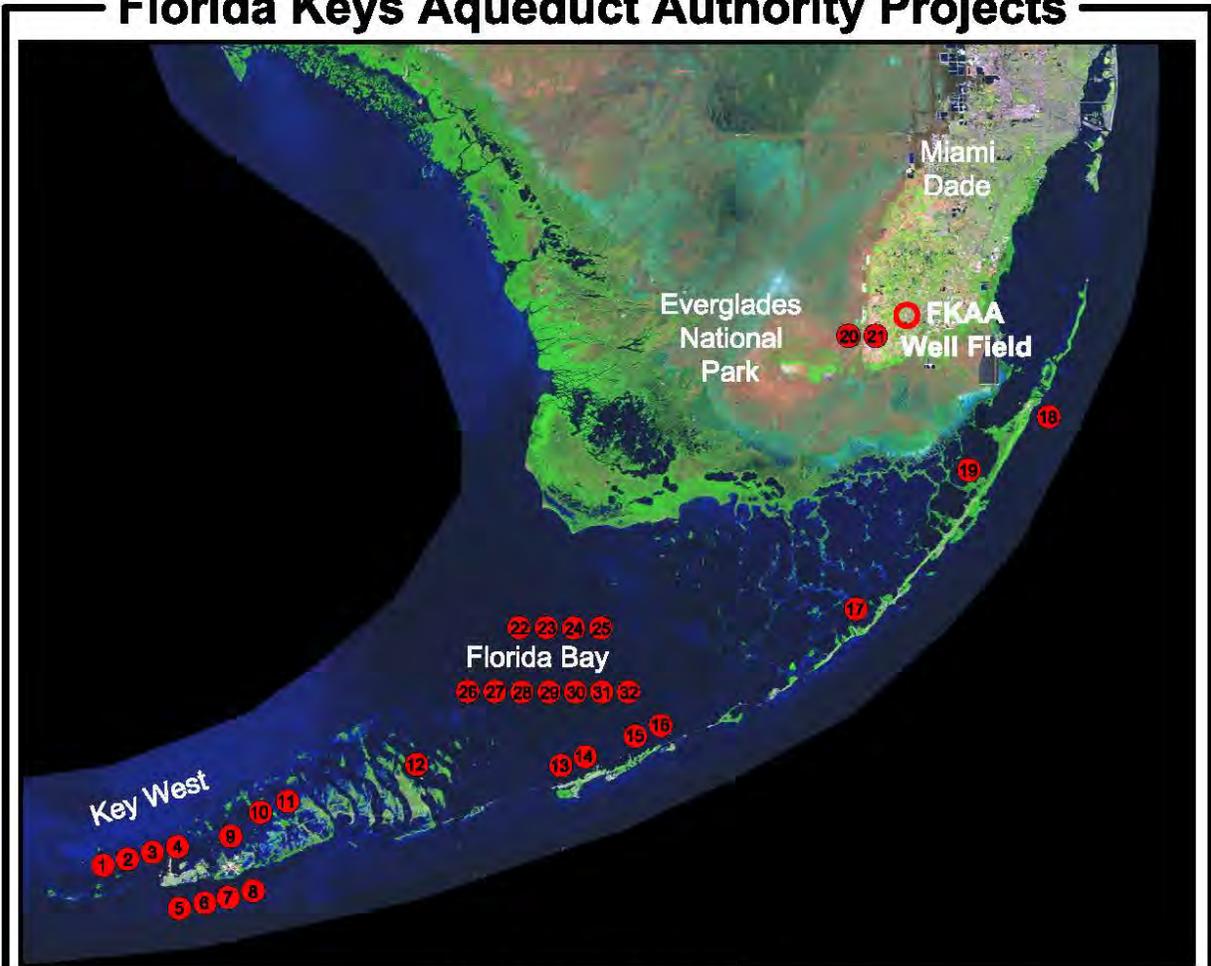
For fiscal years 2021-2025

Description	2021	2022	2023	2024	2025	Estimated five-year expenditures
Water Projects						
Repair/upgrade subaqueous crossing	1,900,000					1,900,000
Repair/upgrade cathodic protection	2,000,000					2,000,000
Rockland yard building	750,000					750,000
Grassy Key transmission line replacement	2,300,000					2,300,000
Stock Island pump station and generator replacement	3,000,000	3,000,000				6,000,000
Stock Island RO	8,000,000	25,500,000	8,000,000			41,500,000
Stock Island RO generator	500,000	9,500,000				10,000,000
Key West administration building	11,900,000	4,300,000				16,200,000
Islamorada transmission line replacement	200,000	13,000,000	13,000,000			26,200,000
Front/Whitehead/Eaton distribution line replacement	1,750,000					1,750,000
Transmission Terminus rehabilitation			1,000,000	4,500,000		5,500,000
Cross Key water distribution upgrade	200,000					200,000
South/United Straet water distribution upgrade			1,500,000	1,500,000		3,000,000
Utility coordination relocates	1,700,000					1,700,000
Navy- connection tank feed	110,000					110,000
Navy- connection A distribution		600,000	750,000	1,500,000	1,300,000	4,150,000
Navy- connection B distribution			340,000			340,000
Navy- second feed to Boca Chica			500,000			500,000
Navy- fire system West	1,400,000					1,400,000
Navy- fire system East		1,000,000	1,000,000	950,000		2,950,000
No name Key	1,300,000					1,300,000
Stock Island garage replacement					520,000	520,000
Electrical improvement at Florida City - phase 1	2,200,000	2,000,000				4,200,000
Chemical system improvements at Florida City					950,000	950,000
Box Girder bridge coating/coupling			3,000,000	6,000,000	6,000,000	15,000,000
Transmission system valve replacement			500,000	1,000,000	1,000,000	2,500,000
Marathon pump station tank installation				500,000	3,800,000	4,300,000
Coco Plum 3					2,300,000	2,300,000
Ocean Reef distribution and storage improvements				3,200,000	4,000,000	7,200,000
Complete MIU collection system			200,000	2,000,000		2,200,000
Roof replacement- building K1	130,000					130,000
Total water projects	39,340,000	58,900,000	29,790,000	21,150,000	19,870,000	169,050,000
Wastewater projects						
Decentralized Program (Cross Key, Pigeon Key and On-site)	1,500,000	1,500,000				3,000,000
Big Coppitt treatment plant expansion	3,000,000	7,000,000				10,000,000
Big Coppitt WW treatment filters	1,300,000					1,300,000
Navy lift station rehabilitation	1,200,000					1,200,000
Duck Key collection system rehabilitation					200,000	200,000
Bay Point treatment plant decommissioning					5,100,000	5,100,000
Total wastewater projects	7,000,000	8,500,000	-	-	5,300,000	20,800,000
Total capital improvement projects	\$ 46,340,000	\$ 67,400,000	\$ 29,790,000	\$ 21,150,000	\$ 25,170,000	\$ 189,850,000
Funding sources						
Funds from retail rates and cash on hand	\$ 18,030,000	\$ 13,500,000	\$ 6,200,000	\$ 18,700,000	\$ 23,870,000	\$ 80,300,000
Navy water rates	1,510,000	1,600,000	2,590,000	2,450,000	1,300,000	9,450,000
Federal and state appropriations	6,000,000	1,000,000	-	-	-	7,000,000
Bond proceeds	20,800,000	51,300,000	21,000,000	-	-	93,100,000
Total	\$ 46,340,000	\$ 67,400,000	\$ 29,790,000	\$ 21,150,000	\$ 25,170,000	\$ 189,850,000

Project Summaries

For fiscal years 2021-2025

Florida Keys Aqueduct Authority Projects



Project Legend

1 Key West Administration Building Replacement	17 Islamorada Transmission Line Replacement
2 South/United Street Water Distribution-Upgrade Key West	18 Ocean Reef Distribution & Storage Improvements
3 Front/Whitehead/Eaton-Key West	19 Cross Key Water Distribution Upgrade
4 Transmission Terminus Rehabilitation-Key West	20 Electric Improvement-Phase 1-Florida City
5 Stock Island Pump Station & Generator Replacement	21 Chemical System Improvements-Florida City
6 Stock Island Garage Replacement	22 Utility Coordination Relocates(conjunction with FDOT)
7 Stock Island RO Facility Treatment(Water)	23 MIU Collection System/Meter Boxes-Keys Wide
8 Stock Island RO Generator Treatment(Water)	24 Box Girder Coating/Coupling Replacement
9 Blg Coppltt Treatment Plant Expansion-Wastewater	25 Transmission System Valve Replacement
10 Blg Coppltt Treatment Filters-Wastewater	26 Navy-Connection Tank Feed
11 Bay Point Treatment Plant Decommission	27 Navy-Connection A Distribution
12 No Name Key Water Distribution Upgrade-Big Pine Key	28 Navy-Connection B Distribution
13 Marathon Pump Station 4 MG Tank Installation	29 Navy- Fire System West
14 Coco Plum 3 Distribution Upgrade-Marathon	30 Navy- Fire System East
15 Grassy Key Transmission Line Replacement	31 Navy- Lift Station Rehabilition/Manholes
16 Duck Key Collection System Rehabilitation	32 Navy-Second Feed to Boca Chica

Project Summaries (continued)

For fiscal years 2021-2025

New Joe Pinder Administration Building

Renewal and Replacement

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	Jolynn Reynolds, P.E.
Contractor	Keystar-Gulf Building
Start Date	2018
Completion Date	2022
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, is completing the re-design of the new building, and Keystar-Gulf Building has been selected as the Construction Management At Risk firm to facilitate the construction of the new building. Demolition of the existing building is underway.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$11,900,000	\$4,300,000	\$ -	\$ -	\$ -	\$16,200,000
Total Costs	\$11,900,000	\$4,300,000	\$0	\$ -	\$ -	\$16,200,000

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 2021-2025

KEY WEST TRANSMISSION MAIN TERMINUS REPLACEMENT

Renewal and Replacement

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 FKA A engineering department. The project is expected to be partially financed from a federal low interest loan administered by the Water Infrastructure Finance and Innovation Act (WIFIA).

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000	\$ -	\$ 3,000,000
Total Costs	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000	\$ -	\$ 3,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

KEY WEST DISTRIBUTION LINE REPLACEMENT

Renewal and Replacement

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	FKAA Construction Crew
Start Date	2019
Completion Date	2021
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project includes the replacement of existing 5,468 feet of 12" ductile iron 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
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 1,250,000	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000
Total Costs	\$ 1,250,000	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	30,000	30,000	30,000	30,000	(30,000)	90,000
Other Operating Costs						
Total Operating Costs	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ (30,000)	\$ 90,000

Project Summaries (continued)

For fiscal years 2021-2025

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	Metro Equipment Service, Inc.
Start Date	2017
Completion Date	2021
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 was performed and an area of approximately 2-miles was identified for replacement (MM 58-60). 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 with this limitation.

Status/Recent Developments:

Installation of new steel pipe is underway. 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
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 2,300,000	\$ -	\$ -	\$ -	\$ -	\$2,300,000
Total Costs	\$ 2,300,000	\$ -	\$0	\$ -	\$ -	\$2,300,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	100,000	(100,000)	(100,000)	(100,000)	(100,000)	(300,000)
Other Operating Costs						
Total Operating Costs	\$ 100,000	\$ (100,000)	\$ (100,000)	\$ (100,000)	\$ (100,000)	\$ (300,000)

Project Summaries (continued)

For fiscal years 2021-2025

ISLAMORADA TRANSMISSION MAIN REPLACEMENT

Renewal and Replacement

Project Information

Location	Islamorada
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1163-18
Design Engineer	Emmy Koenig, P.E.
Project Manager	Emmy Koenig, P.E.
Contractor	To Be Determined
Start Date	2019
Completion Date	2023
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:

The FCAA's Engineering Department will be designing the replacement transmission main. The project is expected to be financed from a federal low interest loan administered by the Water Infrastructure Finance and Innovation Act (WIFIA).

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	200,000	13,000,000	13,000,000			\$26,200,000
Total Costs	\$ 200,000	\$ 13,000,000	13,000,000	\$ -	\$ -	\$26,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2021	2022	2023	2024	2025	
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 2021-2025

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	2024
Completion Date	2025
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:

FCAA 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
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ 3,200,000	\$ 4,000,000	\$ 7,200,000
Total Costs	\$ -	\$ -	\$ -	\$ 3,200,000	\$ 4,000,000	\$ 7,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

NO NAME KEY DISTRIBUTION INSTALLATION

New 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	TLC Diversified, Inc. and 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 17,790 linear feet of distribution mains to serve No Name Key and connect to the existing distribution system serving Big Pine Key.

Status/Recent Developments:

The installation of the pipe on the bridge is currently underway. FCAA's Engineering Department is currently completing the design and permitting for the remaining distribution system.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 1,300,000	\$ -	\$ -	\$ -	\$ -	\$ 1,300,000
Total Costs	\$ 1,300,000	\$ -	\$ -	\$ -	\$ -	\$ 1,300,000

Operating Impact:

	Annual Operating Costs (Savings)					Total Cost
	2021	2022	2023	2024	2025	
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 2021-2025

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	2025
Completion Date	2026
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 2025.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ -	\$ 520,000	\$ 520,000
Total Costs	\$ -	\$ -	\$ -	\$ -	\$ 520,000	\$ 520,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2021	2022	2023	2024	2025	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

TRANSMISSION MAIN REHABILITATION

Renewal and Replacement

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	2023
Completion Date	2032
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 Middle-Lower Keys.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	-	-	3,000,000	\$ 6,000,000	\$ 6,000,000	\$15,000,000
Total Costs	\$ -	\$ -	3,000,000	\$ 6,000,000	\$ 6,000,000	\$15,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2021	2022	2023	2024	2025	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

ELECTRICAL IMPROVEMENTS 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	Black and Veatch
Project Manager	Brian Stark
Contractor	To be determined
Start Date	2021
Completion Date	2022
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project would address electrical improvements at Florida City.

Status/Recent Developments:

FCAA recently completed an electrical assessment and identified/prioritized electrical improvements.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 2,200,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 4,200,000
Total Costs	\$ 2,200,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 4,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

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	2022
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:

Project is ready for bidding.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 3,000,000	\$ 3,000,000	\$ -	\$ -	\$ -	\$ 6,000,000
Total Costs	\$ 3,000,000	\$ 3,000,000	\$ -	\$ -	\$ -	\$ 6,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

REPAIR/UPGRADE SUBAQUEOUS CROSSING

Renewal and Replacement

Project Information

Location	Various Locations
Project Type	Transmission System
Category	Renewal
Project Number	7067-18
Design Engineer	Baxter & Woodman, Inc.
Project Manager	Justin Dacey, E.I.
Contractor	To be determined
Start Date	2018
Completion Date	2021
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 Baxter & Woodman, Inc. to perform the design and permitting of the repairs. FKAA plans to improve the anchoring system to prevent damage caused by future storms. FKAA is currently in the permitting process and also has applied for FEMA reimbursement.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 1,900,000	\$ -	\$ -	\$ -	\$ -	\$1,900,000
Total Costs	\$ 1,900,000	\$ -	\$ -	\$ -	\$ -	\$1,900,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2021	2022	2023	2024	2025	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

CATHODIC PROTECTION

Renewal and Replacement

Project Information

Location	Various locations
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1151-17/7065-18
Design Engineer	Southern Cathodic Protection
Project Manager	Justin Dacey, E.I.
Contractor	To Be Determined
Start Date	2017
Completion Date	2021
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The water transmission system includes 187 miles of high pressure pipe which is primarily made of welded steel and ductile iron. The steel pipe has a series of Cathodic Protection (CP) devices to keep the steel from corrosive deterioration. This CP system is not working properly and needs to be repaired. Furthermore, following Hurricane Irma, additional damage to the CP system occurred that will also need to be repaired.

Status/Recent Developments:

FCAA retained Southern Cathodic Protection to perform the design of the repairs. FCAA is also seeking FEMA reimbursement for the repairs related to damage caused by Hurricane Irma. Project is in the bidding phase.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
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
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

DECENTRALIZED WASTEWATER TREATMENT PROGRAM

Wastewater Improvements

Project Information

Location	Various locations
Project Type	Wastewater System
Category	Wastewater Improvements
Project Number	4029-09
Design Engineer	Various Consultants
Project Manager	Emmy Koenig, P.E.
Contractor	Various Contractors
Start Date	2017
Completion Date	2022
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

FCAA and Environmental Protection Agency have collaborated through a grant program to address locations that are not feasible to connect to the central wastewater system. The grant requires a 25% local cost share. FCAA will design, permit, construct, and operate the onsite systems as part of the wastewater program. Projects include residential onsite systems and community systems for Cross Key and Pigeon Key.

Status/Recent Developments:

FCAA retained CPH, Inc. to perform the design of the Cross Key WWTP; project is in the bidding phase. FCAA also is continuing to install residential on-site systems.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 1,500,000	\$ 1,500,000	\$ -	\$ -	\$ -	\$ 3,000,000
	-	-	-	-	-	
Total Costs	\$ 1,500,000	\$ 1,500,000	\$ -	\$ -	\$ -	\$ 3,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2021	2022	2023	2024	2025	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

BIG COPPITT WASTEWATER RECLAMATION FACILITY EXPANSION

Treatment and Reclaimed Water

Project Information

Location	Big Coppitt WWTP
Project Type	Wastewater System
Category	WWTP Expansion
Project Number	4069-17
Design Engineer	Carollo Engineering, Inc.
Project Manager	David Hackworth, P.E.
Contractor	Wharton Smith
Start Date	2020
Completion Date	2022
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The Big Coppitt Wastewater Reclamation Facility is being expanded to accommodate the wastewater flows from Boca Chica Wastewater Treatment Plant and future growth of service area.

Status/Recent Developments:

Project is in the design phase.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 6,000,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 10,000,000
Total Costs	\$ 6,000,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 10,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

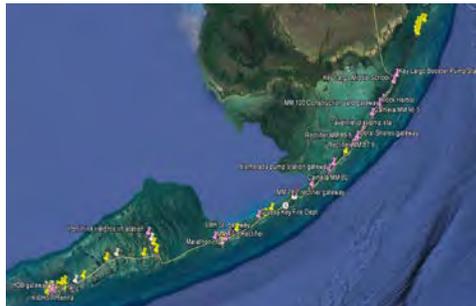
For fiscal years 2021-2025

METER READING DATA COLLECTORS

Water System Improvements

Project Information

Location	System-wide
Project Type	Water System
Category	Water System Improvements
Project Number	2337-17
Design Engineer	In-house Personnel
Project Manager	Justin Dacey
Contractor	TBD
Start Date	2023
Completion Date	2024
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The installation of the meter reading data collectors will provide real-time meter reading to enhance water loss recovery, improve response time for stuck meter, high consumption, etc., allow customers to "View My Meter" to identify leaks on the customer side, and enhance water conservation efforts.

Status/Recent Developments:

This will complete the MIU collection system project for coverage keys-wide and new meter boxes. This is in the planning phases.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ 200,000	\$ 2,000,000	\$ -	\$ 2,200,000
Total Costs	\$ -	\$ -	\$ 200,000	\$ 2,000,000	\$ -	\$ 2,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

Project Information

Location	Navy properties in lower Keys
Project Type	Distribution System
Category	Renewal and Replacement
Project Number	8000 series
Design Engineer	In-house Design Team/Consultants
Project Manager	Assignments to staff engineers
Contractor	In-house crew and others
Start Date	2008
Completion Date	Ongoing
Funding	Revenue from Navy contract
Facilities Master Plan Project	Yes



Description/Justification:

The Authority entered into a contract in January 2008 to own and operate the Navy's water distribution systems in the Keys. Many of the lines are reaching end of life, water tanks need maintenance and valves and/or replacement other infrastructure is lacking. Revenue from the Navy includes funding for renewal and replacement that will be sufficient to fund the following upgrades through 2025. The following upgrades are located on Boca Chica:

- Connection Tank Feed
- Connection A Distribution Upgrades
- Connection B Distribution Upgrades
- Second Feed Transmission Feed to Boca Chica
- Fire System - West
- Fire System - East

Status/Recent Developments:

The projects are in the planning and design phases.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	\$ 1,510,000	\$ 1,600,000	\$ 2,590,000	\$ 2,450,000	\$ 1,300,000	\$ 9,450,000
Total Costs	\$ 1,510,000	\$ 1,600,000	\$ 2,590,000	\$ 2,450,000	\$ 1,300,000	\$ 9,450,000

Operating Impact:

	Annual Operating Costs (Savings)					Total Cost
	2021	2022	2023	2024	2025	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

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	Emmy Koenig, P.E>
Contractor	TBD
Start Date	2025
Completion Date	2025
Bond Funded	No
Facilities Master Plan Project	Yes



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 2024.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2021	2022	2023	2024	2025	
Capital Engineering & Construction Costs	-	-	\$ -	\$ -	\$ 200,000	\$ 200,000
Total Costs	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ 200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2021	2022	2023	2024	2025	
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 2021-2025

MIDDLE TORCH KEY DISTRIBUTION INSTALLATION

Distribution System

Project Information

Location	Middle and Big Torch Keys
Project Type	Distribution System
Category	
Project Number	2331-17
Design Engineer	In-house Design Team
Project Manager	Jolynn Reynolds
Contractor	To be determined
Start Date	2021
Completion Date	2023
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

Residents of Middle Torch and Big Torch Keys 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. This purpose of this project is to install the approximately 37,000 linear feet of distribution mains to serve Middle Torch and Big Torch Keys and connect the system to the FCAA Transmission Main.

Status/Recent Developments:

FCAA's in-house design team has been tasked with drafting plans for the project.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2019	2020	2021	2022	2023	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ 742,500	\$ 2,475,000	\$ 2,475,000	\$ 5,692,500
Total Costs	\$ -	\$ -	\$ 742,500	\$ 2,475,000	\$ 2,475,000	\$ 5,692,500

Operating Impact:

	Annual Operating Costs (Savings)					Total Cost
	2019	2020	2021	2022	2023	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2021-2025

NAVY MANHOLE REPAIRS

Renewal and Replacement

Project Information

Location	Multiple U.S. Navy Properties
Project Type	Wastewater
Category	Renewal and Replacement
Project Number	4078-18
Design Engineer	To be determined
Project Manager	Bubba Osterhoudt
Contractor	To be determined
Start Date	2023
Completion Date	2023
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

FCAA has over 150 sewer manholes on U.S. Navy properties in various conditions. This project involves performing a condition assessment of these manholes for rehabilitation in order to address those manholes with the greatest need.

Status/Recent Developments:

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2019	2020	2021	2022	2023	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -		\$ 552,000	\$ 552,000
Total Costs	\$ -	\$ -	\$ -	\$ -	\$ 552,000	\$ 552,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2019	2020	2021	2022	2023	
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

Capital Outlay Budget Detail

Additions to Utility Plant 2021 Budget Detail

For fiscal years 2020

			Amount	Water cost centers	Wastewater cost centers	Total
Executive Division						
Executive						
1011	Executive Office	None	\$ -	\$ -		
1012	Public Information	None	-	-		
						\$ -
Administration Division						
Customer Service						
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	None	-	-		
3039	Field Services-Tavernier	None	-	-		
Finance						
6010	Finance	None	-	-		
6020	Billing	None	-	-		
6030	Purchasing and Inventory	Backflow meter change out program	175,000			
		Meters (new service)	100,000			
		New leak detection equipment	30,000			
		Small meter replacement	35,000			
		Large meter replacement	100,000	440,000		
6040	Records	None	-	-		
						440,000
Human Resources						
7010	Human Resources	None	-	-		
Information Technology						
8010	Information Technology	Network switches (8)	50,000			
		SCADA Infrastructure Servers and Storage	80,000			
		Network cabinets (2)	26,000			
		Printers (2)	20,000			
		Fire Suppression System Florida City Server Room	27,000			
					203,000	
						203,000
Utility Operations Division						
Engineering						
2021	General Engineering	None	-	-		
2022	Contract Management	GPS Equipment	25,000	25,000		
2023	Water Quality	None	-	-		
2024	Design	None	-	-		
2025	Construction Crew	None	-	-		
2027	Water Data Management and Loss Division	AMI collectors (approximately 20 locations)	250,000	250,000		
Water Operations						
4001	Operations Office Key West	None	-	-		
4101	Operations Office Stock Island/lower keys	Roll-up garage door for Maintenance shop	7,000	7,000		
4102	Distribution/Maintenance-Area I	8" pressure reducing valves (3)	35,700			
		Roll-up garage door for Key West plant	7,000	42,700		
4103	Distribution/Maintenance-Area II	8" pressure reducing valve	11,900	11,900		
4104	Distribution Pump Station-Key West	None	-	-		
4105	Distribution Pump Station-Stock Island	None	-	-		
4108	Fleet Maintenance-lower keys	Vehicles (see below)	413,000	413,000		
4110	Stock Island Reverse Osmosis Plant	Roll-up garage door for RO plant	7,000	7,000		
4201	Operations Marathon/Middle keys	Re-stucco of Marathon Operations building	10,000			
		Re-stucco of Marathon Distribution building	5,000			
		AC replacement for Marathon Customer Service	9,900			
		Mower (replacement)	16,000	40,900		
4202	Distribution/Maintenance-Area III	Vactron (replace # 845)	125,000			
		Dump trailer (replace # 265)	9,000	134,000		

Capital Outlay Budget Detail (continued)

For fiscal years 2020

4203	Transmission Maintenance-Area III	6" Thompson pump (replace # 260)	44,600		
		Valve exerciser replacement	7,500		
		Wax tape for Bridge Wrapping Project	164,000		
		Tap 125 Upgrade	13,500		
		Tap 85 Upgrade	16,300	245,900	
4204	Transmission Pump Station-Marathon	None	-	-	
4205	Transmission Pump Station-Ramrod	Diesel water pump overhaul	7,000	7,000	
4208	Fleet Maintenance-middle keys	Vehicles (see below)	1,108,000	1,108,000	
4210	Reverse Osmosis Plant-Marathon	Flush pump replacement	10,600	10,600	
4301	Operations Key Largo and upper keys	Self propelled boom lift	49,000		
		Equipment hauler (replace # 294)	7,000	56,000	
4302	Distribution Maintenance Area IV	Islamorada spare motor	6,800	6,800	
4303	Distribution Maintenance Area V	Valve operating machine	36,000	36,000	
4304	Transmission Maintenance Areas IV and V	Forklift	28,500		
		Vactron (replace # 219)	73,000		
		Backhoe Loader (replace # 833)	92,000		
		Industrial ceiling fans for Quonset Hut (2)	11,900		
		6" hydraulic dewatering pump (replace # 858)	58,000		
		Wax tape for Bridge Wrapping Project	40,000		
		Driveway for Quonset Hut	12,600	316,000	
4308	Fleet Maintenance-upper keys	Vehicles (see below)	421,000	421,000	
5010	Water Treatment Plant-Florida City	6" valves for replacement (4)	20,000		
		Refurbish slaker room floor	150,000	170,000	
5020	Transmission Pump Station-Florida City	Replace sludge thickener parts	500,000	500,000	
5030	Transmission Pump Station-Long Key	None	-	-	
5040	Transmission Pump Station-Key Largo	None	-	-	
5050	Florida City RO Plant	Exhaust fan (spare)	30,000	30,000	
5060	Electrical and Instrumentation Controls	Core Drill	8,700		
		FL City UPS replacement	15,100		
		Portable ultrasonic (spare)	19,900		
		Ramrod feeder wire (replacement)	19,200		
		Marathon warehouse genset (replacement)	27,300		
		Long Key motor (spare)	65,500		
		Long Key Telemetry Control Units (4)	22,000	177,700	
					3,741,500
	Wastewater Operations				
4112	Bay Point Wastewater Treatment Plant	None	-	-	
4113	Bay Point Collection	None	-	-	
4114	Big Coppitt Wastewater Treatment	Generator fuel tank replacement	35,900		
		Filter feed pump (replacement) (1)	8,200	44,100	
4115	Big Coppitt Collection	Porpoise and LS G pump replacement (2)	16,000		
		Porpoise wet well rehab	9,000		
		Porpoise master manhole rehab	6,000	31,000	
4116	Key Haven Wastewater Treatment	None	-	-	
4117	Key Haven Collection	None	-	-	
4118	Cudjoe Regional Wastewater Treatment	Polymer skid for RDT (replacement)	13,400	13,400	
4119	Cudjoe Regional Collection	None	-	-	
4120	Navy Wastewater System	Sigsbee master pump replacement (1)	11,000	11,000	
4213	Wastewater Treatment Plant-Duck Key	None	-	-	
4214	Wastewater Operations and Maintenance	Felling equipment trailer (new)	24,400		
		Drain camera	11,700	36,100	
4216	Duck Key Collection	Resort manhole repair (4)	24,000		
		Grinder pump replacement (1)	5,200	29,200	
4312	Wastewater Treatment Plant-Layton	None	-	-	
4313	Layton Collection	None	-	-	
					164,800

Total Capital Outlay

\$ 4,549,300

Capital Outlay Budget Detail (continued)

For fiscal years 2020

Fleet details				
4108	Fleet Maintenance-lower keys	1/2 ton (replace vehicle # 166)	29,000	
		1/2 ton (replace vehicle # 135)	29,000	
		1/2 ton (replace vehicle # 157)	29,000	
		1 van (replace vehicle # 172)	34,000	
		1 ton (replace vehicle #118)	44,000	
		1 ton (replace vehicle #308)	44,000	
		1 ton (replace vehicle # 186)	44,000	
		1 ton (replace vehicle # 167)	44,000	
		4000gal water truck (replace vehicle # 199)	116,000	
4208	Fleet Maintenance-middle keys	1/2 ton (replace vehicle # 332)	29,000	413,000
		1/2 ton (replace vehicle # 334)	29,000	
		1/2 ton (replace vehicle # 336)	29,000	
		1/2 ton (replace vehicle # 145)	29,000	
		1 van (replace vehicle # 403)	34,000	
		1 van (replace vehicle # 301)	34,000	
		F-550 w/crane (replace vehicle # 301)	79,000	
		VacCon for WW	704,000	
		1 ton w/crane for WW position (new)	74,000	
		1 ton electrician van (replace vehicle # 320)	67,000	1,108,000
4308	Fleet Maintenance-upper keys	1/2 ton (replace vehicle # 602)	29,000	
		1 van (replace vehicle # 407)	34,000	
		1 van (replace vehicle # 537)	34,000	
		1 van (replace vehicle # 501)	34,000	
		1 van (replace vehicle # 112)	34,000	
		1 ton (replace vehicle # 534)	44,000	
		1 ton (replace vehicle # 535)	44,000	
		Dump truck (replace vehicle # 318)	168,000	421,000
Total fleet capital			1,942,000	
Wax Taping Details				
4203	Transmission Maintenance-Area III	Wax tape for Bridge Wrapping Project	164,000	
4304	Transmission Maintenance Areas IV and V	Wax tape for Bridge Wrapping Project	40,000	164,000
				40,000
Total wax taping			204,000	

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 2021 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 2021 is estimated to be approximately \$168 million and debt service is approximately \$11.1 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, 10/1/20	2021 proceeds from issuance of debt	2021 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	9,395,000	-	240,000	9,155,000
Series 2019A water revenue bonds	45,010,000	-	-	45,010,000
Series 2021A water revenue bonds [2]	-	-	-	-
Total bonds	\$ 172,825,000	\$ -	\$ 4,555,000	\$ 168,270,000

SUMMARY OF DEBT SERVICE

	Fixed / Variable	Budgeted 2020 debt service			Budgeted 2021 debt service		
		Principal	Interest	Total	Principal	Interest	Total
Series 2008 water refunding and revenue bonds ^[1]	Variable	\$ -	\$ 1,992,000	\$ 1,992,000	\$ -	\$ 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	Fixed 5.00%	-	444,000	444,000	-	2,250,000	2,250,000
Series 2021A water revenue bonds [2]	Fixed 4.18%	-	-	-	-	-	-
Total bonds		\$ 4,450,000	\$ 4,863,000	\$ 9,313,000	\$ 4,555,000	\$ 6,575,000	\$ 11,130,000

[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 2020		Budgeted 2021	
	Water	Wastewater	Water	Wastewater
	Revenue available for debt service			
Total operating revenue	\$ 58,782,000	\$ 9,967,000	\$ 59,165,000	\$ 10,037,000
Interest income-revenue funds	500,000	-	500,000	-
Other revenue available for debt service	531,000	-	6,534,000	-
Less operating expenses before depreciation	(40,997,300)	(7,536,200)	(41,733,600)	(8,776,000)
Net funds available for debt coverage	18,815,700	2,430,800	24,465,400	1,261,000
Debt service requirements	\$ 8,011,000	858,000	\$ 8,027,000	853,000
Coverage factor (minimum of 1.10 for water only)	2.35		3.05	
System development fees	\$ 1,000,000	\$ 138,000	\$ 1,000,000	\$ 138,000
Coverage factor with system development fees (minimum of 1.20)	2.47	2.99	3.17	1.64

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

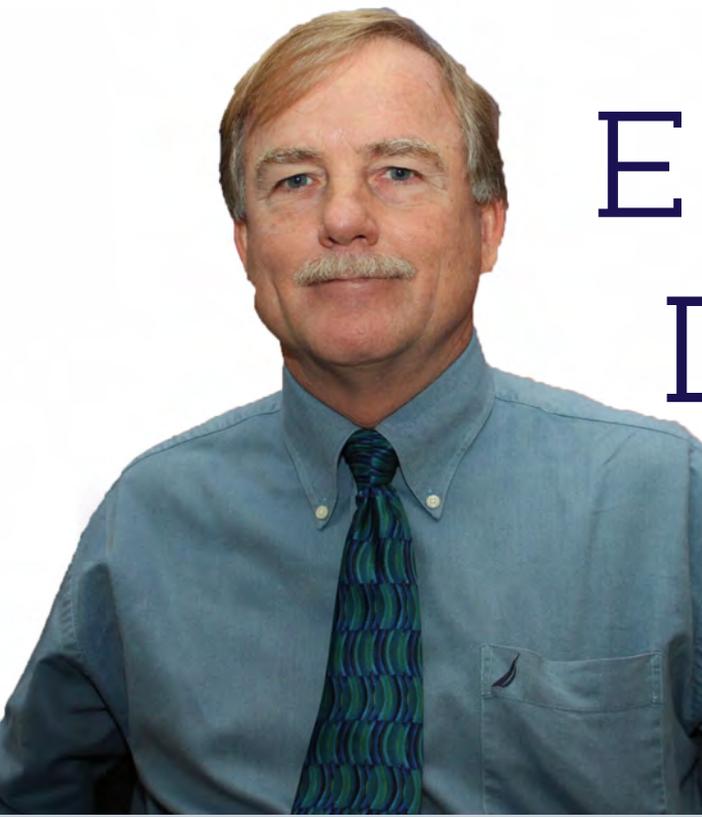
Operations Department Summary

Position and Fleet Summary

Operating Expenditure Budget by Functional



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Executive Division

Executive

Public Information

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.



Executive Division Summary

For fiscal year 2021

Executive Division

KEY DEPARTMENT INDICATORS

	Actual 2019	Budgeted 2020	Budgeted 2021
Key department indicators			
Number of full time department employees budgeted	8	10	9
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	2	2	(1)
Number of regular and special board meeting	14	14	26
Number of board workshop meetings	3	3	3
Number of board committee meetings	4	4	4
Number of public hearings	6	6	2

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.

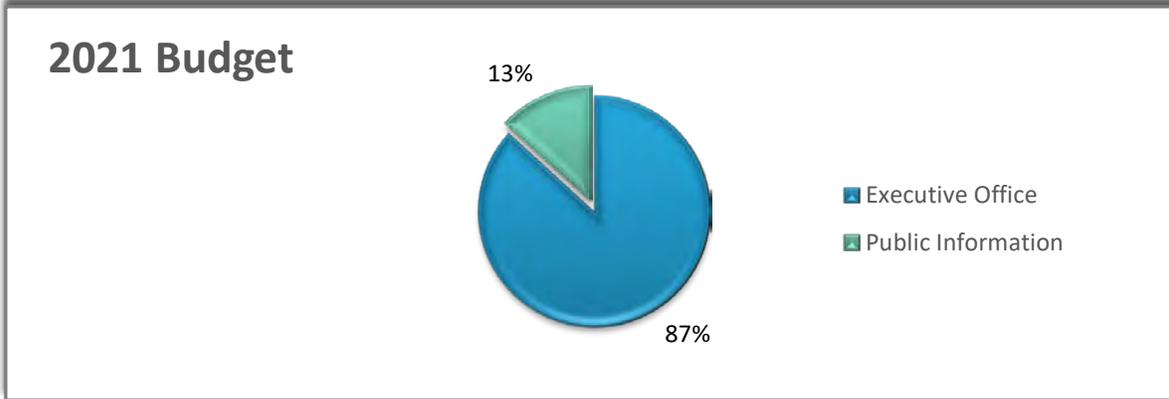
Develop an internal communications strategy.



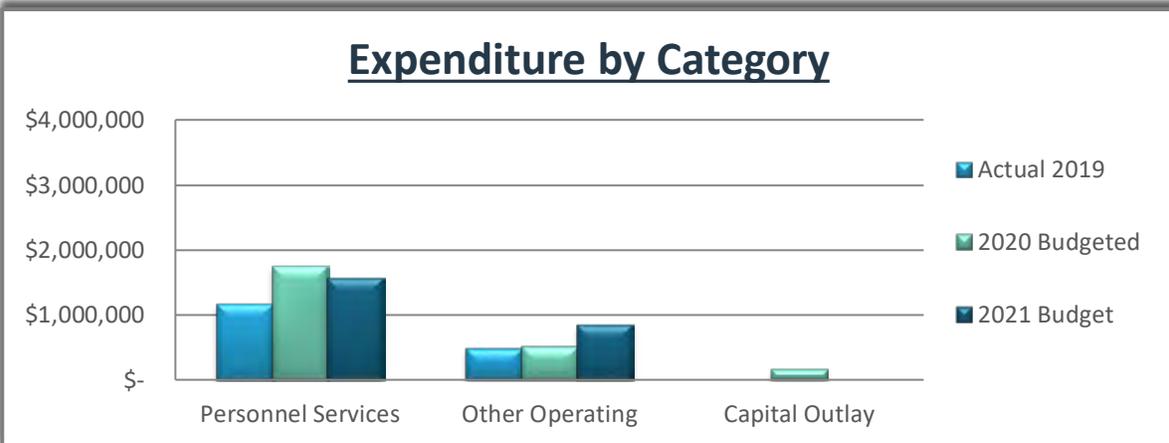
Executive Division Summary (continued)

For fiscal years 2021

Executive



Division	2021 Budget
Executive Office	\$ 2,088,500
Public Information	317,600
Total	\$ 2,406,100



Expenditure	Actual 2019	2020 Budgeted	2021 Budget
Personnel Services	\$ 1,174,307	\$ 1,749,600	\$ 1,556,000
Other Operating	482,571	520,700	850,100
Capital Outlay	-	160,000	-
Total	\$ 1,656,878	\$ 2,430,300	\$ 2,406,100

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Administration Division

Finance
Human Resources
Information Technology
Customer Service

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.

Customer Service Department

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 Tavernier and the Upper Keys
Field Services Marathon and the Middle Keys

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.

Customer Service Department Summary

For fiscal year 2021

Customer Service Department KEY DEPARTMENT INDICATORS

	Actual 2019	Budgeted	
		2020	Budget 2021
Key department indicators			
Number of full time department employees budgeted	36	35	35
New positions not in prior year's budget	-	-	-
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	(1)	-	-
Number of calls received from call center	86,000	86,000	90,000
Number of meters in service	53,000	53,000	53,000
Number of automated read meters	53,000	53,000	53,000
Number of data collection units	70	70	70
Number of delinquent service orders	6,000	6,000	6,000
Number of high consumption investigations	6,000	6,000	6,000
New meter installations (not including replacements)	600	600	600
Total field service orders	39,000	39,000	39,000
Assist Customers	1,000	1,000	1,000
Total Number of data extracts performed	2,000	2,000	2,000
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.

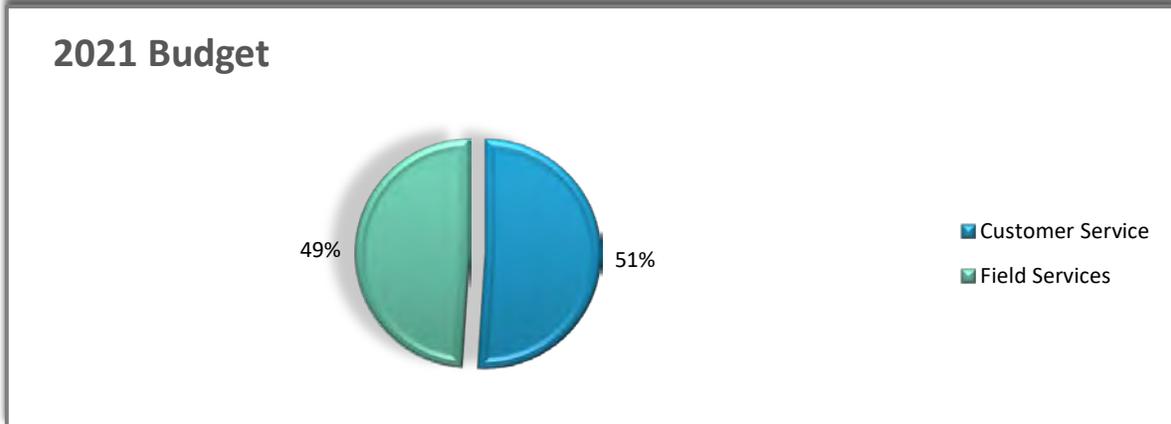
Actively mentor employees; promote and support training, continuing education, cross training (Backflow) and career development that aligns with our strategic needs.



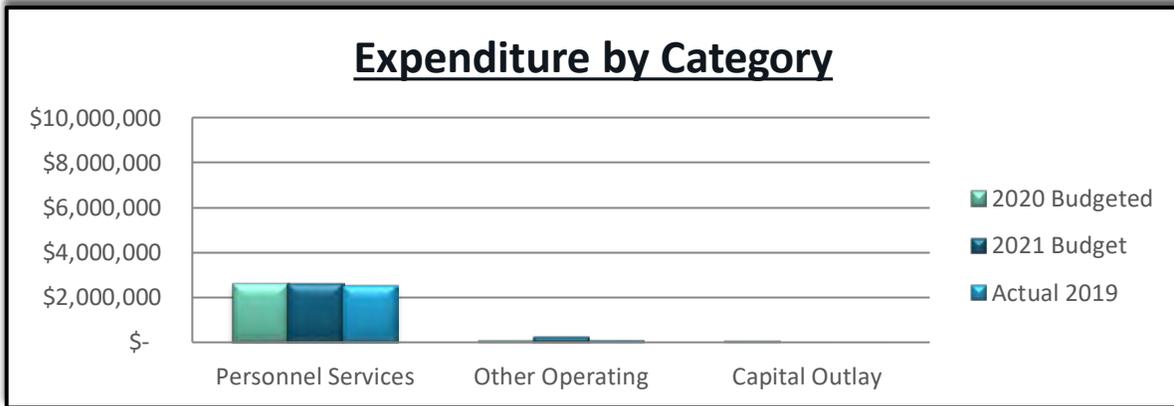
Customer Service Department Summary (continued)

For fiscal years 2021

Customer Service



Division	2021 Budget
Customer Service	1,471,410
Field Services	1,411,500
Total	\$ 2,882,910



Expenditure	Actual 2019	2020 Budgeted	2021 Budget
Personnel Services	\$ 2,523,081	\$ 2,612,700	\$ 2,632,900
Other Operating	108,105	90,400	250,010
Capital Outlay	-	56,000	-
Total	\$ 2,631,186	\$ 2,759,100	\$ 2,882,910



Finance Department

Finance

Billing

Records

Purchasing and Inventory

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.

Finance Department Summary

For fiscal year 2021

**Finance Department
KEY DEPARTMENT INDICATORS**

	Actual 2019	Budgeted 2020	Budget 2021
Key department indicators			
Number of full time department employees budgeted	30	28	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.

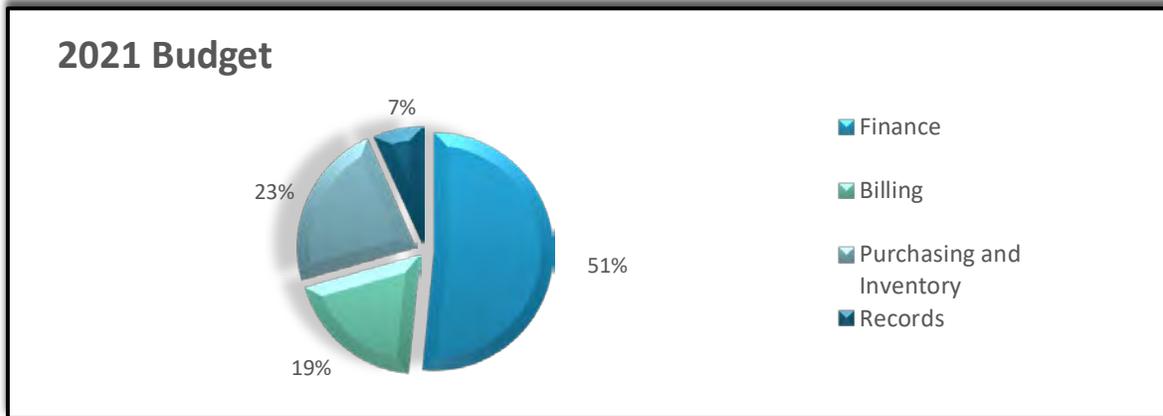
Continue to monitor internal processes to capitalize on staffing and monetary efficiencies.



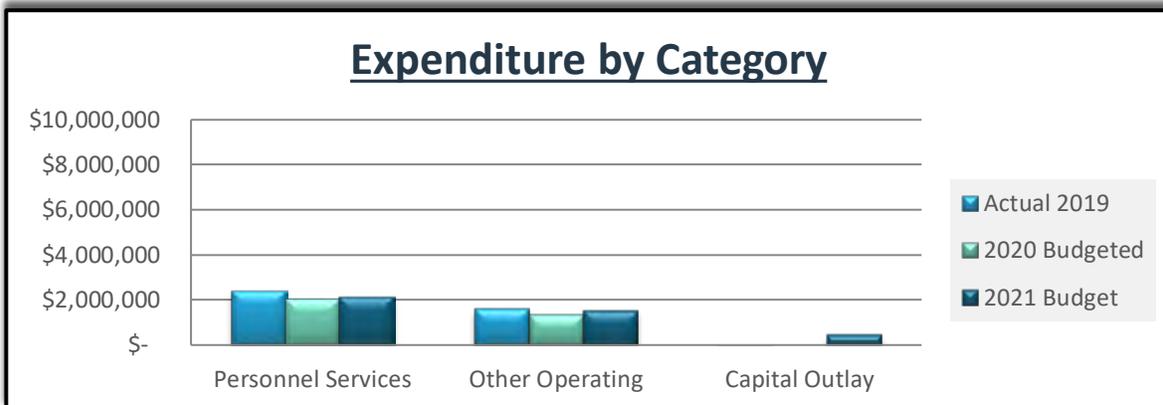
Finance Department Summary (continued)

For fiscal years 2021

Finance



Division	2021 Budget
Finance	2,099,500
Billing	776,300
Purchasing and Inventory	924,200
Records	272,700
Total	\$ 4,072,700



Expenditure	Actual 2019	2020 Budgeted	2021 Budget
Personnel Services	\$ 2,405,968	\$ 2,035,300	\$ 2,117,100
Other Operating	1,595,611	1,349,600	1,515,600
Capital Outlay	3,327	-	440,000
Total	\$ 4,004,906	\$ 3,384,900	\$ 4,072,700

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Human Resources Department

Human Resources

Risk Management

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

Human Resources Department Summary

For fiscal year 2021

**Human Resources Department
KEY DEPARTMENT INDICATORS**

Key department indicators			
	Actual 2019	Budgeted 2020	Budget 2021
Number of full time department employees	5	4	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	71	60	110
Number of applications received	519	750	1,450
Number of new hires	32	25	45
Number of resignations, retirements or terminations	33	25	20
Number of grievances filed	2	3	3
Number of arbitrations filed	-	2	1
Number of insurance claims (including workman's compensation and hurricane damage)	33	50	40

**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.

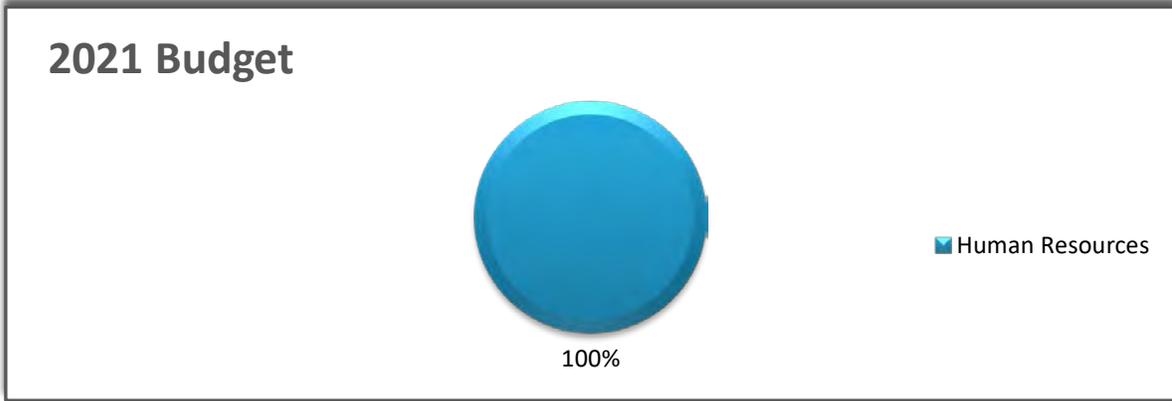
Fine tune the company property program in ADP to better track FCAA property issued to each employee and returned.



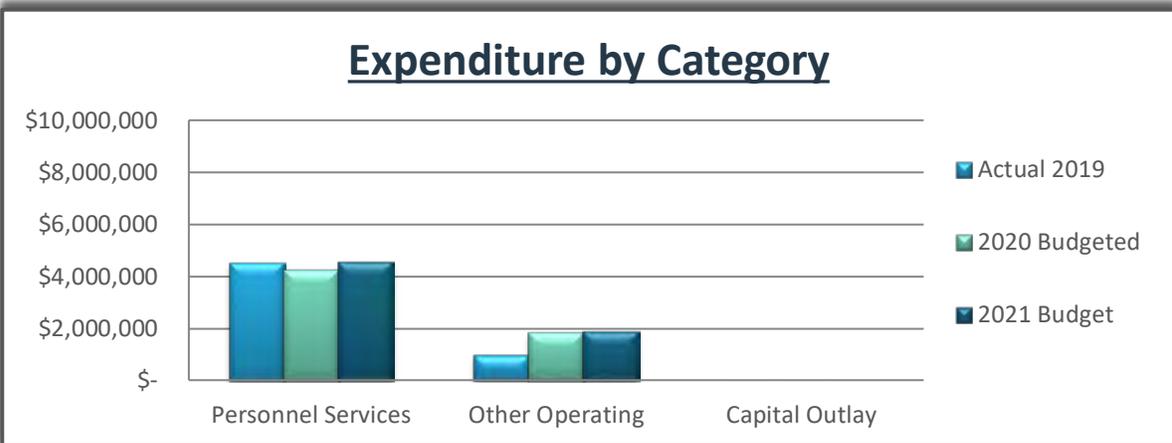
Human Resources Department Summary (continued)

For fiscal year 2021

Human Resources



Division	2021 Budget
Human Resources	\$ 6,432,600
Total	\$ 6,432,600



Expenditure	Actual 2019	2020 Budgeted	2021 Budget
Personnel Services	\$ 4,525,093	\$ 4,250,200	\$ 4,549,900
Other Operating	969,052	1,843,100	1,882,700
Capital Outlay	-	-	-
Total	\$ 5,494,145	\$ 6,093,300	\$ 6,432,600

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Information Technology Department

Information Technology

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.



Information Technology Department Summary

For fiscal year 2021

Information Technology Department

KEY DEPARTMENT INDICATORS

	Actual 2019	Budgeted 2020	Budget 2021
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	3,901	4,000	2,500
Number of work stations/IPads maintained	438	350	450
Number of servers maintained	100	115	95
Routers/switches maintained	127	100	122
PBX switches maintained	-	-	-
Telephones maintained (includes fax & cell)	136	175	175
Radios maintained	-	-	-
PLCs maintained	-	-	-
Printers	127	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.

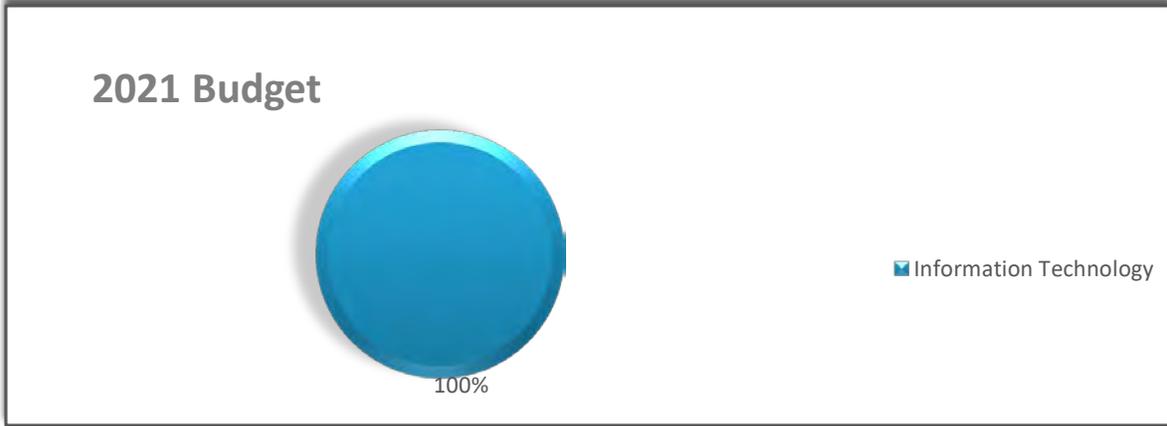
Develop a defensible utility and related infrastructure.



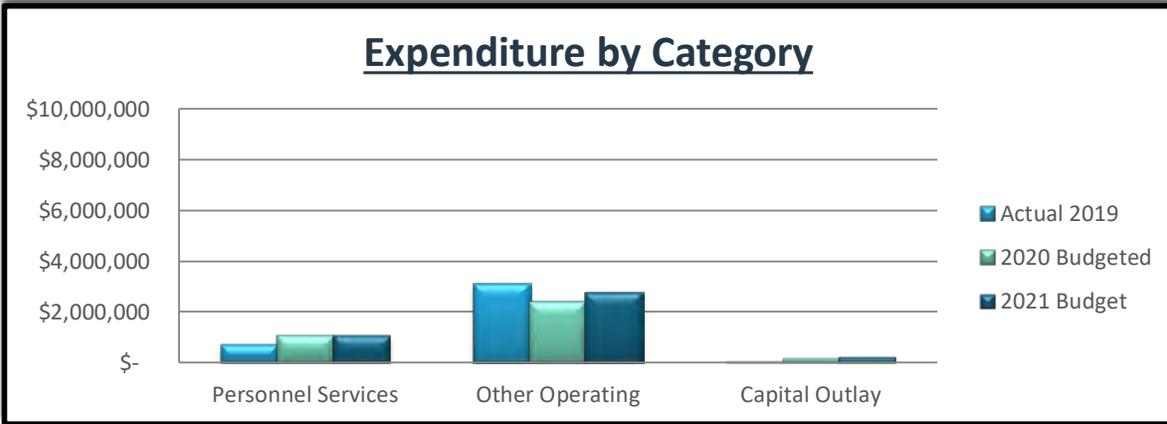
Information Technology Department Summary (continued)

For fiscal years 2021

Information Technology



Division	2021 Budget
Information Technology	\$ 4,041,750
Total	\$ 4,041,750



Expenditure	Actual 2019	2020 Budgeted	2021 Budget
Personnel Services	\$ 697,152	\$ 1,039,800	\$ 1,071,300
Other Operating	3,096,797	2,394,900	2,767,450
Capital Outlay	26,258	134,000	203,000
Total	\$ 3,820,207	\$ 3,568,700	\$ 4,041,750

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Engineering Department

General Engineering
Contract Management
Water Quality
Design
Construction Crew
Water Data Management & Loss Division

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.

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Engineering Department Summary

For fiscal year 2021

**Engineering Department
KEY DEPARTMENT INDICATORS**

	Actual 2019	Budgeted 2020	Budget 2021
Key department indicators			
Number of full time department employees budgeted	46	47	47
New positions not in prior year's budget	-	1	1
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	(13)	1	1
Number of construction design projects underway	14	14	14
Number of permits			
Number of construction projects underway	10	14	14
Number of general engineering task orders	11	12	12
Number of fixture reviews	580	450	500
Number of plan reviews	54	89	95
Feet of designed distribution	24,150	42,080	50,280
Number of Fire line/hydrant	37	60	60
Number of backflow inspections completed	500	1,000	1,000
Number of backflow prevention tests	2,466	3,000	3,000
Number of water quality samples	16,379	16,800	16,800
Feet of distribution pipe installed by in-house crew	10,100	12,000	12,000
Number of meter change outs	1,395	2,000	2,000
Number of meter tests	1,530	2,000	750
Number of hydrant inspections			766

**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.

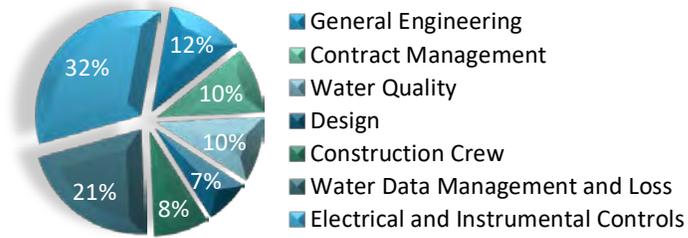


Engineering Department Summary (continued)

For fiscal years 2021

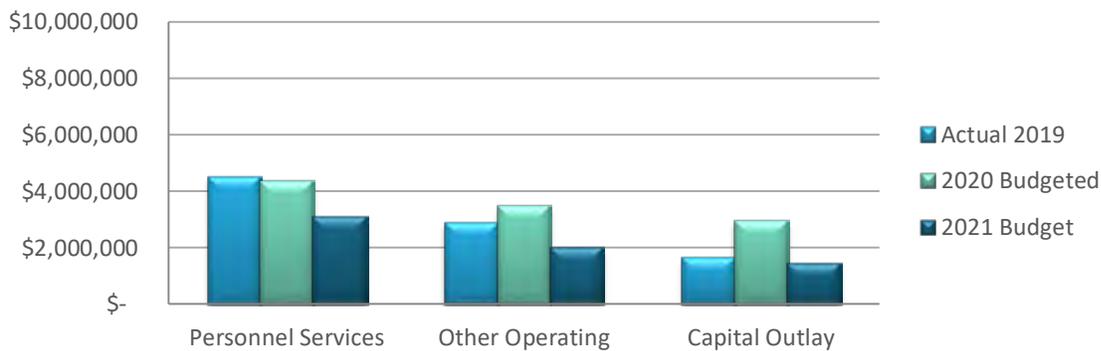
Engineering

2021 Budget



Division	2021 Budget
General Engineering	\$ 1,115,800
Contract Management	963,700
Water Quality	943,000
Design	672,400
Construction Crew	806,600
Water Data Management and Loss	2,057,700
Electrical and Instrumental Controls	3,104,700
Total	\$ 9,663,900

Expenditure by Category



Expenditure	Actual 2019	2020 Budgeted	2021 Budget
Personnel Services	\$ 4,530,231	\$ 4,357,900	\$ 3,101,600
Other Operating	2,884,200	3,479,900	1,996,400
Capital Outlay	1,651,928	2,964,200	1,461,200
Total	\$ 9,066,359	\$ 10,802,000	\$ 6,559,200



Water Operations Department

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)
Transmission System Control (Florida City) Middle Keys

Emergency Water Supply Treatment Facility (Marathon)
Lower Keys Emergency Water Supply Treatment Facility (Stock
Island)
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

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.

Water Operations Department Summary

For fiscal year 2021

Water Operations Department

KEY DEPARTMENT INDICATORS

	Actual 2019	Budgeted 2020	Budget 2021
Key department indicators			
Number of full time department employees	107	107	107
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	(15)	-	-
Number of vehicles in the department	115	115	115
Water treated (billions of gallons)	6,454	6,454	6,454
Transmission line maintained (in feet)	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	217	217	217

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.

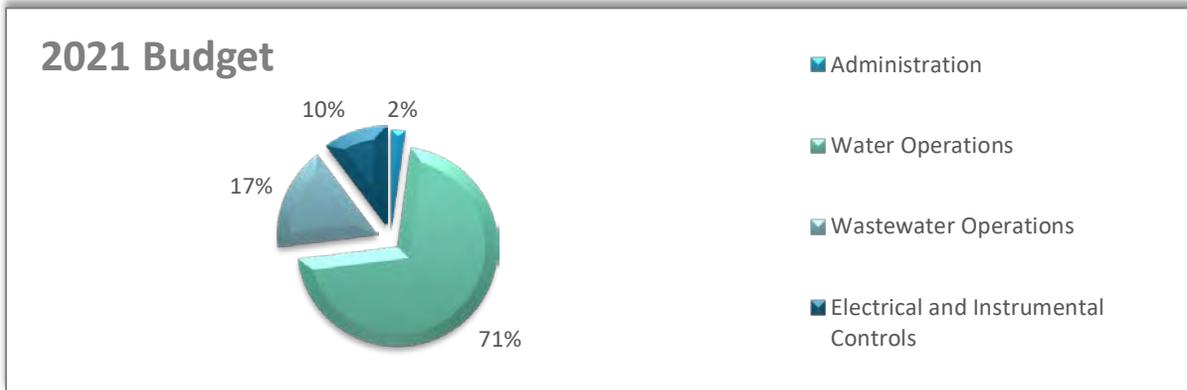
Meet and exceed all SDWA regulatory requirements.



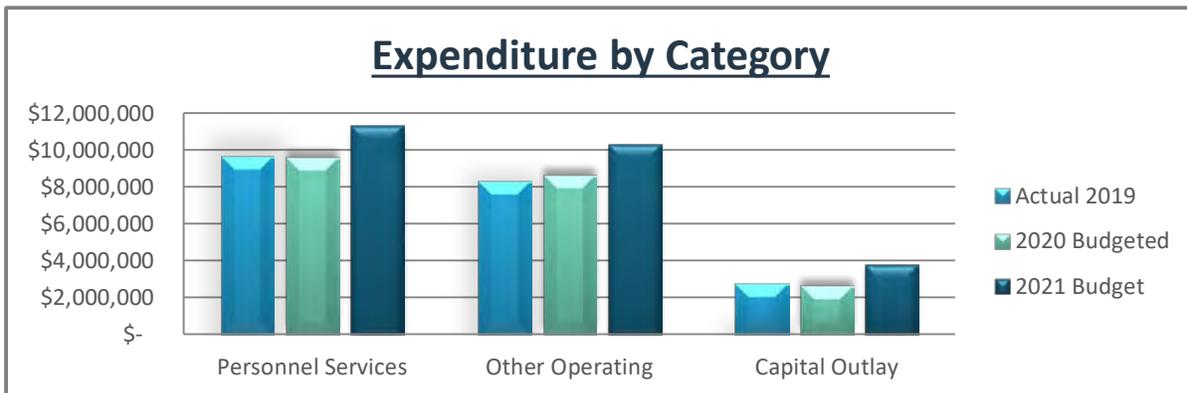
Water Operations Department Summary (continued)

For fiscal years 2021

Water Operations



Division	2021 Budget
Administration	\$ 639,900
Water Operations	21,569,400
Wastewater Operations	5,082,821
Electrical and Instrumental Controls	3,104,700
Total	\$ 30,396,821



Expenditure	Actual 2019	2020 Budgeted	2021 Budget
Personnel Services	\$ 9,634,916	\$ 9,541,500	\$ 11,269,700
Other Operating	8,270,170	8,613,800	10,302,800
Capital Outlay	2,708,979	2,569,300	3,741,500
Total	\$ 20,614,065	\$ 20,724,600	\$ 25,314,000

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Wastewater Department

Wastewater Treatment Plant - Bay Point
Bay Point Collection
Big Coppitt Wastewater Treatment
Big Coppitt Collection
Key Haven Wastewater Treatment
Key Haven Collection
Wastewater Operations and Maintenance
Duck Key Collection

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

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.

Wastewater Operations Department Summary

For fiscal year 2021

**Wastewater Operations Department
KEY DEPARTMENT INDICATORS**

	Actual 2019	Budgeted 2020	Budget 2021
Key department indicators			
Number of full time department employees	34	36	37
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	2	2	1
Number of vehicles in the department	27	27	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.

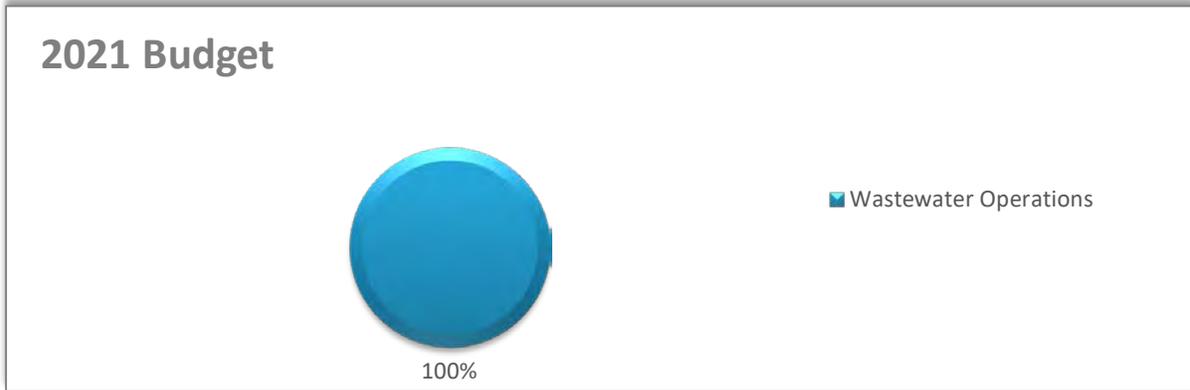
Complete the transition to ezDMR reporting for all wastewater facilities.



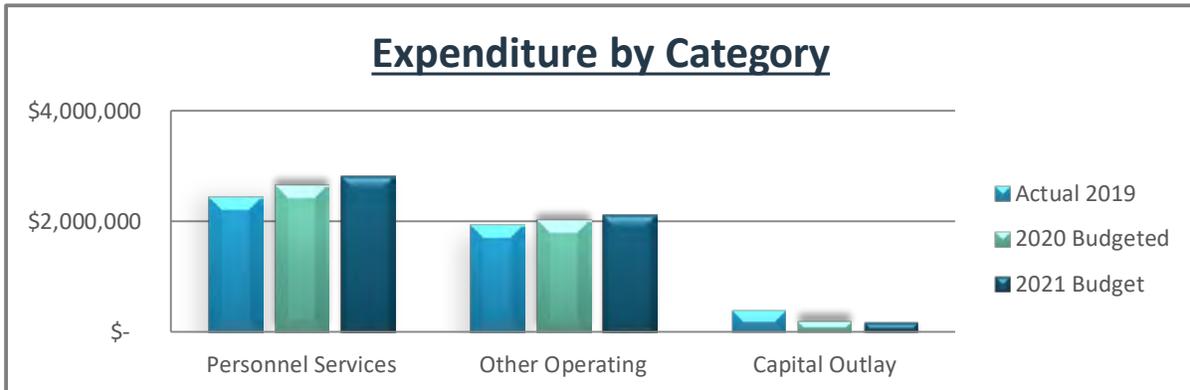
Wastewater Operations Department Summary (continued)

For fiscal years 2021

Wastewater Operations



Division	2021 Budget
Wastewater Operations	5,082,821
Total	\$ 5,082,821



Expenditure	Actual 2019	2020 Budgeted	2021 Budget
Personnel Services	\$ 2,436,952	\$ 2,640,400	\$ 2,814,101
Other Operating	1,927,378	2,013,700	2,103,920
Capital Outlay	377,052	192,800	164,800
Total	\$ 4,741,382	\$ 4,846,900	\$ 5,082,821

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Position and Fleet

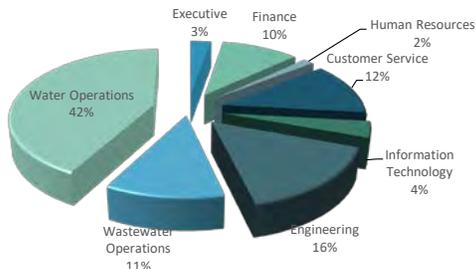
For fiscal years 2021

POSITION AND FLEET SUMMARY 2021

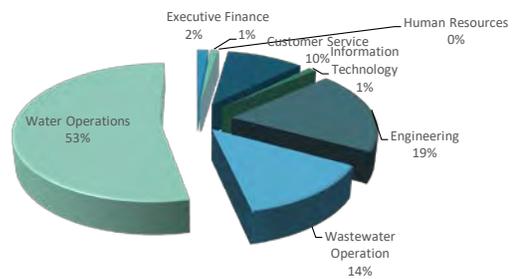
Positions	Executive	Finance	Human Resources	Customer Service	Information Technology	Engineering	Wastewater Operations	Water Operations	Total
Budgeted positions in 2019	8	30	4	36	11	45	32	120	286
New positions									
Distribution System Operator								2	2
Budgeted positions in 2020	8	30	4	36	11	45	32	122	288
New positions									
Wastewater Maintenance Mechanic							1		1
Cathodic Protection Specialist								1	1
Transferred positions									
Contract Field Rep						1			1
Eliminated positions									
Deputy Executive Director	(1)								(1)
Budgeted positions in 2021	8	30	4	36	11	46	33	123	290

Fleet	Executive	Finance	Human Resources	Customer Service	Information Technology	Engineering	Wastewater Operation	Water Operations	Total
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
Added vehicles									
One ton							1		1
VacCon							1		1
Eliminated vehicles									
None									-
Transferred vehicles									
None									-
Budgeted vehicles in 2021	3	2	-	21	2	40	28	110	206

BUDGETED POSITIONS BY DEPARTMENT



BUDGETED VEHICLES BY DEPARTMENT



Operating Expenditure By Functional Unit

For fiscal years 2021

2021 Budget Summary

	2019 Actual	2020 Budget	2021 Budget	Increase/Decrease Amount	Change from previous year budget
<u>Executive Division</u>					
Executive Office	\$ 1,453,009	\$ 2,002,100	\$ 2,088,500	\$ 86,400	
Public Information	203,869	\$ 428,200	317,600	(110,600)	
Totals	1,656,878	2,430,300	2,406,100	(24,200)	-1.0%
<u>Finance Department</u>					
Finance	2,537,768	1,884,800	2,099,500	214,700	11.4%
Billing	719,435	778,500	776,300	(2,200)	-0.3%
Purchasing and Inventory	473,046	468,400	924,200	455,800	97.3%
Records	274,638	253,200	272,700	19,500	7.7%
Totals	4,004,887	3,384,900	4,072,700	687,800	20.3%
<u>Human Resources Department</u>					
Human Resources	5,494,145	6,093,300	6,432,600	339,300	5.6%
Totals	5,494,145	6,093,300	6,432,600	339,300	5.6%
<u>Customer Service Department</u>					
Customer Service	2,631,186	2,759,100	2,882,910	123,810	4.5%
Totals	2,631,186	2,759,100	2,882,910	123,810	4.5%
<u>Information Technology Department</u>					
Information Technology	3,820,207	3,568,700	4,041,750	473,050	13.3%
Totals	3,820,207	3,568,700	4,041,750	473,050	13.3%
<u>Engineering Department</u>					
General Engineering	1,494,768	1,245,200	1,115,800	(129,400)	-10.4%
Contract Management	779,779	928,800	963,700	34,900	3.8%
Water Quality	910,520	902,900	943,000	40,100	4.4%
Design	422,041	614,700	672,400	57,700	9.4%
Construction Crew	1,200,876	961,200	806,600	(154,600)	-16.1%
Water Data Management and Loss	1,981,020	3,164,100	2,057,700	(1,106,400)	-35.0%
Instrumental control	2,277,355	2,985,100	3,104,700	119,600	4.0%
Totals	9,066,359	10,802,000	9,663,900	(1,138,100)	-39.8%
<u>Water Operations</u>					
Water Operations	20,614,065	20,724,600	25,314,000	4,589,400	22.1%
Totals	20,614,065	20,724,600	25,314,000	4,589,400	22.1%
<u>Wastewater Operations</u>					
Wastewater Operations	4,741,382	4,846,900	5,082,821	235,921	4.9%
Totals	4,741,382	4,846,900	5,082,821	235,921	4.9%
Grand Totals	\$ 52,029,128	\$ 54,609,800	\$ 56,792,081	\$ 2,182,281	4.0%

GLOSSARY



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Glossary fo Terms and Acronyms

For fiscal years 2021

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 2021

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

SFWMD – 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 2021

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.