



Florida Keys Aqueduct Authority

2018 Budget & Financial Plan



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Florida Keys Aqueduct Authority

Budget and Financial Plan
2018

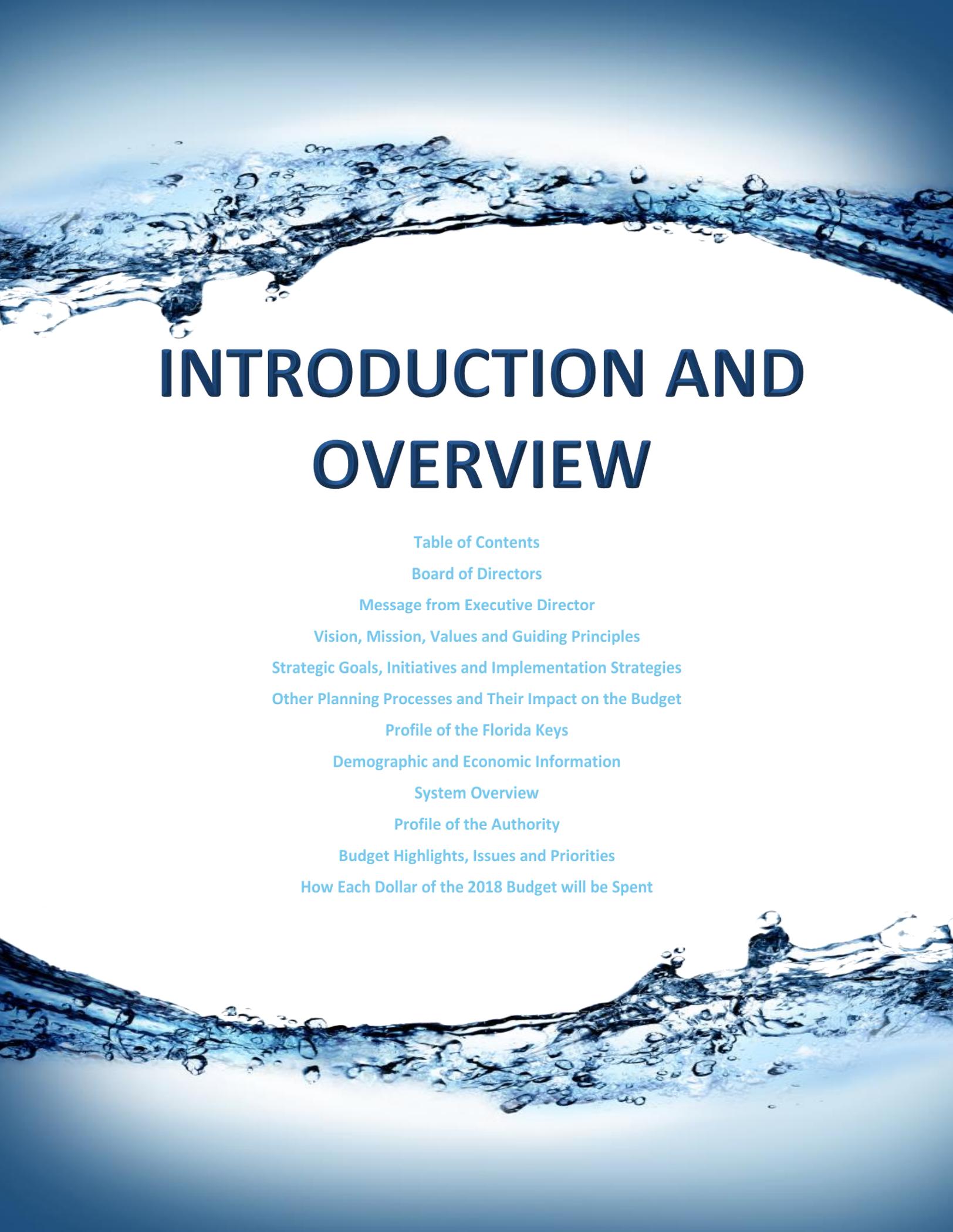
Prepared by
Kerry G. Shelby
Deputy Executive Director and
Chief Financial Officer

Assisted by
The Department of Finance



1100 Kennedy Drive
Key West, FL 33040

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A large, dynamic splash of clear blue water arches across the top and bottom of the page, framing the central text. The water is captured in mid-air, with numerous bubbles and droplets visible, creating a sense of movement and freshness. The background is a light, clean white, which makes the blue water stand out prominently.

INTRODUCTION AND OVERVIEW

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FLORIDA KEYS AQUEDUCT AUTHORITY

2018 BOARD OF DIRECTORS

J. ROBERT DEAN CHAIRMAN

District 3- Current term (pending appointment)
Owner and Director, Dean-Lopez Funeral Home

RICHARD J. TOPPINO VICE CHAIRMAN

District 2- Current term expires December 31, 2018
Treasurer, Charley Toppino & Sons, Inc.
Vice President, Monroe Concrete Products, Inc.

DAVID C. RITZ SECRETARY/ TREASURER

District 5- Current term (pending appointment)
President, Ocean Reef Community Association

ANTOINETTE M. APPELL BOARD MEMBER

District 4- Current term (pending appointment)
Highly Qualified Paraprofessional with the
Monroe County School District

CARA HIGGINS BOARD MEMBER

District 1- Current term expires December 31, 2018
Partner Horan & Higgins LLP

MESSAGE FROM THE EXECUTIVE DIRECTOR

KIRK ZUELCH

On behalf of the Board of Directors and staff of the Florida Keys Aqueduct Authority, we are pleased to present our annual budget for the fiscal year ending September 30, 2018, as adopted by the Board of Directors on August 30, 2017, 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, 2018 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 higher than the current year due mainly to the addition of new wastewater customers being served by the new Cudjoe Regional Wastewater System and a projected 2% rate adjustment for the annual inflation index. Water volume sales are also projected to minimally increase over current year levels. Operating expenses are budgeted slightly higher than the current year due mainly to the additional costs of operating the new wastewater system. Capital projects are focused on critical resiliency projects that strengthen the systems and increases reliability. Water projects are budgeted to be funded through reserves and wastewater projects will be funded by reserves, remaining bond proceeds from the previous year and state appropriations.

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

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

Respectfully submitted,



Kirk Zuelch
Executive Director

August 31, 2017

VISION, MISSION, VALUES AND GUIDING PRINCIPLES

FOR FISCAL YEAR 2018

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

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.

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

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

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.



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

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.

VISION, MISSION, VALUES AND GUIDING PRINCIPLES- CONTINUED

FOR FISCAL YEAR 2018

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.

Employee and Leadership Development: We recruit and retain a workforce team that is competent, 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.



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.

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.

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

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.

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:

- A. **Develop a sustainable utility and related infrastructure**
- B. **Proactive public outreach and superior customer service**
- C. **Enhance employee communication and development**
- D. **Financial optimization**
- E. **Maximize energy efficiency**
- F. **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 2018

	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	Twenty-year plan includes project listing by plan year	Staff evaluates capital needs on an ongoing basis and adjusts the plan as needed	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. Replacement decisions are determined considering changing software technology, economic issues, maintenance costs and downtime

PROFILE OF THE FLORIDA KEYS

FOR FISCAL YEAR 2018

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 73,000. 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.

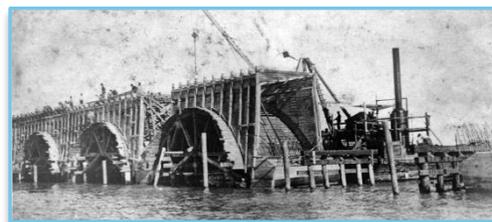


Early History

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.

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.



PROFILE OF THE FLORIDA KEYS-CONTINUED

FOR FISCAL YEAR 2018

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.

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.



DEMOGRAPHIC AND ECONOMIC INFORMATION

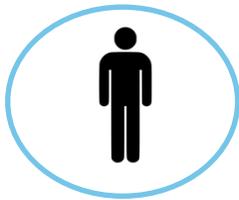
FOR FISCAL YEAR 2018

The information presented in the budget is best understood when it is considered from the broader perspective of the specific environment within which the Authority operates. The demographics presented here are the latest data available at the time of publication of this document.

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. Many residents are in the service area for only part of the year. The permanent year-round population of Monroe County is approximately 73,000 residents. The average functional population, defined as the sum of the permanent population and the peak seasonal population estimated by the Monroe County Growth Management Division to be approximately 155,000. Due to this difference in population, the Authority experiences monthly fluctuations in water consumption and wastewater flows depending on seasonal demands

Estimated Population



Males-41,065
53%



Population-76,047
2016



Female-36,416
47%



DEMOGRAPHIC AND ECONOMIC INFORMATION-CONTINUED

FOR FISCAL YEAR 2018

SOCIAL, ECONOMIC AND HOUSING CHARACTERISTICS-2009-2016



Median age (years)
41.7



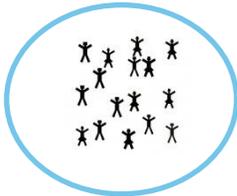
Average household size
2.53



Total visitors to the Keys in 2015
5,466,937



Median household income \$57,042
Per capita income \$34,020



Persons below the poverty level
12.10%



Total housing units
52,913
Median single family home value
\$509,000



Mean travel time to work (minutes)
18.80

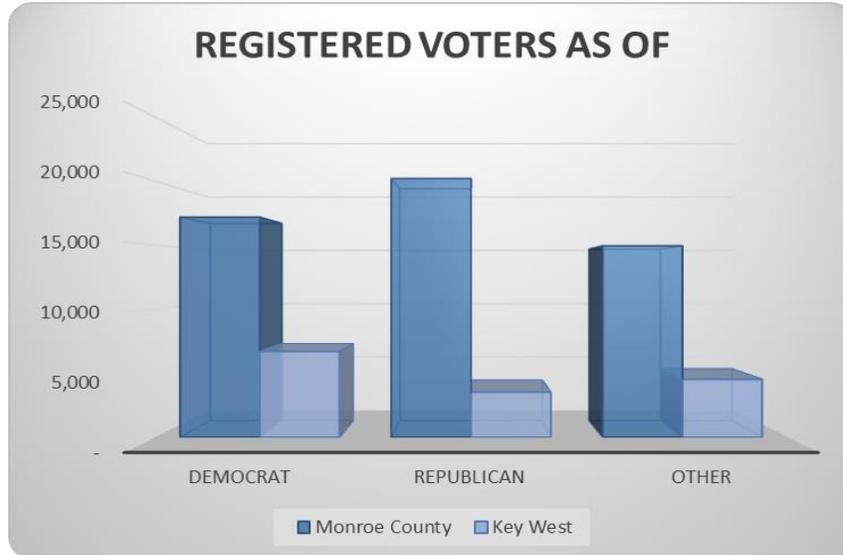
Fun Facts about the Florida Keys

- The Florida reef is one of the world's largest reefs and it is 160 miles long.
- Key West's earlier Spanish name was Cayo Hueso.
- Cuba is 90 miles from Key West (Miami is 164 miles away!)
- Key Largo was mentioned in a famous song by the Beach Boys
- The Queen Conch is a protected marine species and it is prohibited to catch
- The Florida Keys are highly biodiverse due to the coral reefs and tropical climate
- After 5 attempts Diana Nyad, 64, set a world record after swimming from Havana to Key West. She was the first person to do it without a shark cage.



DEMOGRAPHIC AND ECONOMIC INFORMATION-CONTINUED

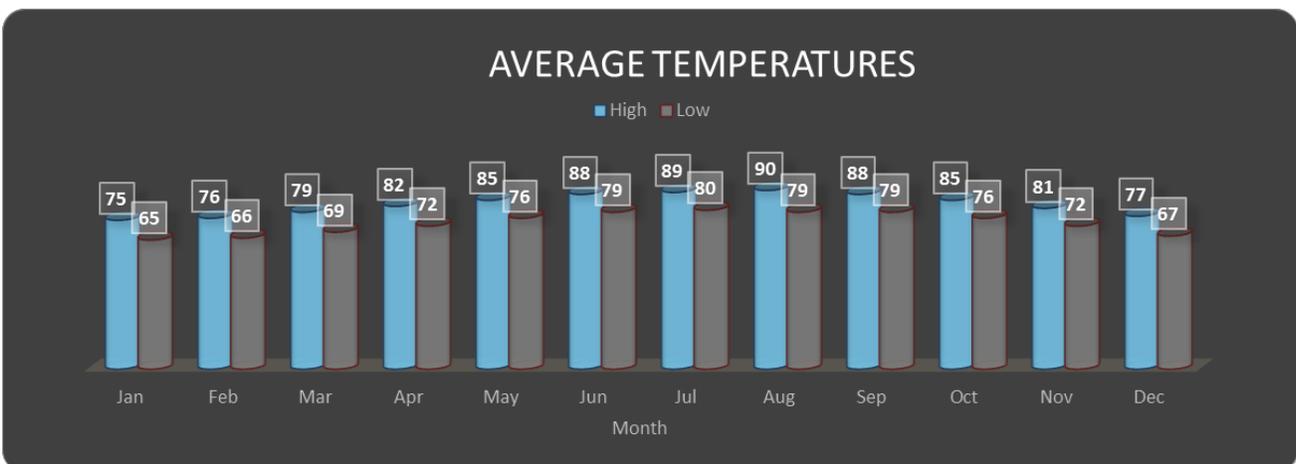
FOR FISCAL YEAR 2018



Affiliation	Monroe County	Key West
Democratic	17,166	6,699
Republican	20,181	3,514
Other	14,931	4,516
Totals	52,278	14,729

Source: www.keyselections.org/keywestchamberofcommerce

AVERAGE MONTHLY TEMPERATURES



DEMOGRAPHIC AND ECONOMIC INFORMATION-CONTINUED

FOR FISCAL YEAR 2018

AVERAGE ANNUAL RAINFALL



ACTUAL ANNUAL RAINFALL

	Key West International Airport	Miami International Airport
2016	40.88	75.00
2015	38.92	47.22
2014	33.94	73.65
2013	44.43	60.58
2012	60.58	97.87
2011	35.07	50.56
2010	41.47	68.56
2009	32.40	51.14
2008	36.52	63.59
2007	36.54	59.27

Source: National Weather Service & Southeast Regional Climate Control

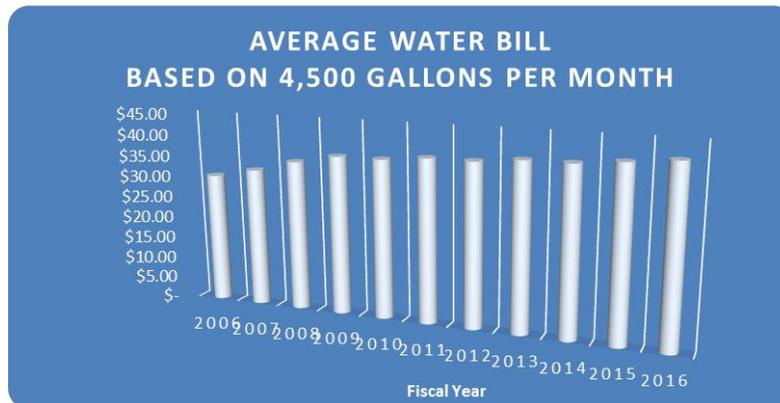
DEMOGRAPHIC AND ECONOMIC INFORMATION-CONTINUED

FOR FISCAL YEAR 2018

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 well field 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 Floridian 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 has remained consistent and is considered the "new normal" for budgeting purposes. As the economy improved in recent years, water use trended upward slightly.



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 worsened, tourism and tourism-related development are slowing and hotels and resorts are using less water.

WORKFORCE ISSUES

The Authority's linear geography requires sufficient staff in all areas to respond to operational and customer needs. This makes staff levels and staffing costs higher than in a centrally located system. Service personnel and customer service offices are maintained 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 2018

WORKFORCE ISSUES-CONTINUED

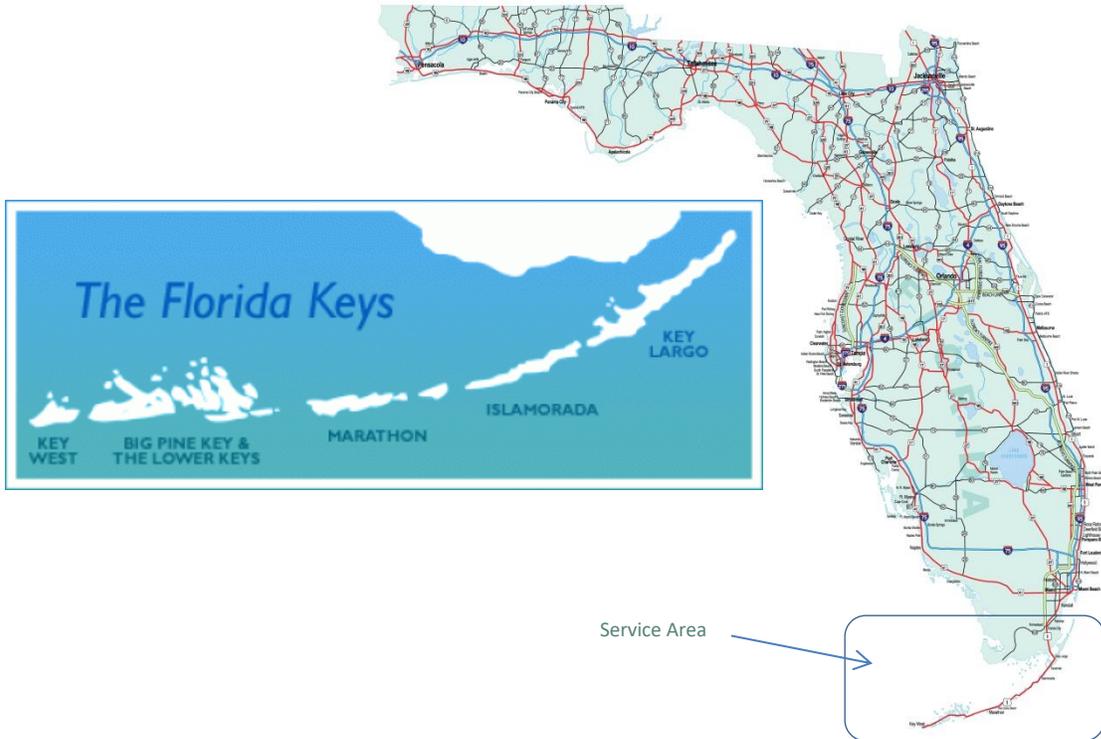
The cost of living in Monroe County is quite a bit higher than most of the rest of the state, making it difficult to recruit and retain staff. Economic conditions have forced some employees to relocate. Therefore, overall compensation must be carefully considered each year in order to assure a sufficient workforce.

		Total Gallons		
		Consumed	Total Water	% of Water
2016		(000)	Revenues	Revenues
1	United States Navy	338,808	\$ 1,012,432	2.9%
2	Monroe County Detention Center	54,095	555,397	1.6%
3	Monroe County Schools	39,990	343,876	1.0%
4	Ocean Reef Club	38,524	336,552	1.0%
5	Cheeca Lodge and Spa	75,325	334,767	1.0%
6	Keys Hotel Operator Inc	29,232	295,130	0.9%
7	City of Key West	39,091	289,079	0.8%
8	Resort Hotels of Key	21,455	241,453	0.7%
9	RLJ DBT Key West Lessee, LLC	21,229	229,030	0.7%
10	Stock Island Apartments	21,115	217,268	0.6%

		Total Gallons		
		Consumed	Total Water	% of Water
2007		(000)	Revenues	Revenues
1	United States Navy	296,175	\$ 885,029	2.3%
2	Monroe County Board of County Commissioners	51,049	423,909	1.1%
3	Chica Holdings LLC	45,395	400,807	1.1%
4	Ocean Reef Club	43,982	351,105	0.9%
5	Monroe County Schools	36,157	267,209	0.7%
6	City of Key West	24,367	91,108	0.2%
7	Anglers Club Inc	23,643	204,747	0.5%
8	Sheraton Suites KW	21,672	187,926	0.5%
9	Heartland Hotel Corp.	19,969	159,502	0.4%
10	Hawks Cay Investors	19,471	162,715	0.4%

SYSTEM OVERVIEW

FOR FISCAL YEAR 2018



System Overview

- 24 mgd lime softening water treatment plant
- 10 Biscayne aquifer supply wells
- 5 Floridian aquifer supply wells
- 6 mgd brackish water reverse osmosis plant
- 2 seawater reverse osmosis plants (3mgd total capacity)
- 187 miles of steel and ductile iron transmission main (18"-36") at up to 250 psi
- 6 transmission booster and back pump stations
- 43 bridge crossings
- 49 mg capacity in 33 storage tanks
- 690 miles of potable water distribution main at up to 55 psi
- 26 pumping stations
- 7 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 2018

HISTORY AND PURPOSE



In 1937, the legislature of the state of Florida created the Florida Keys Aqueduct Commission, the predecessor to the Florida Keys Aqueduct Authority (Authority). The Commission was charged with the responsibility of obtaining, supplying and distributing potable water to the Florida Keys. In 1970, the Authority was established by the state legislature to succeed the Commission. The Authority currently operates under Special Legislation 76-441, Laws of Florida, as amended, (Enabling Legislation).

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 45,000 customers throughout the Florida Keys, which are a part of Monroe County. 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 was updated in 2006 in conjunction with the development of a strategic water supply plan that identifies future water supplies.

An overview of the Authority's facilities follows.

Well fields

The Authority draws its primary raw water supply from the Biscayne Aquifer through ten wells with screened depths of 20 to 60 feet. The well field is adjacent to the outskirts of the Everglades National Park and is within an environmentally protected pine rockland. The location of the well field, 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 Floridian 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 23.79 mgd. The water treatment process consists primarily of lime softening, filtration disinfections and fluoridation. The reverse osmosis plant has a design capacity of 6 mgd. Brackish water is forced through membranes to remove chlorides and impurities.



PROFILE OF THE AUTHORITY, CONTINUED

FOR FISCAL YEAR 2018

Water production and treatment facilities, continued

to these treatment facilities are water storage tanks, high service pumping equipment emergency diesel generators, a control center for transmission telemetry and a state-certified water quality testing laboratory.

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 187 miles of transmission main and approximately 690 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 .27 mgd facility in Duck Key, a .066 mgd facility in Layton and a .20 mgd facility in Key Haven, Florida. Additionally, the Authority operates a .96 mgd facility in Cudjoe Key and a .33 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. The Authority is nearing completion of the collection system for the Cudjoe system under this agreement. As the capital costs are being borne by Monroe County, they are not included in this budget. However, customer fees and operating expenses for the systems are budgeted in fiscal year 2018.

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 2018

THE AUTHORITY'S OPERATIONS

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

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

Water quality assurance

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

Protection of the groundwater source from potential pollution is a very important water quality issue. The Authority has an ongoing agreement with the Dade County Department of Environmental Resource Management (DERM) to regulate and manage issues relating to the protection of the Authority's well field. 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 salt water intrusion monthly. This network includes seven Authority wells, six United States Geological Survey wells, and four SFWMD canal sites in the Florida Everglades. These seventeen sites provide valuable information on the location, movement and velocity of the saline/fresh water interface.

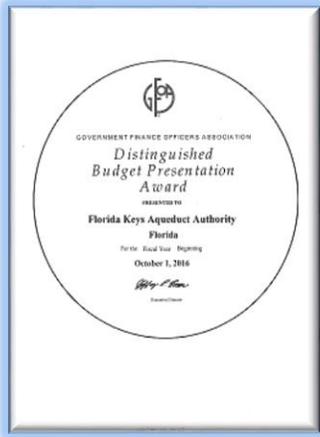
The Authority uses chloramines as its primary disinfecting agent. Chloramines, though not as strong as free chlorine, remain more stable and do not produce potentially harmful by-products. The Authority performs bacteriological testing on samples taken from approximately 90 sample sites throughout the 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 2018

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 fiscal year beginning October 1, 2016. This was the tenth year in a row 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 2015 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, 2015. This was the 25th 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.



Outstanding AquaSBR Plant Performance

For the sixth year in a row, the Authority has been recognized for its outstanding performance in the operation of its wastewater treatment plants. Treating wastewater to the permit levels and maintaining constant nutrient levels year-round are the criteria used for this acknowledgment.



PROFILE OF THE AUTHORITY, CONTINUED

FOR FISCAL YEAR 2018

ACKNOWLEDGEMENTS

The preparation of the budget and financial plan for the year ending September 30, 2018 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 2018

IMPORTANT MILESTONES IN THE AUTHORITY'S HISTORY

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.



Long Key pumping station 1960

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, and 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, larger-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.

PROFILE OF THE AUTHORITY, CONTINUED

FOR FISCAL YEAR 2018

IMPORTANT MILESTONES IN THE AUTHORITY'S HISTORY, CONTINUED

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

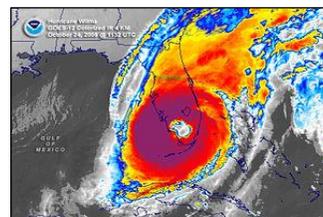
Reverse osmosis facility on Stock Island is renovated. The plant's capacity is split between Stock Island (2 mgd) and Marathon (1 mgd) to provide potable water during emergencies.

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 damages to the Authority from Wilma were substantial, yet water service was not interrupted.



Hurricane Wilma

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. This facility helps the Authority meet dry season permit limitations and reduces 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.



Reverse osmosis expansion in Florida City

2011

South Florida experienced 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

The Authority is nearing completion of a \$200 million wastewater system to service the lower Keys. This system is the last major wastewater system necessary to complete advanced wastewater treatment throughout the Keys.

BUDGET HIGHLIGHTS, ISSUES AND PRIORITIES

FOR FISCAL YEAR 2018

KEY HIGHLIGHTS

The 2018 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:

- New operation of the Cudjoe Regional wastewater system
- Sizable capital improvement plan
- Contractual salary increases

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

- Potential curtailment of water use in light of new wastewater charges
- Increasing costs of communications systems maintained by external partners
- Uncertainty of employee health care costs for self-retained risk

These impacts, as well as other budget drivers, are discussed in more detail below. Other issues that may affect operating costs that are not quantified in the budget itself are the potential impacts of hurricanes, effects of a rapidly rising cost of living and unfavorable claim experience for employee health care self-insurance.

OPERATING REVENUE

Utility operating revenue

After several years of reduced consumption, water sales began to show signs of recovery in recent years. Water volume sales are budgeted to increase by about 1% over the current budget. The budget includes a 2% rate adjustment for inflation effective October 1, 2017.

Other revenue and capital contributions

System development fees remain relatively insignificant, comprising only about 3% of overall revenue. Interest income is also minor, 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 4.7% higher than those budgeted in the current year. Some of the significant budgeted expenditures are discussed below.

BUDGET HIGHLIGHTS, ISSUES AND PRIORITIES, CONTINUED

FOR FISCAL YEAR 2018

Personnel costs

Salaries and benefits are budgeted at \$26,606,600, or about 3.3% higher than the current budget. A cost of living salary adjustment of 2.0% is budgeted to go into effect for all employees on October 1, 2017 along with an average estimated merit increase of about 1.1%. This amount will vary based on actual performance results. Eight new positions were added in 2018. Three were wastewater personnel along with an additional engineer, a leak control technician, an IT specialist a meter and billing analyst and an asset management position. Positions for four customer service staff and a position for the assistant manager of engineering were deleted in the 2018 salary budget.

Other operating expenses

Wastewater operating costs, such as materials and maintenance, chemicals and electricity are budgeted to increase, mainly due to the new wastewater system on Cudjoe Key. The increase in outsourced operations is due in part to a project to refurbish the variable speed drives at Florida City by the Technical Services group. Other consulting and support services increased mainly due to the deep well integrity test at Florida City which occurs every five years. Other utilities and technical services increased due to increasing costs of fiber optic and telephone service.

Capital outlay

Capital outlay is budgeted at \$3,732,300, an increase of \$37,600 over the current year. These costs are for replacement of heavy equipment and vehicles, master tap upgrades as well as critical software and network components.

CAPITAL IMPROVEMENT PROJECTS

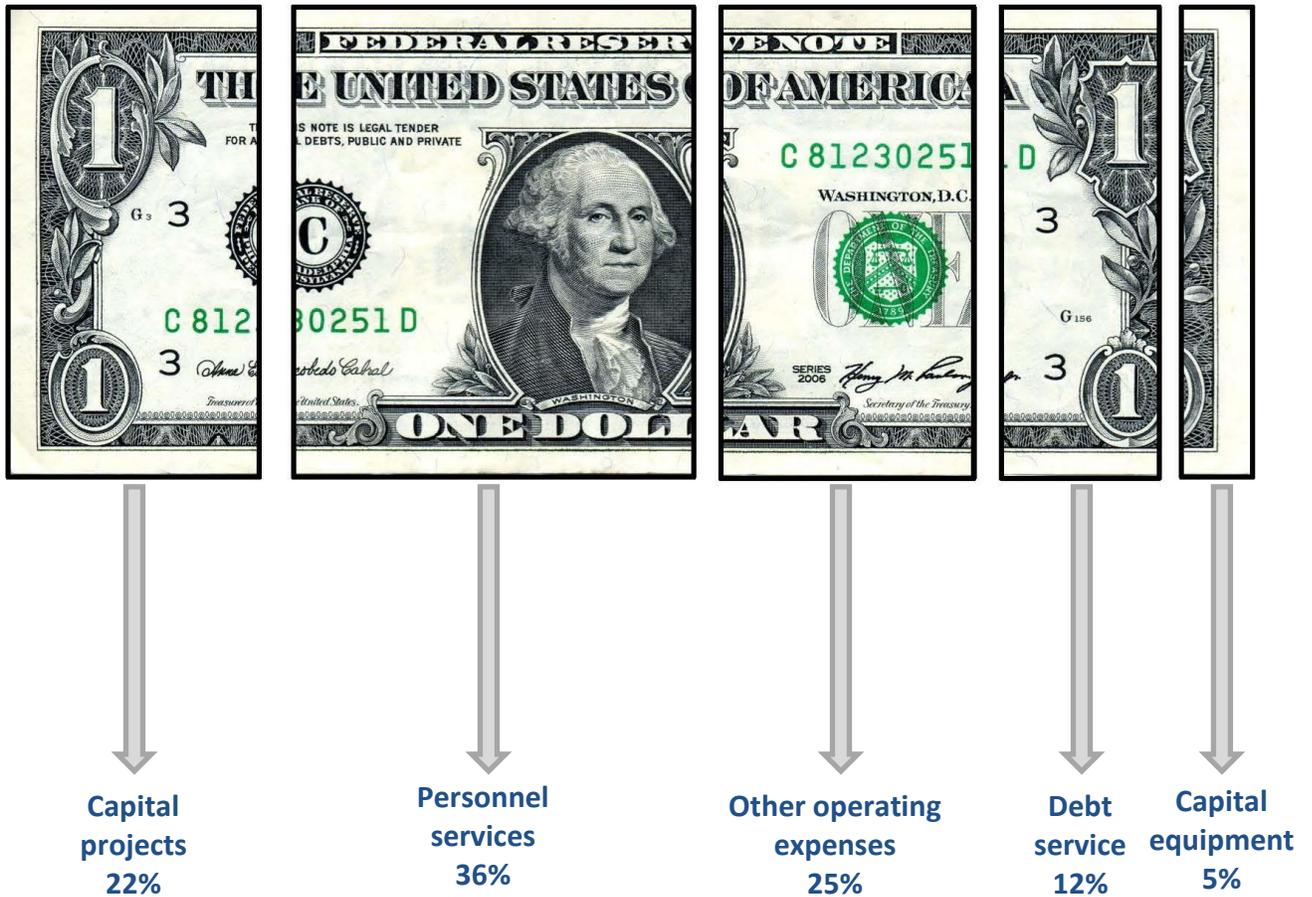
The 2018 capital improvement plan is centered around projects that are critical to sustaining continued reliable operations. The 2018 portion of the plan calls for \$16,250,000 in capital expenditures and includes costs for distribution and transmission line replacements in areas identified as vulnerable to breaks. Also included are projects to redirect wastewater flows in Key Haven and the US Navy base to the newer centralized treatment plant on Cudjoe Key that meets current treatment standards. The old plants will be demolished. See a detailed discussion of capital projects under the section entitled Capital and Debt.

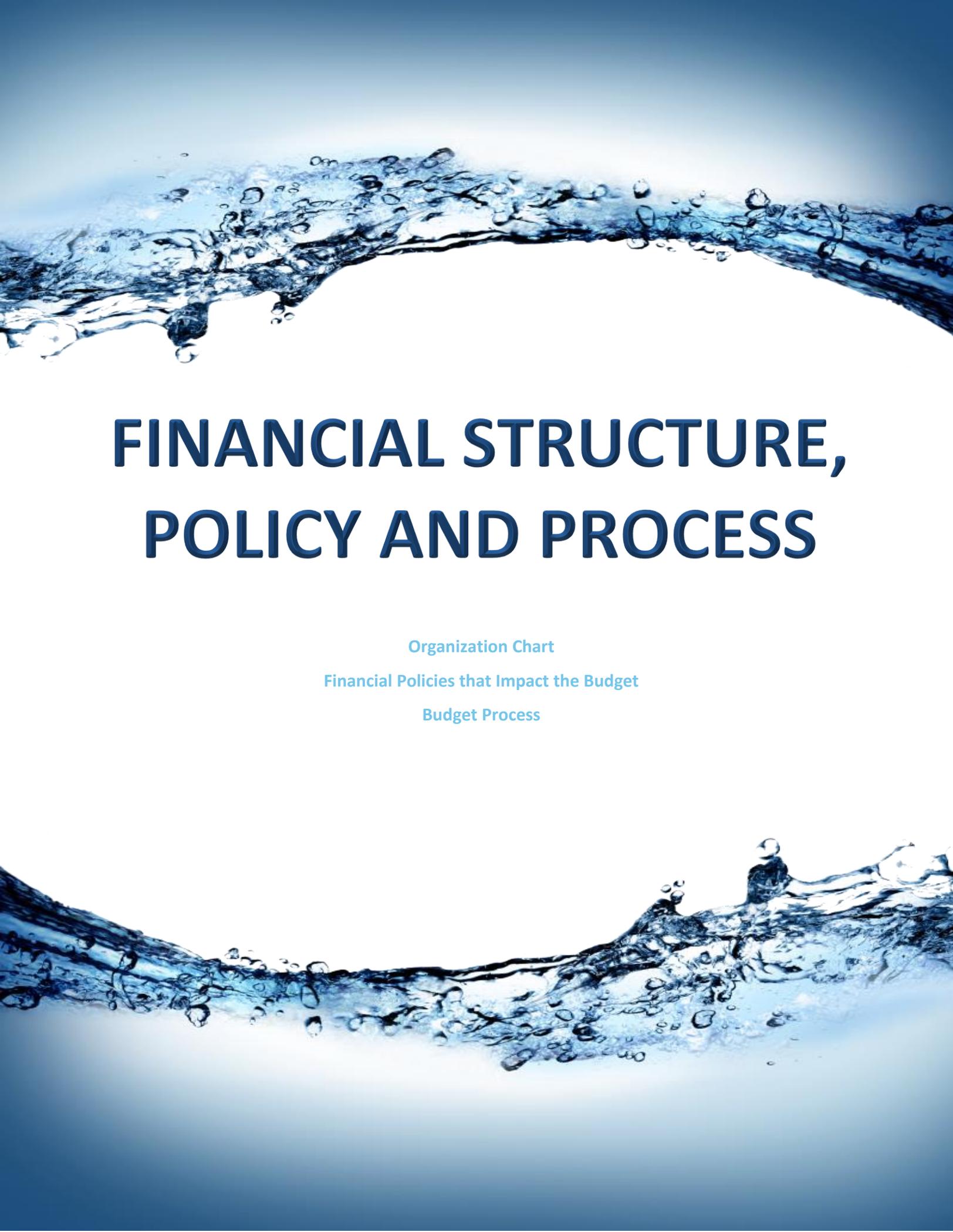
CAPITAL FINANCING AND DEBT SERVICE

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.

No new bond issues are included in the 2018 budget. Debt service is budgeted at approximately \$8.9 million, an increase of about 2%. 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 2018 BUDGET WILL BE SPENT



A large, dynamic splash of blue water frames the top and bottom of the page. The water is captured in mid-air, creating a sense of movement and freshness. The background is a light blue gradient.

FINANCIAL STRUCTURE, POLICY AND PROCESS

Organization Chart

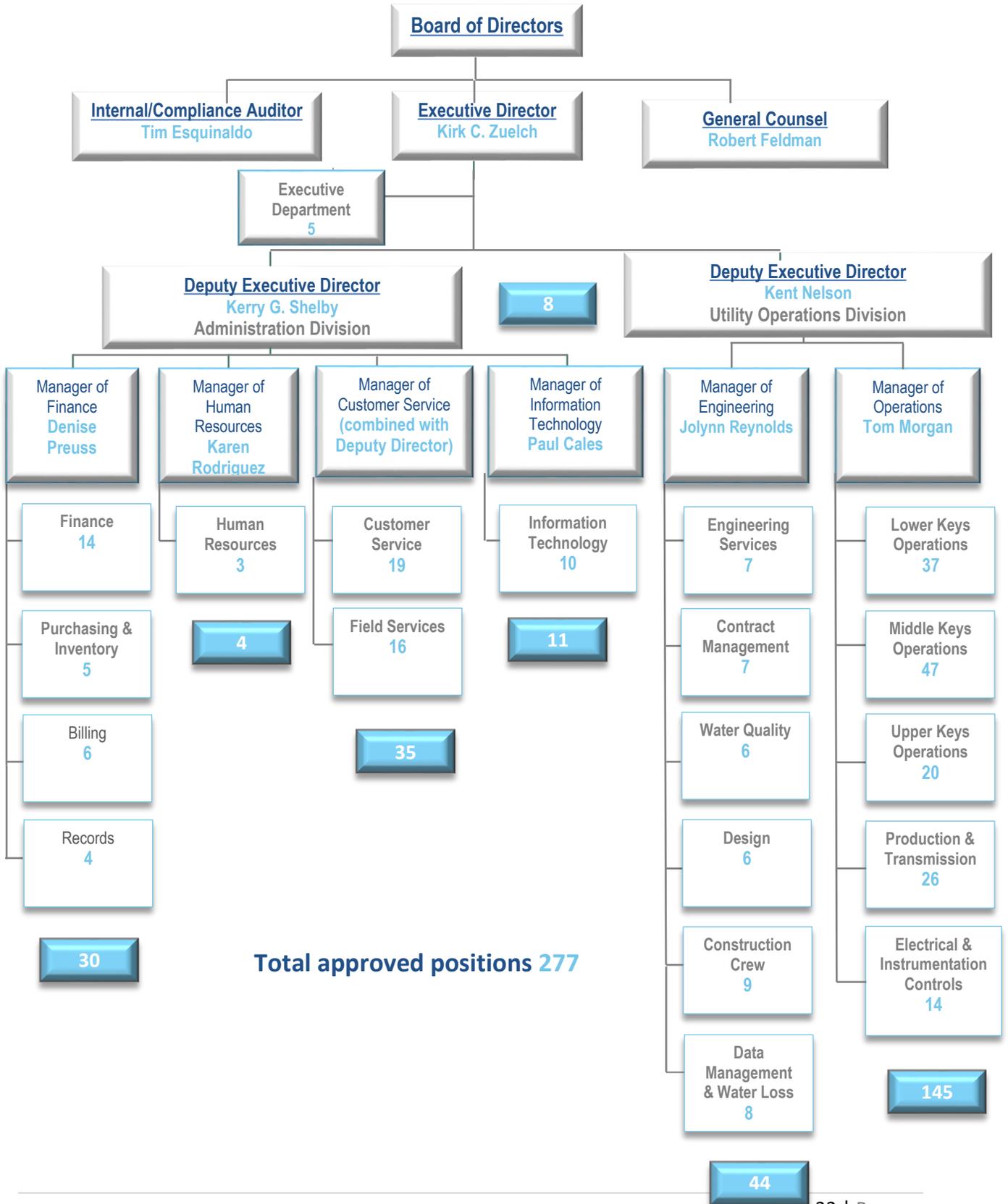
Financial Policies that Impact the Budget

Budget Process

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ORGANIZATION CHART

FOR FISCAL YEAR 2018



CONTACT INFORMATION

FOR FISCAL YEAR 2018

Executive Division

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FINANCIAL POLICIES THAT IMPACT THE BUDGET

FOR FISCAL YEAR 2018

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 2018

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 \$9,000,000 for working capital in the event of a natural disaster or operating emergency.

FINANCIAL POLICIES THAT IMPACT THE BUDGET, CONTINUED

FOR FISCAL YEAR 2018

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 2018

Budget Preparation

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

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

Budget Monitoring

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

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

Budget Presentation

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

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

Budgeted expenditures are characterized as operating expenses, capital expenditures or debt service. Capital expenditures are those expenditures for assets costing over \$1,500 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 2018

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 Improvements and Financing Plan

Review project and priorities												
Estimate five- year operational impact												
Review plan and 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 budget 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 adoption												

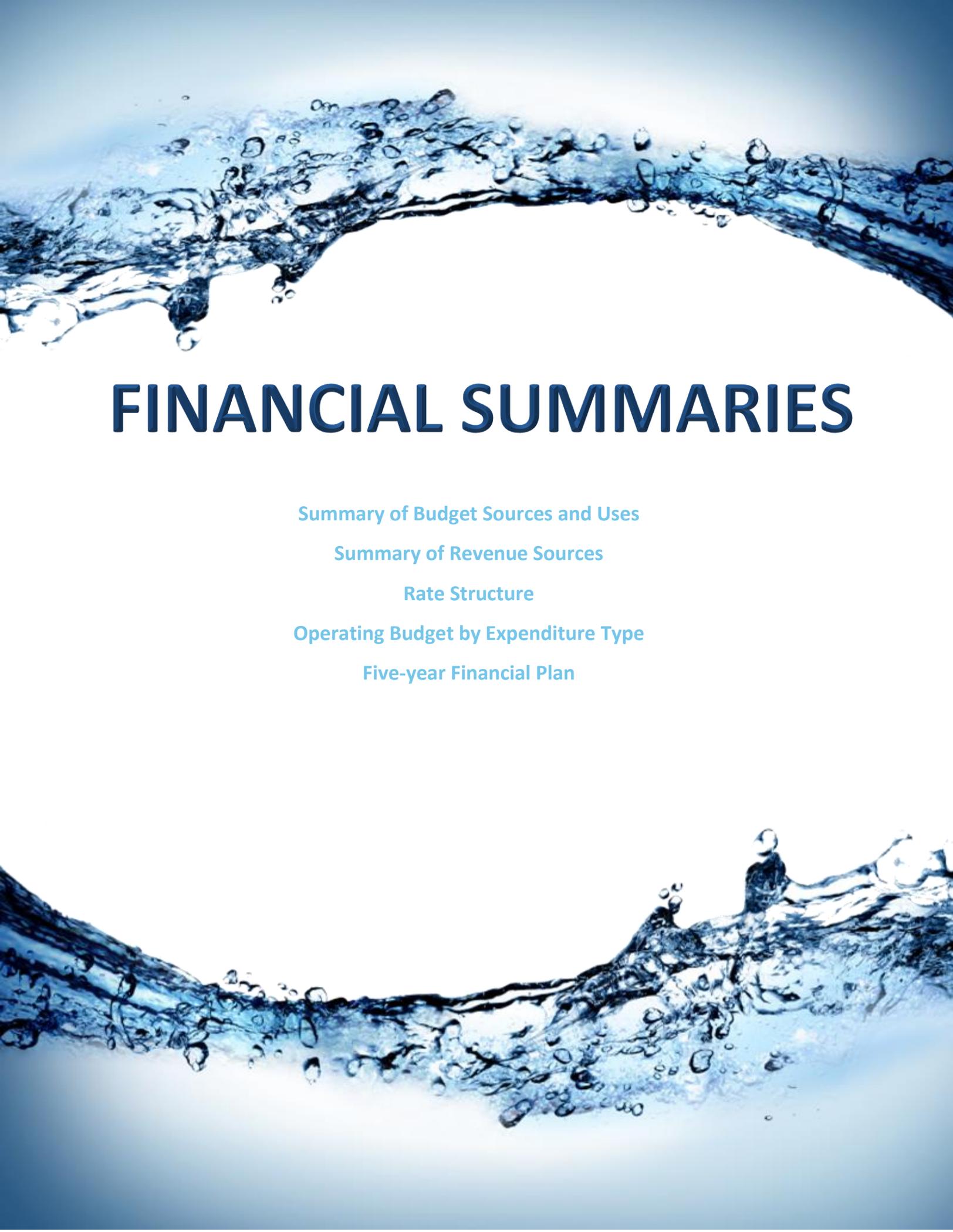
BUDGET PROCESS, CONTINUED

FOR FISCAL YEAR 2018

Budget Calendar

Dates for Preparation of the 2018 Budget

January 2017								May 2017							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
1	2	3	4	5	6	7	Informal input from our Board of Directors, staff and customer's year around. Prepare budget sheets for distribution to Departments.		1	2	3	4	5	6	
8	9	10	11	12	13	14		May 24 th budget workshop (if needed)	7	8	9	10	11	12	13
15	16	17	18	19	20	21			14	15	16	17	18	19	20
22	23	24	25	26	27	28			21	22	23	24	25	26	27
29	30	31						28	29	30	31				
February 2017							In February, Departments are working on their budgets.	June 2017							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
			1	2	3	4		June 28 th budget public hearing					1	2	3
5	6	7	8	9	10	11			4	5	6	7	8	9	10
12	13	14	15	16	17	18	11		12	13	14	15	16	17	
19	20	21	22	23	24	25	18		19	20	21	22	23	24	
26	27	28					25	26	27	28	29	30	31		
March 2017							Week 3 budget meetings with Deputy Executive Director Week 4 budget meetings with Executive Director	July 2017							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
			1	2	3	4		July 26 th , 2 nd budget public hearing Marathon							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	31		23	24	25	26	27	28	29		
							30	31							
April 2017							April 26 th first budget workshop August 30 th , 3 rd and final budget public hearing Tavernier. Budget adoption planned for regular board meeting agenda.	August 2017							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
						1					1	2	3	4	5
2	3	4	5	6	7	8		6	7	8	9	10	11	12	
9	10	11	12	13	14	15	13	14	15	16	17	18	19		
16	17	18	19	20	21	22	20	21	22	23	24	25	26		
23	24	25	26	27	28	29	27	28	29	30	31				
30															

A large, dynamic splash of clear blue water arches across the top and bottom of the page, framing the central text. The water is captured in mid-air, with numerous bubbles and droplets visible, creating a sense of movement and freshness. The background is a light, clean white, which makes the blue water stand out prominently.

FINANCIAL SUMMARIES

Summary of Budget Sources and Uses

Summary of Revenue Sources

Rate Structure

Operating Budget by Expenditure Type

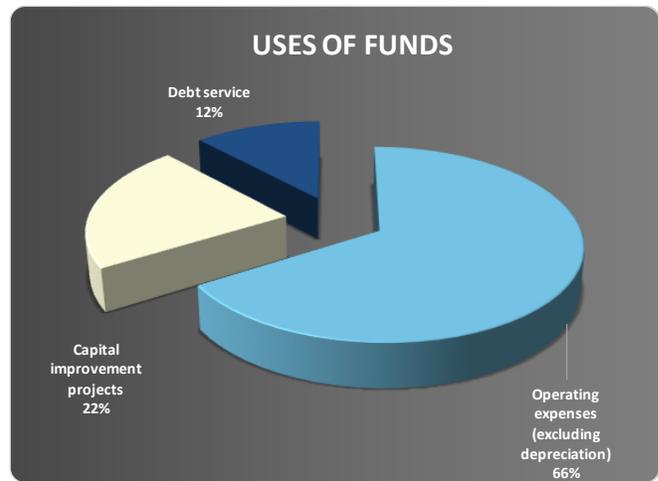
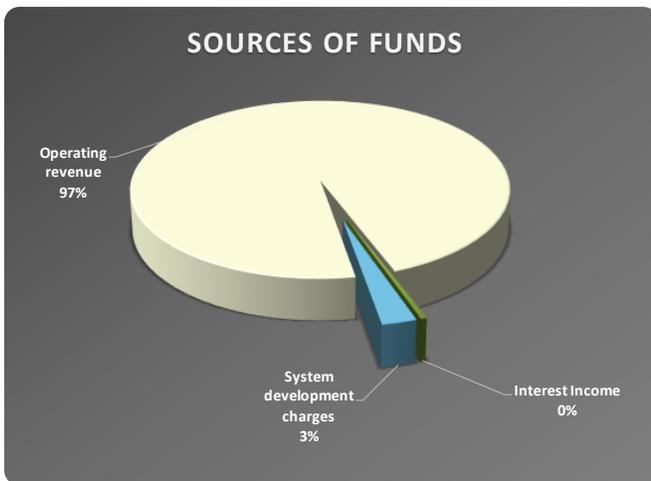
Five-year Financial Plan

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SUMMARY OF BUDGETED SOURCES AND USES

FOR FISCAL YEAR 2018

	2016	2017 budget			2018 budget			% Change
	Actual	Water	Wastewater	Total	Water	Wastewater	Total	
Total budgeted sources of funds								
Utility operating revenue	\$ 59,809,589	\$ 50,146,000	\$ 8,951,000	\$ 59,097,000	\$ 51,540,000	\$ 9,177,000	\$ 60,717,000	2.7%
Interest income	292,557	300,000	-	300,000	300,000	-	300,000	0.0%
System development fees and other income	2,467,426	1,410,000	138,000	1,548,000	1,510,000	138,000	1,648,000	6.5%
Special assessments and appropriations	-	-	5,000,000	5,000,000	-	-	-	-100.0%
Proceeds from issuance of debt, net of issue costs	-	-	10,000,000	10,000,000	-	-	-	-100.0%
Total budgeted sources of funds	62,569,572	51,856,000	24,089,000	75,945,000	53,350,000	9,315,000	62,665,000	-17.5%
Total budgeted uses of funds								
Operating expenditures (excluding depreciation)	45,717,723	38,538,500	8,372,100	46,910,600	41,649,500	7,470,200	49,119,700	4.7%
Capital improvement projects	8,593,501	10,775,000	9,600,000	20,375,000	10,400,000	5,850,000	16,250,000	-20.3%
Debt service	10,418,115	8,281,000	767,000	9,048,000	8,003,000	861,000	8,864,000	-2.0%
Total budgeted uses of funds	64,729,339	57,594,500	18,739,100	76,333,600	60,052,500	14,181,200	74,233,700	-2.8%
Excess (deficit) sources over uses	(2,159,767)	(5,738,500)	5,349,900	(388,600)	(6,702,500)	(4,866,200)	(11,568,700)	
Adjustments to cash basis from accrual	4,126,616	-	-	-	-	-	-	
Change in cash and investments	1,966,849	(5,738,500)	5,349,900	(388,600)	(6,702,500)	(4,866,200)	(11,568,700)	
Beginning cash and investments	42,627,789	43,036,400	1,558,200	44,594,600	37,297,900	6,908,100	44,206,000	-0.9%
Ending cash and investments	44,594,638	37,297,900	6,908,100	44,206,000	30,595,400	2,041,900	32,637,300	-26.2%
Reserves and restricted cash and investments	(29,320,000)	(29,320,000)	(72,000)	(29,392,000)	(25,644,000)	(71,000)	(25,715,000)	-12.5%
Estimated ending unrestricted cash and investment:	\$ 15,274,638	\$ 7,977,900	\$ 6,836,100	\$ 14,814,000	\$ 4,951,400	\$ 1,970,900	\$ 6,922,300	-53.3%



SUMMARY OF REVENUE SOURCES

FOR FISCAL YEAR 2018

	Actual	Water	Wastewater	Total	Water	Wastewater	Total	Increase / Decrease	% change from prior budget
Number of locations									
Estimated locations receiving monthly base charge	49,086	49,000	10,500 *		50,600	10,500			
								in ww you had +3000	
Volume									
Estimated gallons (000s) billed at retail rates	4,774,587	4,850,000			4,899,000				
Estimated gallons (000s) billed to US Navy	274,413	249,000			251,000				
Total estimated gallons(000s) sold	5,049,000	5,099,000			5,150,000				
Operating revenue									
Fees for service									
Retail water rate revenue	\$ 42,577,821	\$ 45,103,000		\$ 45,103,000	\$ 46,465,000		\$ 46,465,000	\$ 1,362,000	3.0%
US Navy water rate revenue	1,048,332	1,001,000		1,001,000	1,031,000		1,031,000	30,000	3.0%
US Navy distribution system charge	2,456,208	2,487,000		2,487,000	2,487,000		2,487,000	-	0.0%
Retail reclaimed water rate revenue	55,919	55,000		55,000	57,000		57,000	2,000	3.6%
Retail wastewater rate revenue	2,986,921		7,487,000	7,487,000	\$ 7,713,000		7,713,000	226,000	3.0%
US Navy wastewater revenue	-		1,464,000	1,464,000	1,464,000		1,464,000	-	0.0%
Total fees for service	49,125,201	48,646,000	8,951,000	57,597,000	50,040,000	9,177,000	59,217,000	1,620,000	2.8%
Other operating revenue	4,096,009	1,500,000	-	1,500,000	1,500,000	-	1,500,000	-	0.0%
Total operating revenue	53,221,210	50,146,000	8,951,000	59,097,000	51,540,000	9,177,000	60,717,000	1,620,000	2.7%
Non-operating revenue									
Interest income	294,360	300,000	-	300,000	300,000	-	300,000	-	0.0%
Grant proceeds	-	-	-	-	-	-	-	-	-
Charges to other utilities for billing services	380,193	390,000	-	390,000	390,000	-	390,000	-	0.0%
Other income	433,370	120,000	-	120,000	120,000	-	120,000	-	0.0%
Total non-operating revenue	1,107,923	810,000	-	810,000	810,000	-	810,000	-	0.0%
Total budgeted revenue	54,329,133	50,956,000	8,951,000	59,907,000	52,350,000	9,177,000	61,527,000	1,620,000	2.7%
System development fees (including assessments)	1,074,959	900,000	138,000	1,038,000	1,000,000	138,000	1,138,000	100,000	9.6%
State appropriation (Key Haven project)	-	-	5,000,000	5,000,000	-	-	-	(5,000,000)	10.0%
Total revenue and system development fees	\$ 55,404,092	\$ 51,856,000	\$ 14,089,000	\$ 65,945,000	\$ 53,350,000	\$ 9,315,000	\$ 62,665,000	\$ (3,280,000)	-5.0%

* Total reflects existing customers and the number of new customers phased in throughout the year.

General assumptions:

Water volume sales increase	1.0%	1.0%
Rate index increase	2.0%	2.0%
Additional rate increase (decrease)	0.0%	0.0%
Average interest rate (applied to average cash balance)	0.5%	
System development fee growth factor	0.0%	0.0%

RATE STRUCTURE

FOR FISCAL YEAR 2018

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, 2016	After October 1, 2017 index
Potable Water Rates		
Base facilities charge		
¾-inch or ¾-inch	\$ 14.12	\$ 14.40
1-inch	35.30	36.01
1½-inch	70.59	72.00
2-inch	112.94	115.20
3-inch	211.75	215.99
4-inch	350.37	357.38
6-inch	707.19	721.33
8-inch	1,129.30	1,151.89
Consumption charge ^[1]		
Block 1	\$ 5.93	\$ 6.05
Block 2	8.66	8.83
Block 3	9.71	9.90
Block 4	10.83	11.05
Block 5	11.89	12.13
Reclaimed Water Rates		
Consumption charge ^[1]		
Block 1	\$ 2.97	\$ 3.02
Block 2	4.33	4.42
Block 3	4.86	4.95
Block 4	5.42	5.52
Block 5	5.95	6.06

RATE STRUCTURE, CONTINUED

FOR FISCAL YEAR 2018

	Rates in effect on October 1, 2016	After October 1, 2017 index
Wastewater Rates		
Base facilities charge		
5/8-inch or 3/4-inch	\$ 24.18	\$ 24.66
1-inch	90.70	92.51
1½-inch	181.40	185.03
2-inch	290.25	296.06
3-inch	544.21	555.09
4-inch	907.00	925.14
6-inch	1,814.03	1,850.31
8-inch	2,486.89	2,536.63
Flow collection charge		
Residential (up to 10,000 gallons)	\$ 9.15	\$ 9.33
Non-residential (all consumption)	9.15	9.33

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 2018

SCHEDULE OF BUDGETED EXPENDITURES FOR THE YEAR ENDING SEPTEMBER 30, 2018

Total Company

BUDGETED 2018

	2016 Budget	2016 Actual	2017 Budget	Water	Wastewater	Total	Increase /Decrease	% change from prior budget
Operating capital expenditures								
Additions to utility plant	4,625,500	\$ 4,214,018	\$ 3,694,700	\$ 3,522,000	\$ 210,300	\$ 3,732,300	\$ 37,600	1%
Capitalized salaries	757,600	772,219	1,061,300	1,033,800	-	1,033,800	(27,500)	-3%
Capitalized overtime	-	23,175	-	-	-	-	-	-
Total operating capital expenditures	5,383,100	5,009,412	4,756,000	4,555,800	210,300	4,766,100	10,100	0.2%
Operating expenses								
Personnel services								
Salaries	17,686,500	18,050,652	18,265,100	17,434,800	1,497,300	18,932,100	667,000	4%
Overtime	507,400	551,532	507,300	333,600	150,000	483,600	(23,700)	-5%
Retirement	1,602,800	1,671,696	1,668,100	1,682,800	114,600	1,797,400	129,300	8%
Payroll taxes	1,450,100	1,439,248	1,517,000	1,438,500	126,000	1,564,500	47,500	3%
Employee health insurance	3,591,700	3,410,018	3,600,000	3,600,000	-	3,600,000	-	0%
Other benefits	202,600	150,424	192,400	218,200	10,800	229,000	36,600	19%
Total personnel services	25,041,100	25,273,570	25,749,900	24,707,900	1,898,700	26,606,600	856,700	3.3%
Other operating expenses								
Electricity	3,016,800	2,685,451	3,214,500	2,763,500	429,000	3,192,500	(22,000)	-1%
Fuel for power production	96,400	53,642	88,700	72,500	11,000	83,500	(5,200)	-6%
Chemicals	1,891,700	1,729,154	2,112,000	1,520,200	637,500	2,157,700	45,700	2%
Maintenance and materials	3,575,900	4,053,661	3,716,900	3,451,600	524,300	3,975,900	259,000	7%
Engineering services	195,000	216,385	140,000	290,000	-	290,000	150,000	107%
Accounting and auditing services	75,000	62,720	82,000	89,500	-	89,500	7,500	9%
Legal services	30,000	25,244	30,000	30,000	-	30,000	-	0%
Outsourced operations	749,600	617,450	1,045,700	1,498,800	182,500	1,681,300	635,600	61%
Other consulting and support services	1,356,400	1,168,545	1,523,500	1,579,700	-	1,579,700	56,200	4%
Sludge removal	285,000	139,016	249,400	60,000	234,000	294,000	44,600	18%
Rental of building - real property	33,500	18,499	19,000	8,000	6,000	14,000	(5,000)	-26%
Rent expense - equipment	70,200	58,074	75,800	55,600	7,400	63,000	(12,800)	-17%
Transportation expense	531,000	462,604	525,000	495,600	-	495,600	(29,400)	-6%
Insurance - vehicles	110,000	85,657	110,000	110,000	-	110,000	-	0%
Insurance - general liabilities	125,300	104,562	125,000	137,000	-	137,000	12,000	10%
Insurance - workers' compensation	254,000	198,757	254,000	270,000	-	270,000	16,000	6%
Insurance - property and flood	1,120,000	969,171	993,300	993,300	-	993,300	-	0%
Advertising	38,000	52,012	75,000	69,000	-	69,000	(6,000)	-8%
Bad debt expense	81,000	41,000	81,000	81,000	-	81,000	-	0%
Office supplies	128,200	108,422	142,400	137,500	6,500	144,000	1,600	1%
Other utilities and technical services	499,800	482,894	676,300	819,900	-	819,900	143,600	21%
Postage	52,000	30,248	57,100	37,300	1,000	38,300	(18,800)	-33%
Travel	130,100	60,591	145,300	153,400	9,000	162,400	17,100	12%
Training	158,300	99,639	148,500	140,900	12,500	153,400	4,900	3%
Miscellaneous	182,600	170,223	161,200	160,000	3,000	163,000	1,800	1%
Bank charges	425,000	494,314	455,000	520,000	-	520,000	65,000	14%
Public information and outreach	107,800	47,483	145,800	129,000	-	129,000	(16,800)	-12%
Freight charges	15,000	8,882	12,300	10,000	-	10,000	(2,300)	-19%
Total other operating expenses	15,333,600	14,244,300	16,404,700	15,683,300	2,063,700	17,747,000	1,342,300	8.2%
Total operating budget	\$ 40,374,700	\$ 39,517,870	\$ 42,154,600	\$ 40,391,200	\$ 3,962,400	\$ 44,353,600	\$ 2,199,000	5.2%
Allocation of administrative expenses				\$ (3,297,500)	\$ 3,297,500	\$ -		
Total operating expenses after allocation	40,374,700	39,517,870	42,154,600	37,093,700	7,259,900	44,353,600	2,199,000	5.2%
Total operating budget	\$ 45,757,800	\$ 44,527,282	\$ 46,910,600	\$ 41,649,500	\$ 7,470,200	\$ 49,119,700	\$ 2,209,100	4.7%
Operating expenditures added in 2018 budget for new initiatives						(555,600)		
Operating expenditures deleted in 2018 for discontinued operations						-		
Net comparative 2018 budget after adjustments for new and discontinued operations						\$ 48,564,100	\$ 1,653,500	3.5%

FIVE YEAR FINANCIAL PLAN

FOR FISCAL YEAR 2018-2022

PROJECTED CHANGES IN NET POSITION

FOR FISCAL YEARS 2018 - 2022

	2018	2019	2020	2021	2022
Projected operating results					
Operating revenue	\$ 60,717,000	\$ 62,182,000	\$ 63,684,000	\$ 65,223,000	\$ 66,802,000
Operating expenses (before depreciation)	(44,353,600)	(44,797,000)	(45,245,000)	(45,697,000)	(46,154,000)
Net operating income (before depreciation)	16,363,400	17,385,000	18,439,000	19,526,000	20,648,000
Interest income	300,000	300,000	300,000	300,000	300,000
Other income	510,000	516,000	522,000	528,000	534,000
Interest expense	(4,519,000)	(4,429,000)	(4,331,000)	(4,231,000)	(4,170,000)
Projected net income before depreciation	12,654,400	13,772,000	14,930,000	16,123,000	17,312,000
System development fees (including assessments)	1,138,000	1,138,000	1,138,000	1,138,000	1,138,000
State appropriations (Key Haven and East Long Key)	-	-	-	-	-
Projected increase (decrease) in net position before depreciation	13,792,400	14,910,000	16,068,000	17,261,000	18,450,000
Projected beginning net position	145,600,000	143,992,400	143,502,400	144,170,400	146,031,400
Projected net position before depreciation	159,392,400	158,902,400	159,570,400	161,431,400	164,481,400
Estimated depreciation	(15,400,000)	(15,400,000)	(15,400,000)	(15,400,000)	(15,400,000)
Projected ending net position after depreciation	\$ 143,992,400	\$ 143,502,400	\$ 144,170,400	\$ 146,031,400	\$ 149,081,400

PROJECTED SOURCES AND USES OF FUNDS

FOR FISCAL YEARS 2018 - 2022

	2018	2019	2020	2021	2022
Total projected sources of funds					
Utility operating revenue	\$ 60,717,000	\$ 62,182,000	\$ 63,684,000	\$ 65,223,000	\$ 66,802,000
Interest income	300,000	300,000	300,000	300,000	300,000
System development fees and other income	1,648,000	1,654,000	1,660,000	1,666,000	1,672,000
Special assessments and appropriations	-	-	-	-	-
Proceeds from issuance of debt, net of issue costs	-	-	-	-	-
Total projected sources of funds	62,665,000	64,136,000	65,644,000	67,189,000	68,774,000
Total projected uses of funds					
Operating expenditures (excluding depreciation)	49,119,700	44,797,000	45,245,000	45,697,000	46,154,000
Capital improvement projects	16,250,000	9,420,000	7,600,000	9,050,000	9,250,000
Debt service	8,864,000	8,869,000	8,871,000	8,806,000	9,820,000
Total projected uses of funds	74,233,700	63,086,000	61,716,000	63,553,000	65,224,000
Additions to (uses of) cash	\$ (11,568,700)	\$ 1,050,000	\$ 3,928,000	\$ 3,636,000	\$ 3,550,000

FIVE YEAR FINANCIAL PLAN, CONTINUED

FOR FISCAL YEARS 2018-2022

PROJECTED REVENUE AND CONTRIBUTIONS

	FOR FISCAL YEARS 2018 - 2022				
	2018	2019	2020	2021	2022
Estimated gallons (000s) sold to customers at retail rates	4,899,000	4,948,000	4,997,000	5,047,000	5,097,000
Estimated gallons (000s) sold to US Navy	251,000	254,000	257,000	260,000	263,000
Total estimated sales gallons (000s)	5,150,000	5,202,000	5,254,000	5,307,000	5,360,000
Operating revenue					
Fees for service					
Retail water rate revenue	\$ 46,465,000	\$ 47,634,000	\$ 48,832,000	\$ 50,060,000	\$ 51,319,000
US Navy water rate revenue	1,031,000	1,057,000	1,084,000	1,111,000	1,139,000
US Navy distribution system charge	2,487,000	2,487,000	2,487,000	2,487,000	2,487,000
Retail reclaimed water rate revenue	57,000	58,000	59,000	60,000	62,000
Retail wastewater rate revenue	7,713,000	7,907,000	8,106,000	8,310,000	8,519,000
US Navy wastewater revenue	1,464,000	1,501,000	1,539,000	1,578,000	1,618,000
Total fees for service	59,217,000	60,644,000	62,107,000	63,606,000	65,144,000
Other operating revenue	1,500,000	1,538,000	1,577,000	1,617,000	1,658,000
Total operating revenue	60,717,000	62,182,000	63,684,000	65,223,000	66,802,000
Non-operating revenue					
Interest income	300,000	300,000	300,000	300,000	300,000
Grant proceeds	-	-	-	-	-
Charges to other utilities for billing services	390,000	396,000	402,000	408,000	414,000
Other income	120,000	120,000	120,000	120,000	120,000
Total non-operating revenue	810,000	816,000	822,000	828,000	834,000
Total budgeted revenue	61,527,000	62,998,000	64,506,000	66,051,000	67,636,000
System development fees (including assessments)	1,138,000	1,138,000	1,138,000	1,138,000	1,138,000
State appropriations	-	-	-	-	-
Total revenue and contributions	\$ 62,665,000	\$ 64,136,000	\$ 65,644,000	\$ 67,189,000	\$ 68,774,000

Budget assumptions					
Water volume growth sales increase		1.0%	1.0%	1.0%	1.0%
Rate index increase		1.5%	1.5%	1.5%	1.5%
Additional water rate increase (decrease)		0.0%	0.0%	0.0%	0.0%
Additional wastewater rate increase (decrease)		0.0%	0.0%	0.0%	0.0%
Average interest rate (applied to average cash balance)		0.5%	0.5%	0.5%	0.5%
System development fee growth factor		0.0%	0.0%	0.0%	0.0%

FIVE YEAR FINANCIAL PLAN, CONTINUED

FOR FISCAL YEARS 2018-2022

FIVE YEAR CAPITAL IMPROVEMENT AND CAPITAL FINANCING PLAN

Description	Actual project costs						Estimated five-year expenditures
	to date	2018	2019	2020	2021	2022	
Water Projects							
Ongoing and critical projects							
Distribution pipe replacement/ water main extension	\$ 2,737,154	\$ 4,000,000	\$ 1,500,000	\$ 3,000,000	\$ 3,000,000	\$ 2,500,000	\$ 14,000,000
Transmission main improvements-C-905 Key Largo	1,710,981	4,000,000	4,000,000				8,000,000
Transmission main bridge crossing over C-111 Canal	223,442			1,800,000			1,800,000
Transmission system replacement	8,400				2,000,000	2,000,000	4,000,000
Distribution 4mg storage tank improvements- Marathon	25,223				1,000,000	1,000,000	2,000,000
Transmission main replacement- Grassy Key, Islamorada		500,000	2,000,000				2,500,000
Transmission main underneath Snake Creek				200,000	900,000	900,000	2,000,000
Cathodic protection, metal piping, tanks	2,173	500,000	250,000	250,000	250,000		1,250,000
Valve replacement program- Key West		100,000	100,000	100,000	100,000	100,000	500,000
Control valves for distribution tanks			150,000				150,000
Gateway meter reading data collectors	76,509	350,000	350,000	350,000			1,050,000
System resiliency projects							
Stock Island seawater reverse osmosis plant	-	400,000					400,000
Navy projects							
Water mains, hydrants and meters - Sigsbee	22,514		550,000	550,000	550,000	550,000	2,200,000
Demo/Replace water storage tank- C69 Trumbo Point		550,000					550,000
Priority but non-critical projects							
Water storage tank- lower keys					400,000	1,600,000	2,000,000
Florida City servers room				250,000			250,000
Fire suppression and protection for critical facilities				100,000	100,000	100,000	300,000
Chemical feed system					250,000		250,000
Total water projects	4,806,396	10,400,000	8,900,000	6,600,000	8,550,000	8,750,000	43,200,000
Wastewater Projects							
Collection system improvements - Key Haven	4,269,027	4,000,000					4,000,000
Connection of Navy system to Big Coppitt	1,036,740	1,100,000					1,100,000
Big Coppitt plant expansion (for Navy)	6,118			500,000			500,000
Onsite wastewater program	398,670	500,000	270,000				770,000
Collection system R/R, system wide		250,000	250,000	500,000	500,000	500,000	2,000,000
Total wastewater projects	5,710,555	5,850,000	520,000	1,000,000	500,000	500,000	8,370,000
Total capital improvement projects	10,516,951	\$ 16,250,000	\$ 9,420,000	\$ 7,600,000	\$ 9,050,000	\$ 9,250,000	\$ 51,570,000
Funding sources							
Funds from retail rates and cash on hand	\$ 9,850,000	\$ 8,350,000	\$ 3,550,000	\$ 8,500,000	\$ 8,700,000	\$ 40,450,000	
Navy water rates	550,000	550,000	1,050,000	550,000	550,000	2,750,000	
Federal and state appropriations	500,000	270,000	-	-	-	770,000	
Bond proceeds	5,350,000	250,000	3,000,000	-	-	7,600,000	
Total	\$ 16,250,000	\$ 9,420,000	\$ 7,600,000	\$ 9,050,000	\$ 9,250,000	\$ 51,570,000	

FIVE YEAR FINANCIAL PLAN, CONTINUED

FOR FISCAL YEARS 2018-2022

PROJECTED NEW DEBT ISSUES AND DEBT SERVICE

	2018	2019	2020	2021	2022
Bond issuance assumptions:					
Projected principal amount of new bonds issued	\$ -	\$ -	\$ -	\$ -	\$ -
Available for construction fund	\$ -	\$ -	\$ -	\$ -	\$ -
Estimated issue costs					
Projected interest rate					
Amortization period (years)					
Projected Debt Service					
Principal					
Series 2008 water refunding and revenue bonds	-	-	-	-	2,745,000
Series 2012 wastewater revenue bonds	355,000	355,000	355,000	360,000	365,000
Series 2013A water refunding bonds	2,510,000	2,565,000	2,615,000	2,640,000	-
Series 2013B water revenue bonds	315,000	315,000	325,000	335,000	350,000
Series 2014A water revenue bonds	110,000	115,000	120,000	120,000	125,000
Series 2015A water refunding bonds	-	-	245,000	240,000	1,690,000
Series 2015B water refunding bonds	835,000	855,000	640,000	630,000	115,000
Series 2016 wastewater bonds	220,000	235,000	240,000	250,000	260,000
Total principal	4,345,000	4,440,000	4,540,000	4,575,000	5,650,000
Interest					
Series 2008 water refunding and revenue bonds ^[1]	1,997,000	1,997,000	1,992,000	1,997,000	2,036,000
Series 2012 wastewater revenue bonds	117,000	107,000	97,000	86,000	76,000
Series 2013A water refunding bonds	169,000	128,000	86,000	43,000	-
Series 2013B water revenue bonds	232,000	221,000	209,000	197,000	186,000
Series 2014A water revenue bonds	81,000	77,000	73,000	69,000	65,000
Series 2015A water refunding bonds	1,340,000	1,340,000	1,340,000	1,327,000	1,314,000
Series 2015B water refunding bonds	414,000	393,000	372,000	355,000	340,000
Series 2016 wastewater bonds	169,000	166,000	162,000	157,000	153,000
Total interest	4,519,000	4,429,000	4,331,000	4,231,000	4,170,000
Total projected debt service	\$ 8,864,000	\$ 8,869,000	\$ 8,871,000	\$ 8,806,000	\$ 9,820,000

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

FIVE YEAR FINANCIAL PLAN, CONTINUED

FOR FISCAL YEARS 2018-2022

PROJECTED DEBT SERVICE COVERAGE

	Water Operations				
	2018	2019	2020	2021	2022
Funds available for debt service					
Operating revenue	\$ 51,540,000	\$ 52,774,000	\$ 54,039,000	\$ 55,335,000	\$ 56,665,000
Interest income	300,000	300,000	300,000	300,000	300,000
Other income	510,000	516,000	522,000	528,000	534,000
Less operating expenses	(37,093,700)	(37,683,200)	(38,024,500)	(38,368,200)	(38,715,300)
Net funds available for debt coverage	\$ 15,256,300	\$ 15,906,800	\$ 16,836,500	\$ 17,794,800	\$ 18,783,700
Debt service requirements	\$ 8,003,000	\$ 8,006,000	\$ 8,017,000	\$ 7,953,000	\$ 8,966,000
Coverage factor (minimum of 1.10 required)	1.91	1.99	2.10	2.24	2.10
System development charges	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Coverage factor with system development charges (minimum of 1.20)	2.03	2.11	2.22	2.36	2.21

	Wastewater Operations				
	2018	2019	2020	2021	2022
Funds available for debt service					
Operating revenue	\$ 9,177,000	\$ 9,408,000	\$ 9,645,000	\$ 9,888,000	\$ 10,137,000
Interest income	-	-	-	-	-
Other income	-	-	-	-	-
Less operating expenses	(7,259,900)	(7,113,800)	(7,220,500)	(7,328,800)	(7,438,700)
Net funds available for debt coverage	\$ 1,917,100	\$ 2,294,200	\$ 2,424,500	\$ 2,559,200	\$ 2,698,300
Debt service requirements	\$ 861,000	\$ 863,000	\$ 854,000	\$ 853,000	\$ 854,000
System development charges	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000
Coverage factor with system development charges (minimum of 1.20)	2.39	2.82	3.00	3.16	3.32

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 2018-2022

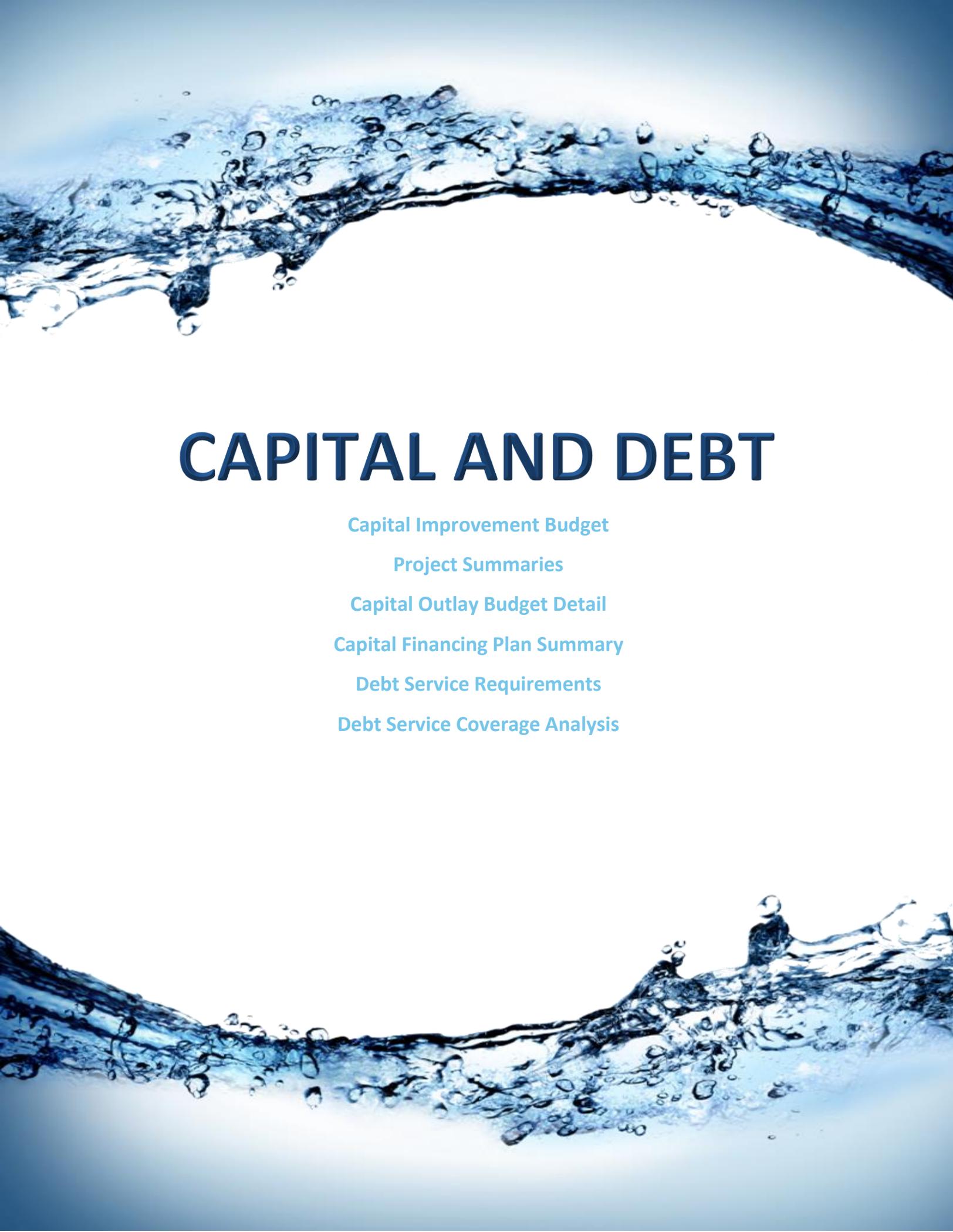
ESTIMATED RATE ADJUSTMENTS AND AVERAGE MONTHLY BILL

	Potable water	
	Estimated percentage increase	Average monthly bill (for 4,500 gallons)
Current Bill		\$ 40.81
Estimated October 1, 2017	2.00%	\$ 41.62
Estimated October 1, 2018	1.50%	\$ 42.25
Estimated October 1, 2019	1.50%	\$ 42.88
Estimated October 1, 2020	1.50%	\$ 43.52
Estimated October 1, 2021	1.50%	\$ 44.18

	Reclaimed water	
	Estimated percentage increase	Average monthly bill (for 1,100 gallons)
Current Bill		\$ 3.26
Estimated October 1, 2017	2.00%	\$ 3.33
Estimated October 1, 2018	1.50%	\$ 3.38
Estimated October 1, 2019	1.50%	\$ 3.43
Estimated October 1, 2020	1.50%	\$ 3.48
Estimated October 1, 2021	1.50%	\$ 3.53

	Wastewater	
	Estimated percentage increase	Average monthly bill (for 4,500 gallons)
Current Bill		\$ 65.36
Estimated October 1, 2017	2.00%	\$ 66.66
Estimated October 1, 2018	1.50%	\$ 67.66
Estimated October 1, 2019	1.50%	\$ 68.68
Estimated October 1, 2020	1.50%	\$ 69.71
Estimated October 1, 2021	1.50%	\$ 70.75

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A large, dynamic splash of clear blue water arches across the top and bottom of the page, framing the central text. The water is captured in mid-air, with numerous bubbles and droplets visible, creating a sense of movement and freshness. The background is a light, clean white, which makes the blue water stand out prominently.

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

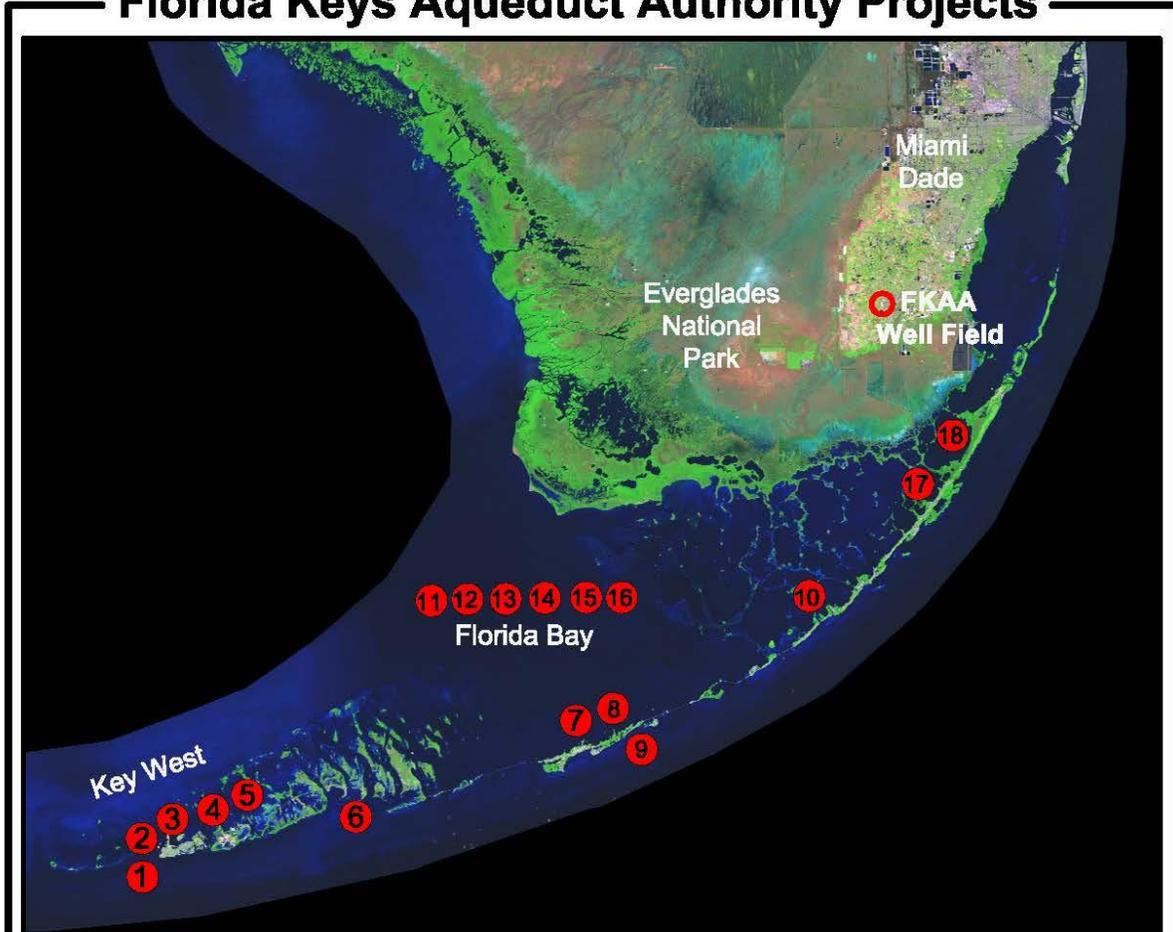
FOR FISCAL YEAR 2018-2022

Description	Actual project costs						Estimated five-year expenditures
	to date	2018	2019	2020	2021	2022	
Water Projects							
Ongoing and critical projects							
Distribution pipe replacement/ water main extension	\$ 2,737,154	\$ 4,000,000	\$ 1,500,000	\$ 3,000,000	\$ 3,000,000	\$ 2,500,000	\$ 14,000,000
Transmission main improvements-C-905 Key Largo	1,710,981	4,000,000	4,000,000				8,000,000
Transmission main bridge crossing over C-111 Canal	223,442			1,800,000			1,800,000
Transmission system replacement	8,400				2,000,000	2,000,000	4,000,000
Distribution 4mg storage tank improvements- Marathon	25,223				1,000,000	1,000,000	2,000,000
Transmission main replacement- Grassy Key, Islamorada		500,000	2,000,000				2,500,000
Transmission main underneath Snake Creek				200,000	900,000	900,000	2,000,000
Cathodic protection, metal piping, tanks	2,173	500,000	250,000	250,000	250,000		1,250,000
Valve replacement program- Key West		100,000	100,000	100,000	100,000	100,000	500,000
Control valves for distribution tanks			150,000				150,000
Gateway meter reading data collectors	76,509	350,000	350,000	350,000			1,050,000
System resiliency projects							
Stock Island seawater reverse osmosis plant	-	400,000					400,000
Navy projects							
Water mains, hydrants and meters - Sigsbee	22,514		550,000	550,000	550,000	550,000	2,200,000
Demo/Replace water storage tank- C69 Trumbo Point		550,000					550,000
Priority but non-critical projects							
Water storage tank- lower keys					400,000	1,600,000	2,000,000
Florida City servers room				250,000			250,000
Fire suppression and protection for critical facilities				100,000	100,000	100,000	300,000
Chemical feed system					250,000		250,000
Total water projects	4,806,396	10,400,000	8,900,000	6,600,000	8,550,000	8,750,000	43,200,000
Wastewater Projects							
Collection system improvements - Key Haven	4,269,027	4,000,000					4,000,000
Connection of Navy system to Big Coppitt	1,036,740	1,100,000					1,100,000
Big Coppitt plant expansion (for Navy)	6,118			500,000			500,000
Onsite wastewater program	398,670	500,000	270,000				770,000
Collection system R/R, system wide		250,000	250,000	500,000	500,000	500,000	2,000,000
Total wastewater projects	5,710,555	5,850,000	520,000	1,000,000	500,000	500,000	8,370,000
Total capital improvement projects	10,516,951	\$ 16,250,000	\$ 9,420,000	\$ 7,600,000	\$ 9,050,000	\$ 9,250,000	\$ 51,570,000
Funding sources							
Funds from retail rates and cash on hand	\$ 9,850,000	\$ 8,350,000	\$ 3,550,000	\$ 8,500,000	\$ 8,700,000	\$ 40,450,000	
Navy water rates	550,000	550,000	1,050,000	550,000	550,000	2,750,000	
Federal and state appropriations	500,000	270,000	-	-	-	770,000	
Bond proceeds	5,350,000	250,000	3,000,000	-	-	7,600,000	
Total		\$ 16,250,000	\$ 9,420,000	\$ 7,600,000	\$ 9,050,000	\$ 9,250,000	\$ 51,570,000

PROJECT SUMMARIES

FOR FISCAL YEAR 2018-2022

Florida Keys Aqueduct Authority Projects



Project Legend

1 Upgrade Seawater Treatment-Stock Island	10 Transmission Main Crossing Snake Creek
2 Key Haven Wastewater System Improvements	11 Meter Readings-Data Collectors
3 Onsite Wastewater Treatment Program-Key Haven & Big Coppitt	12 Tank Control Valves
4 Navy Wastewater Privatization-Big Coppitt Connection/Expansion	13 Cathodic Protection
5 Big Coppitt Wastewater Reclamation Facility Expansion	14 Distribution Replacement Various Subdivisions
6 Transmission Main Niles Channel	15 Valve Replacement Program
7 Marathon Service Building	16 US Navy System Upgrades
8 Marathon 2MG Storage Tank-Distribution Pump Station Improvements	17 Transmission Main Bridge Crossing-C-111 Canal(18-Mile Stretch)
9 Transmission Main Replacement-Grassy Key	18 Transmission Main Improvements-C905-Key Largo

DISTRIBUTION REPLACEMENT

Distribution System

Project Information

Location	Various
Project Type	Distribution System
Category	Renewal and Replacement
Project Number	Various
Design Engineer	In-house Design Team
Project Manager	Several assignments to staff engineers
Contractor	In-house crew and several contractors
Start Date	Ongoing
Completion Date	Ongoing
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

Installation and replacement of pipes and ancillary components of the water distribution system throughout the entire service area that have reached the end of their useful life and are now prone to unpredictable failure or provide water service to areas not currently served. The projects are identified, quantified, justified both economically and technically, and prioritized to address the following criteria: health and safety, water loss, emergency requirements, water quality and aesthetics, mandates in state and federal laws, master plan needs, clear economic benefit, and community benefit.

Status/Recent Developments:

Several distribution system upgrades are currently being designed and constructed for execution following careful evaluation of the cost benefit analysis and prioritization of projects.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 4,000,000	\$ 1,500,000	\$ 3,000,000	\$ 3,000,000	\$ 2,500,000	\$ 14,000,000
	-	-	-	-	-	-
Total Costs	\$ 4,000,000	\$ 1,500,000	\$ 3,000,000	\$ 3,000,000	\$ 2,500,000	\$ 14,000,000

Operating Impact:

	Annual Operating Costs (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TRANSMISSION MAIN IMPROVEMENTS-C-905 KEY LARGO

Transmission System

Project Information

Location	N. Key Largo
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1152-17
Design Engineer	In-house
Project Manager	Ray Shimokubo
Contractor	TBD
Start Date	2018
Completion Date	2019
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The transmission pipeline along C905 provides water to Ocean Reef and homes in the vicinity. Approximately 11 miles of 12" watermain has become compromised from groundwater and bedding issues. Several breaks have occurred. Also, the hydraulics of the existing 12" watermain are restrictive and need to be upsized for improved demand delivery.

The project includes the installation of a 16" watermain and is anticipated to be completed in two phases, each approximately totaling 6 miles of pipe.

Status/Recent Developments:

Phase one is under construction. Phase 2 is under design.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 4,000,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 8,000,000
Total Costs	\$ 4,000,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 8,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	(5,000)	(12,000)	(12,000)	(12,000)	-	
Other Operating Costs						
Total Operating Costs	\$ (5,000)	\$ (12,000)	\$ (12,000)	\$ (12,000)	\$ -	\$ (41,000)

TRANSMISSION LINE BRIDGE CROSSING AT C-111 CANAL-18 MILE STRETCH

Transmission System

Project Information

Location	18-mile stretch
Project Type	Transmission System
Category	Reliability
Project Number	1137-15
Design Engineer	Aecom
Project Manager	Jolynn Reynolds
Contractor	None selected
Start Date	2020
Completion Date	2020
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The 36" water transmission main is an extremely critical part of FKAA's infrastructure. It crosses under the C-111 canal (lower peninsula) as a submerged pipeline section; one of only two remaining under deep waterways on the entire transmission system. To increase reliability and reduce system vulnerability, a parallel 24" steel pipe is planned to be installed beneath the canal via Horizontal Directional Drilling method.

Status/Recent Developments:

This project is under preliminary design and permitting.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ 1,800,000	\$ -	\$ -	\$ 1,800,000
Total Costs	\$ -	\$ -	\$ 1,800,000	\$ -	\$ -	\$ 1,800,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	(2,000)	(2,000)	(2,000)	(2,000)	(8,000)
Other Operating Costs	-	(2,000)	(2,000)	(2,000)	(2,000)	(8,000)
Total Operating Costs	\$ -	\$ (2,000)	\$ (2,000)	\$ (2,000)	\$ (2,000)	\$ (8,000)

TRANSMISSION SYSTEM REPLACEMENT

Transmission System

Project Information

Location	Various Sections of Transmission
Project Type	Water Transmission System
Category	Renewal and Replacement
Project Number	To be determined
Design Engineer	To be determined
Project Manager	Ray Shimokubo
Contractor	To be determined
Start Date	2021
Completion Date	2022
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

As pipe condition assessments are performed, sections of transmission main that pose the highest risk of failure will be identified for future replacement.

Status/Recent Developments:

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000	\$ 4,000,000
Total Costs	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000	\$ 4,000,000

Operating Impact:

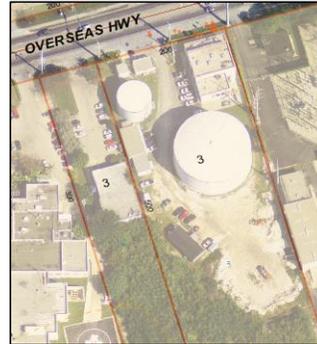
	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DISTRIBUTION 4 MG STORAGE TANK IMPROVEMENTS - MARATHON

Distribution/Transmission Tank

Project Information

Location	Marathon Booster Pump Station
Project Type	Water System
Category	Renewal and Replacement
Project Number	1134-15
Design Engineer	Mathews Consulting
Project Manager	Jolynn Reynolds
Contractor	None Selected
Start Date	2021
Completion Date	2022
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

There is an existing 3.0 Million Gallon (MG) concrete tank located at the Marathon Booster Pump Station that was built in 1974 and is used for both distribution supply and emergency events. During a tank inspection in 2010, it was noted to be in fair condition with numerous settling cracks and indications of leakage. Subsequently, repairs were made to the tank but there are indications that leakage is still occurring. This proposed project will replace the 3MG tank with a 4 MG tank address leakage in addition to providing additional storage for distribution supply and emergency events.

Status/Recent Developments:

Final Design has been completed.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ 2,000,000
Total Costs	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ 2,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TRANSMISSION MAIN REPLACEMENT - GRASSY KEY, ISLAMORADA

Renewal and Replacement

Project Information

Location	Grassy Key
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1154-17
Design Engineer	To be determined
Project Manager	Jolynn Reynolds
Contractor	To be determined
Start Date	2018
Completion Date	2019
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

There have been several leaks on the transmission system in Grassy Key and approximately one to two miles of existing pipeline has been identified for replacement.

Status/Recent Developments:

Pipeline condition assessment performed to determine extent of replacement in Grassy Key.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 500,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,500,000
Total Costs	\$ 500,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,500,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TRANSMISSION MAIN UNDERNEATH SNAKE CREEK

Transmission Main Reliability

Project Information

Location	Snake Creek
Project Type	Water Transmission System
Category	Resiliency
Project Number	1155-17
Design Engineer	To Be Determined
Project Manager	Ray Shimokubo
Contractor	To Be Determined
Start Date	2020
Completion Date	2022
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The 30" water transmission main is an extremely critical part of FCAA's infrastructure that crosses under the Snake Creek canal as a submerged pipeline section under the existing draw bridge. This project consists of installation of a parallel pipe via horizontal directional drilling below the draw bridge, and will be designed to increase reliability and reduce system vulnerability at this location.

Status/Recent Developments:

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ 200,000	\$ 900,000	\$ 900,000	\$ 2,000,000
Total Costs	\$ -	\$ -	\$ 200,000	\$ 900,000	\$ 900,000	\$ 2,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	(4,000)	(4,000)	(4,000)	(12,000)
Total Operating Costs	\$ -	\$ -	\$ (4,000)	\$ (4,000)	\$ (4,000)	\$ (12,000)

CATHODIC PROTECTION, METAL PIPING, TANKS

Transmission Main Protection

Project Information

Location	Various Sections of Transmission
Project Type	Transmission System
Category	Renewal and Replacement
Project Number	1151-17
Design Engineer	CH2M Hill
Project Manager	Jim Brewster
Contractor	To Be Determined
Start Date	2018
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 metal - either ductile iron or steel. The steel pipe has a series of Cathodic Protection (CP) devices to keep it from corrosive deterioration and extending the life of the pipe. This CP system is in need of assessment and repair.

Status/Recent Developments:

CH2M Hill currently performing assessment and design of CP systems on FCAA's water transmission mains.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 500,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ 1,250,000
Total Costs	\$ 500,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ 1,250,000

Operating Impact:

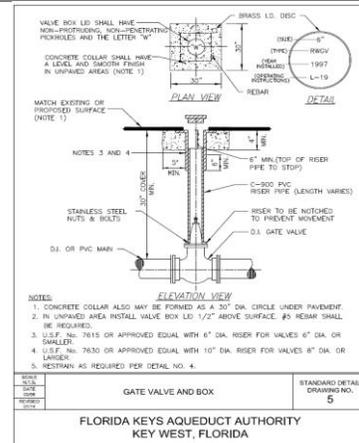
	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

VALVE REPLACEMENT PROGRAM - KEY WEST

RENEWAL AND REPLACEMENT

Project Information

Location	Entire System
Project Type	Water System
Category	Renewal and Replacement
Project Number	2336-17
Design Engineer	In-house
Project Manager	Tom Morgan
Contractor	In-house
Start Date	2018
Completion Date	2022
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

Through regular inspection, FCAA has identified existing valves that are in need of replacement. This project consists of critical transmission system valve replacement.

Status/Recent Developments:

Staff is evaluating and prioritizing sequence of valve replacement program.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
Total Costs	\$ 100,000	\$ 500,000				

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CONTROL VALVES FOR DISTRIBUTION TANKS

Storage Tanks

Project Information

Location	Entire System
Project Type	Transmission System
Category	Water System Improvements
Project Number	1146-16
Design Engineer	In-house
Project Manager	Ray Shimokubo
Contractor	In-house
Start Date	2019
Completion Date	2019
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project consists of the installation of flow control valves at distribution system tank facilities to allow targeted flow into each tank in an effort to minimize extreme flow and pressure fluctuations that can often result in higher energy usage and unforeseen damage to the water infrastructure.

Status/Recent Developments:

Small, pilot installations by FCAA staff have yielded positive results in regulating the flow regime at targeted locations.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000
Total Costs	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	(35,000)	(35,000)	(35,000)	(35,000)	(140,000)
Other Operating Costs	-	(35,000)	(35,000)	(35,000)	(35,000)	(140,000)
Total Operating Costs	\$ -	\$ (35,000)	\$ (35,000)	\$ (35,000)	\$ (35,000)	\$ (140,000)

GATEWAY METER READING DATA COLLECTORS

Water System Improvements

Project Information

Location	System-wide
Project Type	Water System
Category	Water System Improvments
Project Number	2337-17
Design Engineer	In-house Personnel
Project Manager	Justin Dacey
Contractor	In-house Personnel
Start Date	2018
Completion Date	2020
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 non-responsive meters, high consumption, etc., and allow customers to "View My Meter" to identify leaks on their side to enhance water conservation efforts.

Status/Recent Developments:

Plan in place for installation of collectors.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 350,000	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ 1,050,000
Total Costs	\$ 350,000	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ 1,050,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

EXISTING STOCK ISLAND RO PLANT REHABILITATION

Water Supply and Treatment

Project Information

Location	Stock Island
Project Type	Water Supply and Treatment
Category	Reliability
Project Number	1150-17
Design Engineer	To Be Determined
Project Manager	Jolynn Reynolds
Contractor	To Be Determined
Start Date	2018
Completion Date	2018
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The existing 2 Million Gallon per Day (MGD) Stock Island Reverse Osmosis (SIRO) is maintenance intensive, lacks reliability, and currently fails to meet production goals. To address the most critical issues, this project focuses rehabilitating the energy recovery turbines (ERT) and drives on the pumps that appear to be the primary system failures.

Status/Recent Developments:

FKAA staff are coordinating with the ERT manufacturer engineers to devise a modification on the drive shafts in an effort to alleviate the consistent failure of these units. The proposed modifications will be tested on one unit in early September 2017, and if they work, the funding indicated will facilitate modifications of the remaining ERT units.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ 400,000
Total Costs	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ 400,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

US NAVY SYSTEM UPGRADES

Distribution System

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 No	



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 2022. This program consists of the following projects:

- Water main, hydrant and meter replacement at Sigsbee Park
- Demolition and replacement of the water storage tank on Trumbo Point

Status/Recent Developments:

Ongoing through 2022

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 2,750,000
Total Costs	\$ 550,000	\$ 2,750,000				

Operating Impact:

	Annual Operating Costs (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

WATER STORAGE TANK- LOWER KEYS

Water Storage

Project Information

Location	Lower Keys
Project Type	Tank and Pump Station
Category	Distribution Improvements
Project Number	Not assigned
Design Engineer	To Be Determined
Project Manager	Jolynn Reynolds
Contractor	To Be Determined
Start Date	2012
Completion Date	2022
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project includes additional storage and pump station in the lower keys. This will reduce dependency and flow fluctuations on the transmission and improve fire protection in the area.

Status/Recent Developments:

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ 400,000	\$ 1,600,000	\$ 2,000,000
Total Costs	\$ -	\$ -	\$ -	\$ 400,000	\$ 1,600,000	\$ 2,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

FLORIDA CITY SERVERS ROOM

Facilities and Structures

Project Information

Location	Florida City
Project Type	Facilities and Structures
Category	Facility Improvements
Project Number	Not Assigned
Design Engineer	Not Assigned
Project Manager	Paul Cales
Contractor	Not Assigned
Start Date	2020
Completion Date	2020
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project includes repurposing an existing room to house servers and data storage in the K2 facility in Florida City. The existing facility in Key West will be repurposed as a secondary site to allow for failover. Along with increased sustainability in the event of a disaster, this will allow us to utilize additional network capacity and availability. The capacity will allow us more options for cloud-based applications.

Status/Recent Developments:

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ 250,000	\$ -	\$ -	\$ 250,000
Total Costs	\$ -	\$ -	\$ 250,000	\$ -	\$ -	\$ 250,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CHEMICAL FEED SYSTEMS

Water Treatment

Project Information

Location	Florida City
Project Type	Water Treatment
Category	Renewal and Replacement
Project Number	Not assigned
Design Engineer	Not assigned
Project Manager	Ray Shimokubo
Contractor	Not assigned
Start Date	2021
Completion Date	2021
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project includes improvements to the chemical dosage equipment that will allow the system to accurately and automatically pace the chemical dosage without major modifications.

Status/Recent Developments:

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000
Total Costs	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

COLLECTION SYSTEM IMPROVEMENTS - KEY HAVEN

COLLECTION AND TREATMENT

Project Information

Location	Key Haven Collection/Transmission
Project Type	Wastewater System
Category	Renewal and Replacement/Extension
Project Number	4058-15/4070-17
Design Engineer	Various Consultants
Project Manager	Ray Shimokubo
Contractor	Various Contractors
Start Date	2016
Completion Date	2018
Bond Funded	Grant/Assessment
Facilities Master Plan Project	Yes



Description/Justification:

This project includes the replacement of the wastewater collection system on Key Haven and the conveyance of the wastewater from Key Haven to the Boca Chica equalization basin that is being constructed under a different project. This will allow the decommissioning of the Key Haven Wastewater Treatment Plant.

Status/Recent Developments:

Project 4058-15 is under construction and Project 4070-17 is under design.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$4,000,000	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000
Total Costs	\$4,000,000	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CONNECTION OF NAVY SYSTEM TO BIG COPPITT

Navy Improvements

Project Information

Location	Boca Chica WWTP to Big Coppitt WWTP
Project Type	Wastewater System
Category	Wastewater System Improvements
Project Number	4062-16
Design Engineer	Chen-Moore & Associates
Project Manager	Ray Shimokubo
Contractor	Charley Toppino & Sons
Start Date	2016
Completion Date	2018
Bond Funded	No
Facilities Master Plan Project	Revenue from Navy



Description/Justification:

The Authority entered into a contract in 2015 to own and operate the Navy's Wastewater Treatment and Collection Systems in the Keys. In the initial years, the plan is to decommission the Boca Chica WWTP and transfer the flow to the existing Big Coppitt WW Reclamation Facility. Project will be funded through Navy Revenue.

Status/Recent Developments:

Information not available at time of publication

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 1,100,000	\$ -	\$ -	\$ -	\$ -	\$ 1,100,000
Total Costs	\$ 1,100,000	\$ -	\$ -	\$ -	\$ -	\$ 1,100,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

BIG COPPITT PLANT EXPANSION (FOR NAVY)

Treatment and Reclaimed Water

Project Information

Location	Big Coppitt WWTP
Project Type	Wastewater System
Category	WWTP Expansion
Project Number	4069-17
Design Engineer	Brown & Caldwell
Project Manager	Ray Shimokubo
Contractor	To be determined
Start Date	2020
Completion Date	2020
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The Big Coppitt Wastewater Reclamation Facility will be expanded to accommodate the future wastewater flows from NAS - Boca Chica .

Status/Recent Developments:

Preliminary design is complete. Final design will be completed in 2020 for construction in future years.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000
Total Costs	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

ONSITE WASTEWATER 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	Joshua Peele
Contractor	Various Contractors
Start Date	2017
Completion Date	2019
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

The Authority 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 Authority will design, permit, construct, and operate the onsite systems as part of the wastewater program.

Status/Recent Developments:

The first group of ten (10) onsite wastewater system are under construction.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 500,000	\$ 270,000	\$ -	\$ -	\$ -	\$ 770,000
Total Costs	\$ 500,000	\$ 270,000	\$ -	\$ -	\$ -	\$ 770,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

COLLECTION SYSTEM R/R, SYSTEM WIDE

Wastewater Collection

Project Information

Location	Systemwide
Project Type	Wastewater
Category	Renewal and Replacement
Project Number	Not Assigned
Design Engineer	To Be Determined
Project Manager	Ray Shimokubo
Contractor	To Be Determined
Start Date	2018
Completion Date	Ongoing
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

This project will address renewal and replacement needs of the wastewater system. Due to the corrosiveness of wastewater, materials tend to degrade faster and therefore need replacement.

Status/Recent Developments:

Projects will be prioritized based on the development of the Wastewater Master Plan.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2018	2019	2020	2021	2022	
Capital Engineering & Construction Costs	\$ 250,000	\$ 250,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,000,000
	-	-	-	-	-	
Total Costs	\$ 250,000	\$ 250,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2018	2019	2020	2021	2022	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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CAPITAL OUTLAY BUDGET DETAIL

FOR FISCAL YEAR 2018

			Amount	Water cost centers	Wastewater cost centers	Total
Executive Division						
<u>Executive</u>						
1011	Executive Office	None	\$ -	\$ -		
1012	Public Information	None	-	-		\$ -
Administration Division						
<u>Customer Service</u>						
3030	Customer Service Administration	None	-	-		
3031	Central Payment Processing	None	-	-		
3032	Customer Service-Key West	None	-	-		
3034	Customer Service-Marathon	None	-	-		
3035	Customer Service-Tavernier	None	-	-		
3037	Field Services-Key West	None	-	-		
3038	Field Services-Marathon	None	-	-		
3039	Field Services-Tavernier	None	-	-		
<u>Finance</u>						
6010	Finance	None	-	-		
6020	Billing	None	-	-		
6030	Purchasing and Inventory	None	-	-		
6040	Records	None	-	-		
<u>Human Resources</u>						
7010	Human Resources	None	-	-		
<u>Information Technology</u>						
8010	Information Technology	Virtual environment upgrade	100,000			
		Backup solutions	95,000			
		Microsoft Office upgrades	86,000			
		Camera system upgrade	60,000			
		Network switches (10)	50,000			
		Network management software	50,000			
		Servers (3)	45,000			
		Storage, disk enclosures (3)	45,000			
		GIS aerials (pictometry)	10,000	541,000		
						541,000
Utility Operations Division						
<u>Engineering</u>						
2021	General Engineering	None	-	-		
2022	Contract Management	Schondstedt locator (Cudjoe)	2,000			
		Hydrant flow kit	1,800			
		Aries seeker sewer camera (replacement)	12,000	15,800		
2023	Water Quality	Backflow repair building	15,000			
		Vacuum pit cleaner (new)	18,000	33,000		
2024	Design	None	-	-		
2025	Construction Crew	Caterpillar 926M wheel loader (replacement)	167,000			
		Assorted construction MOT signs/barricades/cones	12,000			
		Repair/replace Rockland Key construction yard roof	80,000	259,000		
2027	Water Data Management and Loss Division	New meter installations	180,000			
		New leak detection equipment	4,000			
		Small meter	28,000			
		Large meter	50,000			
		Backflow meter change out program	76,000	338,000		
						645,800

CAPITAL OUTLAY BUDGET DETAIL, CONTINUED

FOR FISCAL YEAR 2018

<u>Operations</u>				
4001	Operations Office Key West	Hurricane shutters	29,000	29,000
4101	Operations Office Stock Island/lower keys	Self contained breathing apparatus	8,400	8,400
4102	Distribution/Maintenance-Area I	Sign board (replacement)	15,800	
		Dump trailer (new)	14,000	29,800
4103	Distribution/Maintenance-Area II	Tap 86 4" pipe and valve upgrade	14,000	
		Tap 94 4" pipe and valve upgrade	14,000	
		Tap 105 4" pipe and valve upgrade	14,000	
		Tap 126 4" pipe and valve upgrade	14,000	
		Tap 163 4" pipe and valve upgrade	14,000	
		Tap 184 4" pipe and valve upgrade	14,000	
		Tap 185 4" pipe and valve upgrade	14,000	
		Tap 230 4" pipe and valve upgrade	14,000	
		Tap 231 4" pipe and valve upgrade	14,000	
		Tap 57 3" pipe and valve upgrade	11,000	
		Tap 203 3" pipe and valve upgrade	11,000	
		Tap 216 3" pipe and valve upgrade	11,000	
		Backhoe trailer (replacement 872)	21,000	
		Vac trailer (new)	90,000	
		Trencher trailer (new)	8,500	
		Dump Trailer (new)	14,000	
		Hydraulic chainsaw (new)	4,500	
		Trencher (new)	92,000	
		Service truck air compressor (new) (3)	9,000	398,000
4104	Distribution Pump Station-Key West	A/C unit (replacement)	10,000	10,000
4105	Distribution Pump Station-Stock Island	Roof (electrical shop)	50,000	
		Control desk (new)	8,000	58,000
4108	Fleet Maintenance-lower keys	Garage roof	75,000	
		Vehicles	460,000	535,000
4110	Stock Island Reverse Osmosis Plant	None	-	-
4112	Bay Point Wastewater Treatment Plant	LDO probe (new) (2)	3,700	
		Sumbersible mizer (replacement) (1)	7,200	10,900
4113	Bay Point Collection	None	-	-
4114	Big Coppitt Wastewater Treatment	LDO probe (new) (2)	3,700	
		Roots blower enclosures (new) (2)	15,800	
		Electrical valveactuator (replacement) (1)	5,000	
		Process blower enclosures (replacement) (2)	24,000	
		WAS pump (replacement) (1)	4,800	
		Hydroxide pump (replacement) (2)	18,000	71,300
4115	Big Coppitt Collection	None	-	-
4116	Key Haven Wastewater Treatment	None	-	-
4117	Key Haven Collection	None	-	-
4118	Cudjoe Regional Wastewater Treatment	Gas detector	4,000	4,000
4119	Cudjoe Regional Collection	Power snakes (new) (2)	4,800	4,800
4120	Navy Wastewater System	Pump (replacement) (3)	14,300	
		Pump (new) (spare)	17,300	31,600
4201	Operations Marathon/Middle keys	None	-	-
4202	Distribution/Maintenance-Area III	Air compressor (replacement)	2,800	
		Tap 63 2" valve upgrade	6,000	
		Tap 218 4" valve upgrade	10,600	
		Tap 100 2" pipe and valve upgrade	11,200	
		Tap 170 2" pipe and valve upgrade	11,200	
		Piping upgrade to Crawl Key and 69th street (2)	36,600	
		Tank access ladders (replacements) (4)	30,000	108,400
4203	Transmission Maintenance-Area III	Arrow traffic management board (replacement)	5,800	
		Utility trailer (replacement)	3,300	
		Valves (replacement) (2)	66,000	
		Tap 68 2" pipe upgrade	3,500	
		Tap 180 2" pipe upgrade	3,500	
		Pedestrian guards (replacement)	10,000	
		Valve vacuum breaker (4)	15,200	107,300
4204	Transmission Pump Station-Marathon	None	-	-

CAPITAL OUTLAY BUDGET DETAIL, CONTINUED

FOR FISCAL YEAR 2018

4205	Transmission Pump Station-Ramrod	Fuel tank and cat walk (replacement)	77,000		
		A/C condensor and handler (Ramrod MCC room)	13,500		
		A/C condensor and handler (Ramrod pump office)	3,800	94,300	
4208	Fleet Maintenance-middle keys	Vehicles	141,000	141,000	
4210	Reverse Osmosis Plant-Marathon	Overhead crane (replacement)	50,000	50,000	
4213	Wastewater Treatment Plant-Duck Key	None	-		-
4214	Wastewater Operations and Maintenance	Liquid tight drying box	11,500		
		Dump trailer (new)	7,700		
		Non-potable tank trailer (new)	9,000		28,200
4216	Duck Key Collection	Manhole repairs (4)	31,000		31,000
4301	Operations Key Largo and upper keys	Gutters and installation, Tavernier Customer Service (new)	2,200		
		Tile, Tavernier Field Service Office (replacement)	4,200	6,400	
4302	Distribution Maintenance Area IV	Tank #1 vent, Islamorada (replacement)	6,000		
		Tank #2 vent, Islamorada (replacement)	8,600		
		Pipe locator	1,800		
		Tap 60 4" pipe and valve upgrade	14,000		
		Tap 61 4" pipe and valve upgrade	14,000		
		Tap 178 4" pipe and valve upgrade	14,000		
		Tap 209 4" pipe and valve upgrade	14,000		
		Tap 210 4" pipe and valve upgrade	14,000		
		Tap 48 3" pipe and valve upgrade	11,000		
		Tap 55 3" pipe and valve upgrade	11,000		
		Tap 199 3" pipe and valve upgrade	11,000		
		Tap 213 3" pipe and valve upgrade	11,000		
		Tap 31 2" pipe and valve upgrade	8,500		
		Tap 57 2" pipe and valve upgrade	8,500		
		Tap 111 2" pipe and valve upgrade	8,500	155,900	
4303	Distribution Maintenance Area V	Tank ladder, Ocean Reef (replacement)	21,300		
		Tanks vents, Ocean Reef (replacement) (3)	35,800		
		Tank vents, Rock Harbor (replacement) (1)	6,000		
		Tank vents, Tavernier (replacement) (1)	6,000		
		Pipe locator (new)	1,800		
		Tap 172 4" pipe and valve upgrade	14,000		
		Tap 173 4" pipe and valve upgrade	14,000		
		Tap 179 4" pipe and valve upgrade	14,000		
		Tap 206 4" pipe and valve upgrade	14,000		
		Tap 212 4" pipe and valve upgrade	14,000		
		Tap 225 4" pipe and valve upgrade	14,000		
		Tap 227 4" pipe and valve upgrade	14,000		
		Tap 228 4" pipe and valve upgrade	14,000		
		Tap 229 4" pipe and valve upgrade	14,000		
		Tap 236 4" pipe and valve upgrade	14,000		
		Tap 200 2" pipe and valve upgrade	8,500	219,400	
4304	Transmission Maintenance Areas IV and V	Arrow traffic management board (replacement)	4,400		
		Message board (new)	13,600		
		Plasma cutter (replacement)	3,200		
		Valve operator (replacement)	9,100	30,300	
4308	Fleet Maintenance-upper keys	Vehicle air conditioner reclaimer (replacement)	4,500		
		Vinyl curtain (new)	2,000		
		A/C installation (new)	13,200		
		Vehicles	226,000	245,700	
4312	Wastewater Treatment Plant-Layton	LDO probes (new) (2)	3,700		
		Influent EQ pump (replacement)	4,000		
		Jet motive (replacement)	9,500		
		WAS pump (replacement) (2)	4,800		22,000
4313	Layton Collection	Lift station pump (spare)	4,700		
		State park grinder pump (spare)	1,800		6,500
5010	Water Treatment Plant-Florida City	Decanter air dryer (replacement)	18,900		
		Chill water coil unit (replacement)	6,600	25,500	

CAPITAL OUTLAY BUDGET DETAIL, CONTINUED

FOR FISCAL YEAR 2018

5020	Transmission Pump Station-Florida City	Trash pumps (new) (2)	6,800			
		Fire door	11,000	17,800		
5030	Transmission Pump Station-Long Key	None	-	-		
5040	Transmission Pump Station-Key Largo	Automatic gate, Long Key pump station (new)	5,600	5,600		
5050	Florida City RO Plant	None		-		
5060	Electrical and Instrumentation Controls	Infrared camera	4,000			
		Flow meter	9,300			
		Pressure calibrator	12,000			
		Cudjoe wastewater well meter (replacement) (4)	21,600			
		Pipe bender	12,500	59,400		
						2,545,500
Total Capital Outlay						\$ 3,732,300

CAPITAL FINANCING PLAN SUMMARY

FOR FISCAL YEAR 2018

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 2018 budget year. Water capital projects will be funded using available cash reserves, revenue from a dedicated source such as assessments, state appropriations or, in the case of U.S. Navy projects, specific charges to that customer.

Wastewater projects will be funded by a combination of existing cash reserves, state appropriations and any remaining proceeds from the Series 2016 bond issue. The costs of completing the construction of the Cudjoe Regional wastewater system will be borne entirely by Monroe County.

Total projected outstanding debt at the end of budget year 2017 is estimated to be approximately \$137 million and debt service is approximately \$8.9 million.

EXISTING OUTSTANDING BOND ISSUES

Water Revenue and Revenue Refunding Bonds

In October 2007, the Authority issued \$53,975,000 in water revenue bonds with an average interest rate of 5.04%. Interest is payable on March 1 and September 1 of each year and principal is payable annually on September 1. The interest rates on the outstanding bonds range from 4.0% to 5.25%. The proceeds from these bonds were used to fund the Authority's continuing capital improvement plan. In April, these bonds were advanced refunded by Series 2015A and 2015B bonds, with the proceeds escrowed to fund debt service on the Series 2007 bonds beginning in 2018.

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. Interest is payable on March 1 and September 1 of each year and principal is payable annually on September 1. 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. Interest is

CAPITAL FINANCING PLAN SUMMARY, CONTINUED

FOR FISCAL YEAR 2018

payable on March 1 and September 1 of each year and principal is payable annually on September 1. 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 2018. 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%.

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 YEAR 2018

SUMMARY OF OUTSTANDING PRINCIPAL OF LONG TERM DEBT

	Projected outstanding principal, 10/1/17	2018 proceeds from issuance of debt	2018 budgeted principal payments	Projected outstanding principal, 9/30/18
Series 2007 water revenue bonds	\$ 995,000	\$ -	\$ -	\$ 995,000
Series 2008 water refunding and revenue bonds ^[1]	52,625,000	-	-	52,625,000
Series 2012 wastewater revenue bonds	4,610,000	-	355,000	4,255,000
Series 2013A water refunding bonds	12,745,000	-	2,510,000	10,235,000
Series 2013B water revenue bonds	6,890,000	-	315,000	6,575,000
Series 2014A water revenue bonds	2,405,000	-	110,000	2,295,000
Series 2015A water refunding bonds	34,560,000	-	-	34,560,000
Series 2015B water refunding bonds	16,435,000	-	835,000	15,600,000
Series 2016 wastewater revenue bonds	10,000,000	-	220,000	9,780,000
Total bonds	\$ 141,265,000	\$ -	\$ 4,345,000	\$ 136,920,000

SUMMARY OF DEBT SERVICE

	Fixed / Variable	Budgeted 2017 debt service			Budgeted 2018 debt service		
		Principal	Interest	Total	Principal	Interest	Total
Series 2007 water revenue bonds	Fixed	\$ 1,065,000	\$ 53,000	\$ 1,118,000	\$ -	\$ -	\$ -
Series 2008 water refunding and revenue bonds ^[1]	Variable	-	1,997,000	1,997,000	-	1,997,000	1,997,000
Series 2012 wastewater revenue bonds	Fixed	350,000	127,000	477,000	355,000	117,000	472,000
Series 2013A water refunding bonds	Fixed	2,465,000	210,000	2,675,000	2,510,000	169,000	2,679,000
Series 2013B water revenue bonds	Fixed	305,000	243,000	548,000	315,000	232,000	547,000
Series 2014A water revenue bonds	Fixed	105,000	84,000	189,000	110,000	81,000	191,000
Series 2015A water refunding bonds	Fixed	-	1,340,000	1,340,000	-	1,340,000	1,340,000
Series 2015B water revenue bonds	Fixed	-	414,000	414,000	835,000	414,000	1,249,000
Series 2016 wastewater revenue bonds	Fixed	150,000	140,000	290,000	220,000	169,000	389,000
Total bonds		\$ 4,440,000	\$ 4,608,000	\$ 9,048,000	\$ 4,345,000	\$ 4,519,000	\$ 8,864,000

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

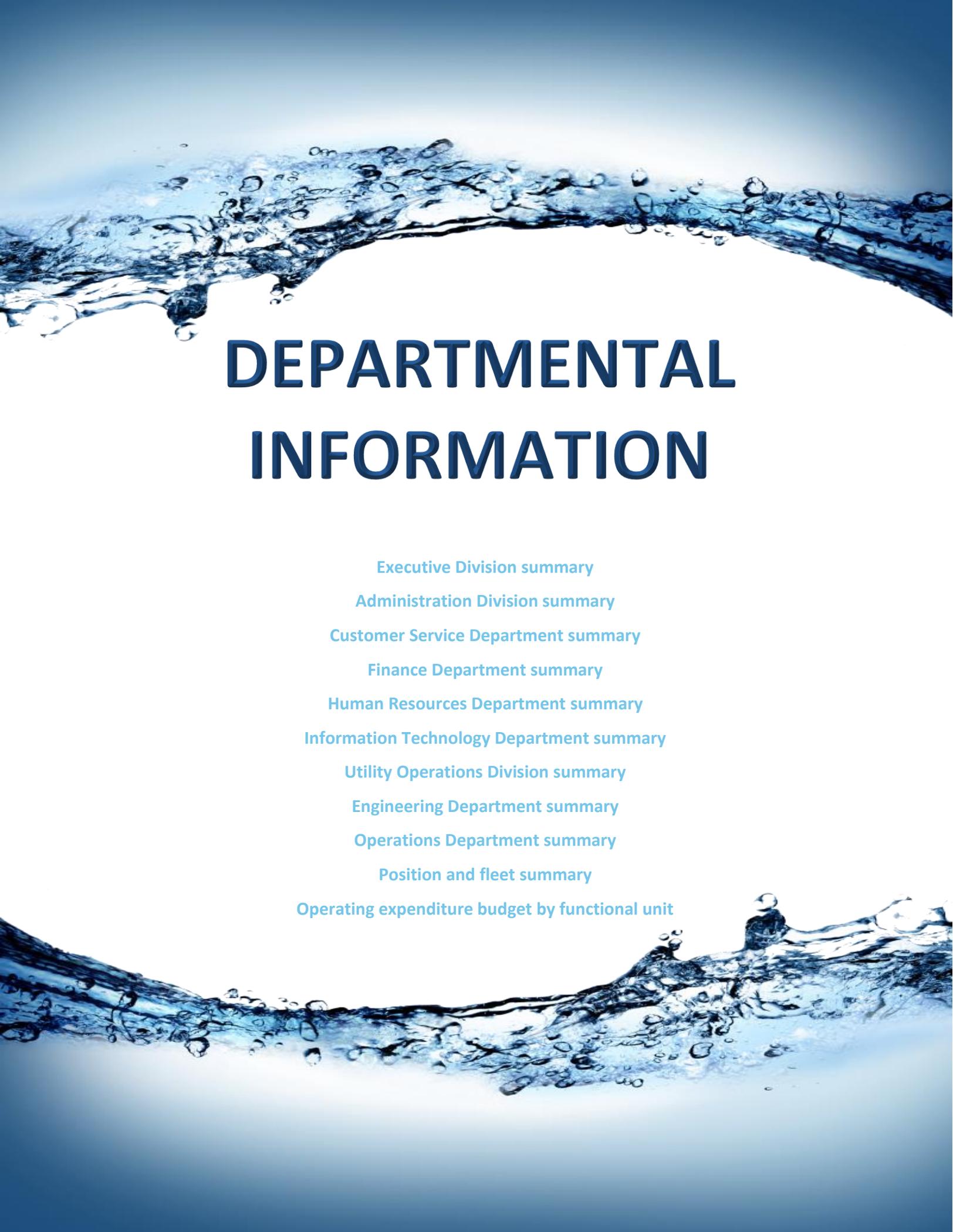
^[2] Assumes delivery date of October 1, 2017

DEBT SERVICE COVERAGE ANALYSIS

FOR FISCAL YEAR 2018

PROJECTED DEBT SERVICE COVERAGE

	Budgeted 2017		Budgeted 2018	
	Water	Wastewater	Water	Wastewater
	Revenue available for debt service			
Total operating revenue	\$ 50,146,000	\$ 8,951,000	\$ 51,540,000	\$ 9,177,000
Interest income-revenue funds	300,000	-	300,000	-
Other revenue available for debt service	510,000	-	510,000	-
Less operating expenses before depreciation	(34,618,400)	(7,536,200)	(37,093,700)	(7,259,900)
Net funds available for debt coverage	16,337,600	1,414,800	15,256,300	1,917,100
Debt service requirements	\$ 8,281,000	767,000	\$ 8,003,000	861,000
Coverage factor (minimum of 1.10 for water only)	1.97		1.91	
System development fees	\$ 900,000	\$ 138,000	\$ 1,000,000	\$ 138,000
Coverage factor with system development fees (minimum of 1.20)	2.08	2.02	2.03	2.39

A large, dynamic splash of clear blue water arches across the top and bottom of the page, framing the central text. The water is captured in mid-air, with numerous bubbles and droplets visible, creating a sense of movement and freshness. The background is a light, clean white, which makes the blue water stand out prominently.

DEPARTMENTAL INFORMATION

- Executive Division summary
- Administration Division summary
- Customer Service Department summary
- Finance Department summary
- Human Resources Department summary
- Information Technology Department summary
- Utility Operations Division summary
- Engineering Department summary
- Operations Department summary
- Position and fleet summary
- Operating expenditure budget by functional unit

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EXECUTIVE DIVISION SUMMARY

FOR FISCAL YEAR 2018



RESPONSIBILITIES AND BUDGET ISSUES

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

DEPARTMENTS

- Executive
- Public Information

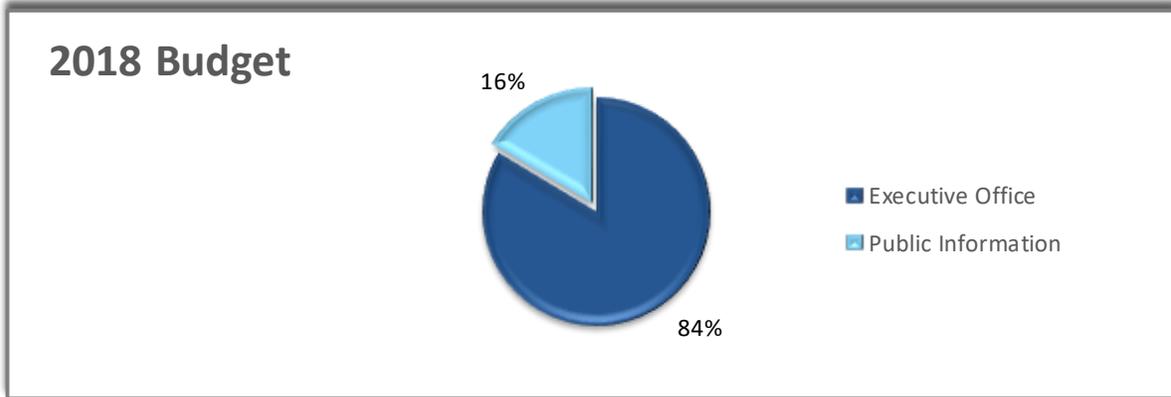
KEY DEPARTMENT INDICATORS

	Actual 2016	Budgeted 2017	Budgeted 2018
Key department indicators			
Number of full time department employees budgeted	8	8	8
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	-	1	1
Number of regular and special board meeting	14	14	14
Number of board workshop meetings	3	3	3
Number of board committee meetings	4	4	4
Number of public hearings	6	6	6

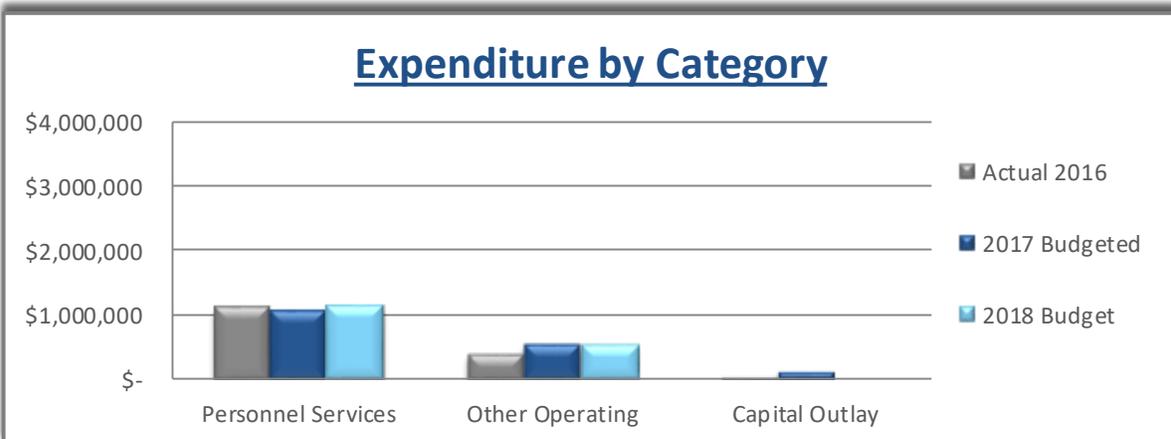
EXECUTIVE DIVISION SUMMARY, CONTINUED

FOR FISCAL YEAR 2018

Executive



Division	2018 Budget
Executive Office	\$ 1,365,200
Public Information	267,800
Total	\$ 1,633,000



Expenditure	Actual 2016	2017 Budgeted	2018 Budget
Personnel Services	\$ 1,084,681	\$ 1,049,600	\$ 1,119,200
Other Operating	382,790	523,600	513,800
Capital Outlay	626	120,000	-
Total	\$ 1,468,097	\$ 1,693,200	\$ 1,633,000

ADMINISTRATION DIVISION SUMMARY

FOR FISCAL YEAR 2018



RESPONSIBILITIES AND BUDGET ISSUES

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

DEPARTMENTS

- Finance
- Human Resources
- Information Technology
- Customer Service

CUSTOMER SERVICE DEPARTMENT SUMMARY

FOR FISCAL YEAR 2018

RESPONSIBILITIES AND BUDGET ISSUES

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

DEPARTMENTAL TEAMS

- Customer Service Key West and the Lower Keys
- Customer Service Marathon and the Middle Keys
- Customer Service Tavernier and the Upper Keys
- Field Services Key West and the Lower Keys
- Field Services Marathon and the Middle Keys
- Field Services Tavernier and the Upper Keys

KEY DEPARTMENT INDICATORS

	Actual 2016	Budgeted 2017	Budget 2018
Key department indicators			
Number of full time department employees budgeted	40	39	35
New positions not in prior year's budget	(3)	-	-
Positions budgeted last year that are eliminated	3	1	(4)
Positions transferred in (out)	2	-	(1)
Number of calls received from call center	115,000	107,000	85,000
Number of meters in service	49,000	49,000	52,000
Number of automated read meters	49,900	49,300	52,000
Number of data collection units	23	24	31
Number of delinquent service orders	-	3,200	3,900
Number of high consumption investigations	7,500	6,000	7,000
New meter installations (not including replacements)	300	400	500
Total field service orders	53,700	40,000	38,000
Number of zero read investigations	3,900	4,000	3,000
Number of MIU's changes	-	2,800	4,200

CUSTOMER SERVICE DEPARTMENT SUMMARY, CONTINUED

FOR FISCAL YEAR 2018

DEPARTMENTAL GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

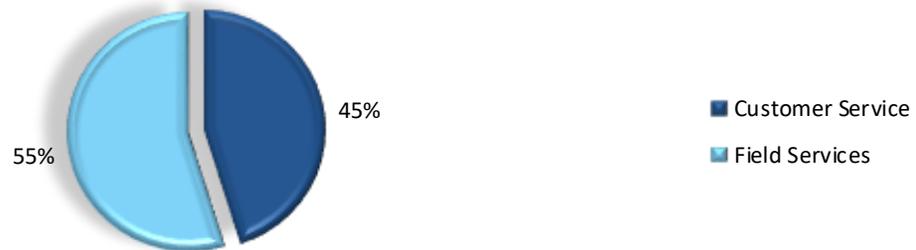
	<u>Strategic goal supported</u>
<ul style="list-style-type: none"> • Provide skilled customer service assistance by providing training and certifications. i.e. Notary services, computer training, GPS training, etc. 	Proactive public outreach and superior customer service.
<ul style="list-style-type: none"> • Develop and expand services for the investigation of accounts with high consumption. 	Provide efficient response to customers who request their consumption be analyzed.
<ul style="list-style-type: none"> • Optimize efficiency through the utilization of the Mobile Workforce Tool for distributing Service Orders. 	Provide efficient response to customers who request their consumption be analyzed.
<ul style="list-style-type: none"> • Expand customer services by utilizing Neptune data collectors to provide real-time data to customers. 	Provide efficient response to customers who request their consumption be analyzed.
<ul style="list-style-type: none"> • Expand membership and participation in key community organizations. 	Promote community involvement by employees participating in public service organizations. Develop a sustainable utility and related infrastructure.
<ul style="list-style-type: none"> • Develop, implement and promote meaningful water conservation programs by participating in available grant opportunities. 	Fund and implement a cost-effective water conservation program.

CUSTOMER SERVICE DEPARTMENT SUMMARY, CONTINUED

FOR FISCAL YEAR 2018

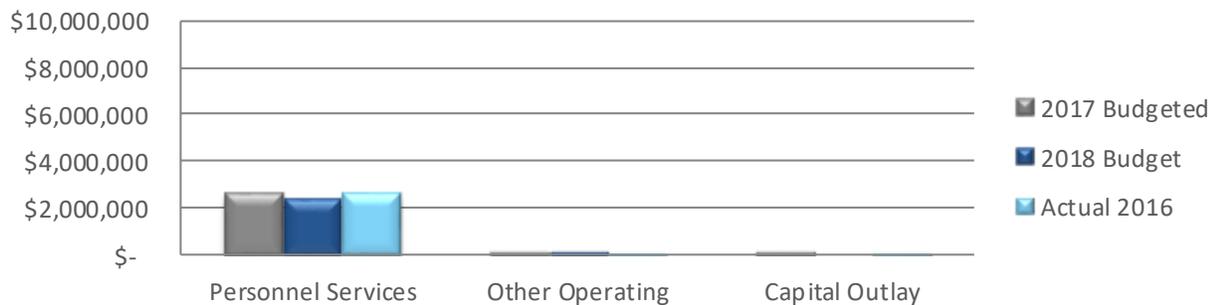
Customer Service

2018 Budget



Division	2018 Budget
Customer Service	1,123,100
Field Services	1,364,100
Total	\$ 2,487,200

Expenditure by Category



Expenditure	Actual 2016	2017 Budgeted	2018 Budget
Personnel Services	\$ 2,592,550	\$ 2,626,200	\$ 2,315,700
Other Operating	77,187	107,100	171,500
Capital Outlay	29,300	101,500	-
Total	\$ 2,699,037	\$ 2,834,800	\$ 2,487,200

FINANCE DEPARTMENT SUMMARY

FOR FISCAL YEAR 2018



RESPONSIBILITIES AND BUDGET ISSUES

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

DEPARTMENTAL TEAMS

- Finance
- Billing
- Records
- Purchasing and inventory

FINANCE DEPARTMENT SUMMARY, *CONTINUED*

FOR FISCAL YEAR 2018

KEY DEPARTMENT INDICATORS

	Actual 2016	Budgeted 2017	Budget 2018
Key department indicators			
Number of full time department employees budgeted	28	29	30
New positions not in prior year's budget	-	-	-
Positions transferred in (out)	-	-	1
Total bills/payments processed	594,841	590,000	600,000
Vendor payments	2,458	2,700	2,700
Customer deposit refunds	11,629	10,000	12,000
Number of purchase orders	1,600	1,650	1,670
Number of bids and RFps/RFQ's issued	23	20	20
Number of warehouses	5	5	5
Number of stock items	2,200	2,250	2,200

DEPARTMENT GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Strategic goal supported

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

Proactive public outreach and superior customer service
- Increase public awareness of excellent quality and value of tap water

Proactive public outreach and superior customer service
- Continue to monitor debt structure to identify possible opportunities for cost savings

Financial optimization
- Continue to monitor water and wastewater rates for sufficiency

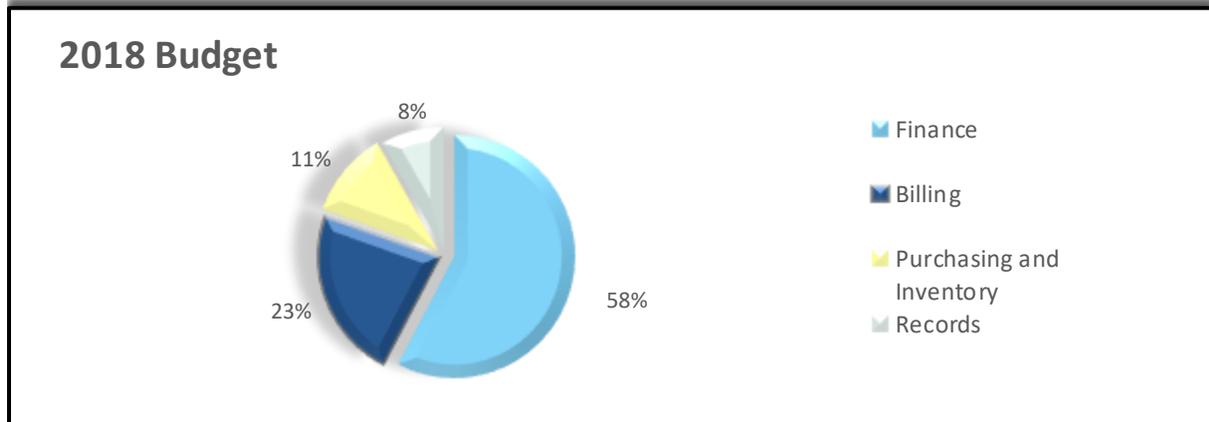
Financial optimization



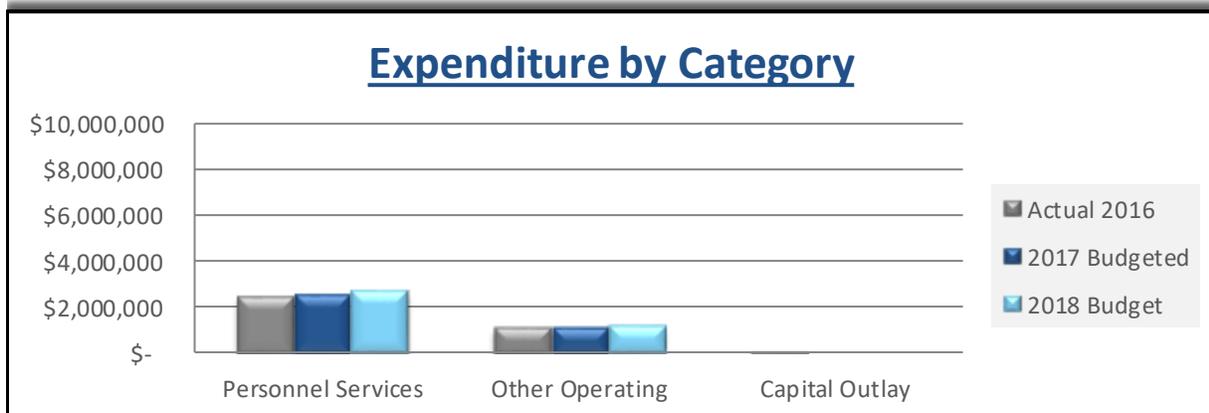
FINANCE DEPARTMENT SUMMARY, *CONTINUED*

FOR FISCAL YEAR 2018

Finance



Division	2018 Budget
Finance	2,239,700
Billing	883,700
Purchasing and Inventory	439,400
Records	320,600
Total	\$ 3,883,400



Expenditure	Actual 2016	2017 Budgeted	2018 Budget
Personnel Services	\$ 2,413,424	\$ 2,443,400	\$ 2,679,900
Other Operating	1,054,802	1,119,100	1,203,500
Capital Outlay	29,974	-	-
Total	\$ 3,498,200	\$ 3,562,500	\$ 3,883,400

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HUMAN RESOURCES DEPARTMENT SUMMARY

FOR FISCAL YEAR 2018



RESPONSIBILITIES AND BUDGET ISSUES

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

DEPARTMENTAL TEAMS

- Human Resources
- Risk Management

HUMAN RESOURCES DEPARTMENT SUMMARY, *CONTINUED*

FOR FISCAL YEAR 2018

KEY DEPARTMENT INDICATORS

Key department indicators			
	Actual 2016	Budgeted 2017	Budget 2018
Number of full time department employees	4	4	4
Number of student positions for the agency	3	3	3
Positions budgeted last year that are eliminated	1	1	-
Positions transferred in (out)	4	(1)	-
Job postings for the organization	37	45	40
Number of applications received	500	500	500
Number of new hires	23	20	-
Number of resignations, retirements or terminations	17	20	-
Number of grievances filed	3	3	3
Number of arbitrations filed	-	2	2
Number of insurance claims (including workman's compensation and hurricane damage)	50	35	40
		-	-

DEPARTMENT GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Strategic goal supported

- Optimize the functionality of the new Human Resources information system with improved technology.

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

- Train employees throughout the system on how to use the many tools available to them within the new system.

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

- Implementing a new electronic performance management system.

Financial optimization by managing our insurance costs and potential loss.

- Utilize the company property program to track property issued to each employee.

Financial optimization by managing our company properly.

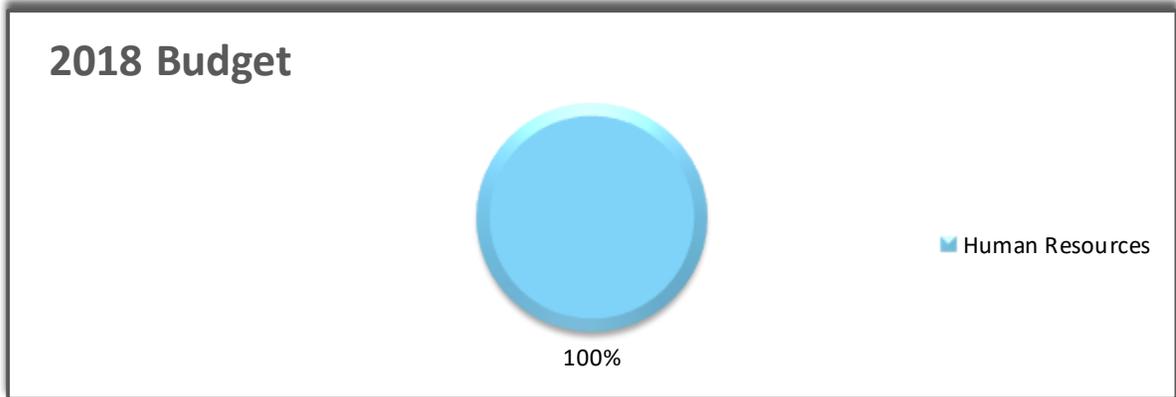
- Utilize more functionality of the automated performance management dashboard.

Enhance employee communication and development by involving the Supervisors and employee in their own performance goals.

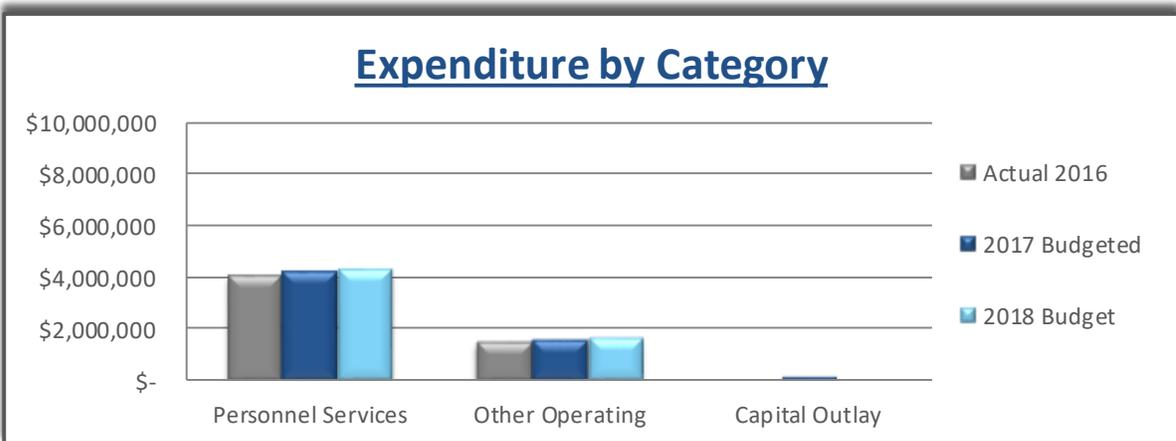
HUMAN RESOURCES DEPARTMENT SUMMARY, *CONTINUED*

FOR FISCAL YEAR 2018

Human Resources



Division	2018 Budget
Human Resources	\$ 5,846,200
Total	\$ 5,846,200



Expenditure	Actual 2016	2017 Budgeted	2018 Budget
Personnel Services	\$ 3,985,868	\$ 4,189,100	\$ 4,226,900
Other Operating	1,445,723	1,578,800	1,619,300
Capital Outlay	-	120,000	-
Total	\$ 5,431,591	\$ 5,887,900	\$ 5,846,200

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INFORMATION TECHNOLOGY DEPARTMENT SUMMARY, FOR FISCAL YEAR 2018



RESPONSIBILITIES AND BUDGET ISSUES

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

DEPARTMENTAL TEAMS

- Information Technology

INFORMATION TECHNOLOGY DEPARTMENT SUMMARY, CONTINUED

FOR FISCAL YEAR 2018

KEY DEPARTMENT INDICATORS

	Actual 2016	Budgeted 2017	Budget 2018
Key department indicators			
Number of full time department employees	25	26	11
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	-	-	(15)
Help desk requests	2,500	5,000	3,000
Number of work stations maintained	310	325	350
Number of servers maintained	110	110	115
Routers/switches maintained	90	95	100
PBX switches maintained	3	3	2
Telephones maintained (includes fax & cell)	455	455	175
Radios maintained	285	2,400	-
PLCs maintained	195	510	-
Printers	145	145	155

DEPARTMENT GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Strategic goal supported

- 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 moving the Authority towards improved technologies
 - Enhance network security to ensure utility safe operations.

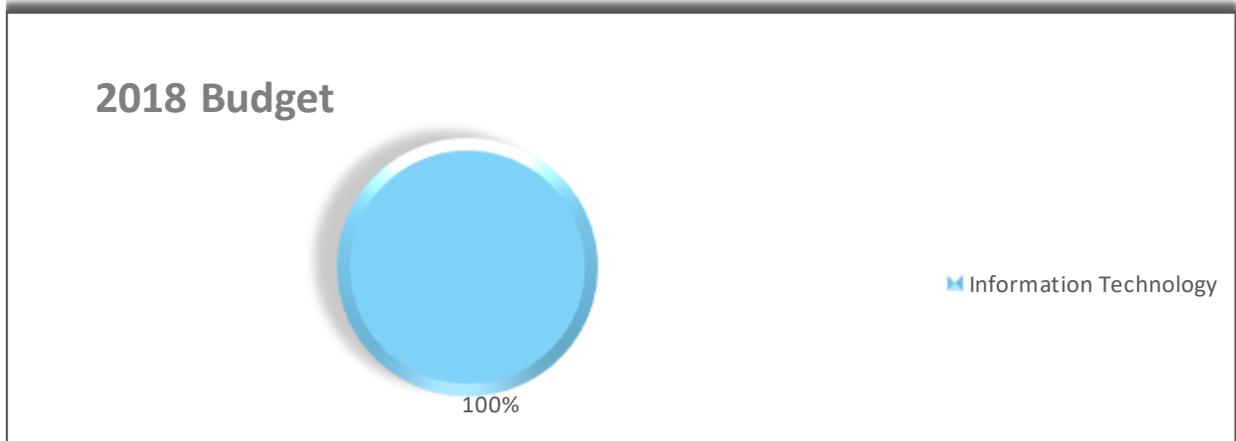
 - Develop a sustainable utility and related infrastructure
 - Financial optimization
 - Enhance employee communication and development plan
 - Develop sustainable strategies
 - Develop a defensible utility and related infrastructure.



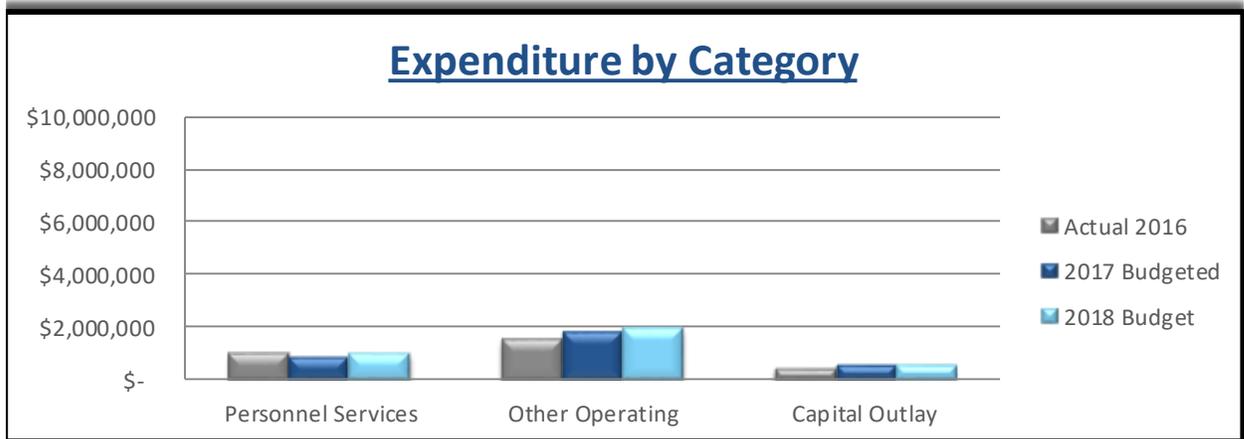
INFORMATION TECHNOLOGY DEPARTMENT SUMMARY,
CONTINUED

FOR FISCAL YEAR 2018

Information Technology



Division	2018 Budget
Information Technology	\$ 3,455,700
Total	\$ 3,455,700



Expenditure	Actual 2016	2017 Budgeted	2018 Budget
Personnel Services	\$ 973,040	\$ 850,700	\$ 973,600
Other Operating	1,452,849	1,782,000	1,941,100
Capital Outlay	423,046	573,500	541,000
Total	\$ 2,848,935	\$ 3,206,200	\$ 3,455,700

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UTILITY OPERATIONS DIVISION SUMMARY

FOR FISCAL YEAR 2018



RESPONSIBILITIES AND BUDGET ISSUES

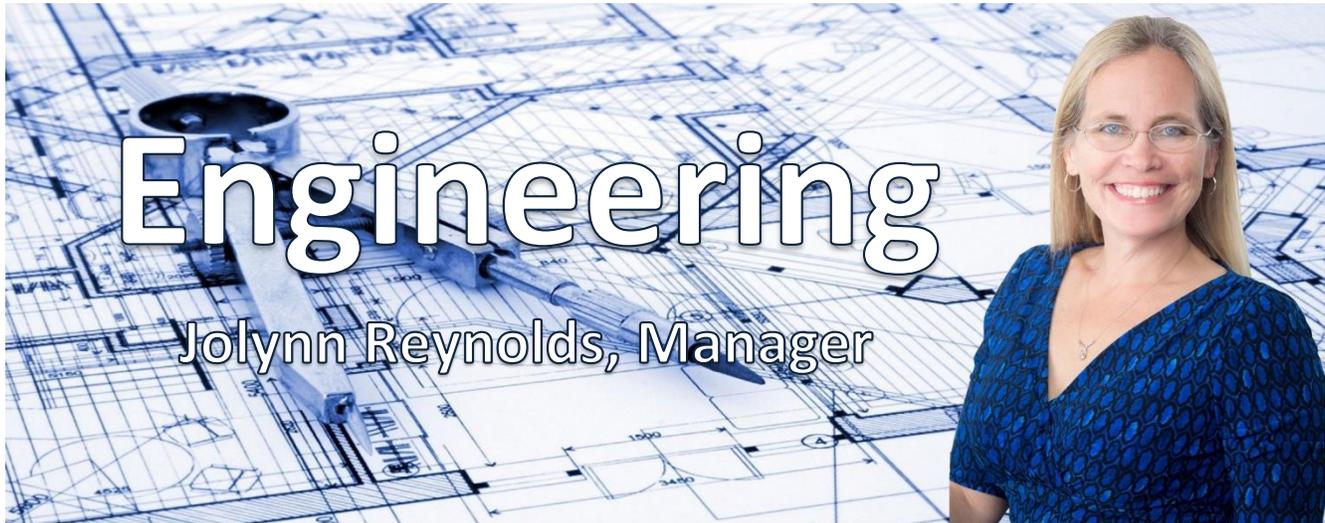
The Utility Operations division is responsible for the operational activities of the organization, including engineering, plant operations and system maintenance. The managers of these departments report directly to the Deputy Executive Director in charge of utility operations. The budgets, goals and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

DEPARTMENTS

- Engineering
- Operations

ENGINEERING DEPARTMENT SUMMARY

FOR FISCAL YEAR 2018



RESPONSIBILITIES AND BUDGET ISSUES

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

DEPARTMENTAL TEAMS

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

ENGINEERING DEPARTMENT SUMMARY, *CONTINUED*

FOR FISCAL YEAR 2018

KEY DEPARTMENT INDICATORS

	Actual 2016	Budgeted 2017	Budget 2018
Key department indicators			
Number of full time department employees budgeted	36	41	44
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	2	2	3
Number of construction design projects underway	12	12	12
Number of construction projects underway	12	12	12
Number of general engineering task orders	5	5	10
Number of fixture reviews	210	170	220
Number of plan reviews	56	80	80
Feet of designed distribution	52,611	48,500	53,115
Number of Fire line/hydrant	36	100	60
Number of backflow inspections completed	465	115	120
Number of backflow prevention tests	10,782	12,505	6,510
Number of water quality samples	15,419	15,396	15,600
Feet of distribution pipe installed by in-house crew	18,000	15,000	25,000
Number of meter change outs	1,138	3,125	3,125
Number of meter tests	1,138	3,125	3,125

DEPARTMENT GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

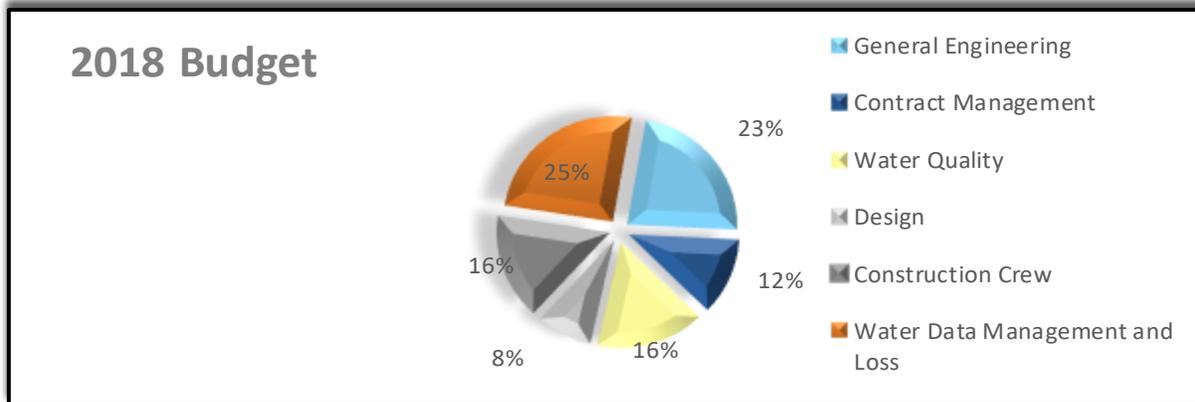
Strategic Goal Supported

- Complete wastewater system projects in Monroe County.
- Recover lost revenue and reduce lost water to meet industry goals.
- Strengthen wellfield protection programs by enforcing existing cooperative agreement with Miami-Dade Department of Environmental Resource Management and enhance in house testing and monitoring.
- Engage experts to assist with assessment of the integrity of the utility system.
- Develop and integrated and dynamic master plan to insure financial stability.
- Financial optimization through integration of workflow programs
- Enhance and provide cost efficiency.
- Work with South Florida Water Management District on plants to prevent or mitigate saltwater intrusion.
- Insure financial efficiency of the CIP delivery. Develop condition assessment of transmission system.
- Increase revenue, reduce water loss, and improve asset management.

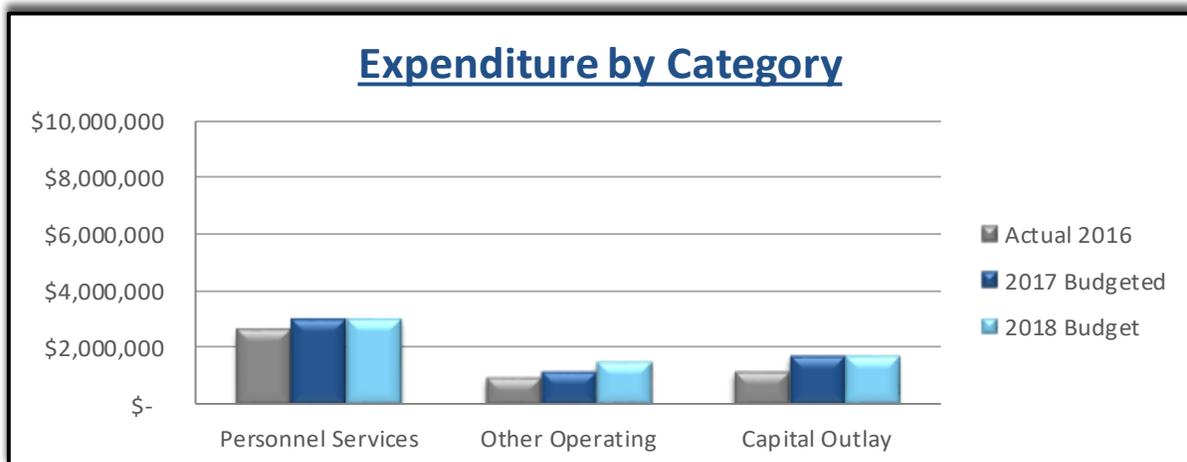
ENGINEERING DEPARTMENT SUMMARY

FOR FISCAL YEAR 2018

Engineering



Division	2017 Budget
General Engineering	\$ 1,402,500
Contract Management	712,300
Water Quality	980,900
Design	506,800
Construction Crew	957,700
Water Data Management and Loss	1,544,300
Total	\$ 6,104,500



Expenditure	Actual 2016	2017 Budgeted	2018 Budget
Personnel Services	\$ 2,569,874	\$ 2,963,000	\$ 2,949,200
Other Operating	935,628	1,138,300	1,475,700
Capital Outlay	1,112,223	1,640,400	1,679,600
Total	\$ 4,617,725	\$ 5,741,700	\$ 6,104,500

OPERATIONS DEPARTMENT SUMMARY

FOR FISCAL YEAR 2018



RESPONSIBILITIES AND BUDGET ISSUES

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

DEPARTMENTAL TEAMS

- Operations Office-Key West
- Operations Office Lower Keys
- Distribution Maintenance-Area I
- Distribution Maintenance-Area II
- Distribution Pump Station-Key West
- Distribution Pump Station-Stock Island
- Valve Shop
- Fleet Maintenance-Lower Keys
- Leak Survey-Lower Keys
- Stock Island Reverse Osmosis Plant
- Wastewater Treatment Plant-Bay Point
- Bay Point Collection
- Big Coppitt Wastewater Treatment
- Big Coppitt Collection
- Key Haven Wastewater Treatment
- Key Haven collection
- Cudjoe Regional Wastewater Treatment
- Cudjoe Regional Collection
- Navy Wastewater Systems
- Operations-Marathon, Middle Keys
- Distribution/Maintenance Area III
- Transmission Maintenance-Area III
- Transmission Pump Station-Marathon
- Transmission Pump Station-Ramrod

OPERATIONS DEPARTMENT SUMMARY, *CONTINUED*

FOR FISCAL YEAR 2018

SUB-DEPARTMENTS, CONTINUED

- Fleet Maintenance-Middle Keys
- Reverse Osmosis Plant-Marathon
- Wastewater Treatment Plant-Duck Key
- Wastewater Operations and Maintenance
- Duck Key Collection
- Operations-Upper Keys/Key Largo
- Distribution Maintenance Area IV
- Distribution Maintenance Area V
- Transmission Maintenance Areas IV & V
- Fleet Maintenance-Upper Keys
- Wastewater Treatment Plant-Layton
- Layton Collection
- Water Treatment-Main Office
- Water Treatment Plant-Florida City
- Transmission Pump Station-Florida City
- Transmission Pump Station-Long Key
- Transmission Pump Station-Key Largo
- Florida City Reverse Osmosis Plant
- Electrical & Instrumentation Controls

KEY DEPARTMENT INDICATORS

	Actual 2016	Budgeted 2017	Budget 2018
Key department indicators			
Number of full time department employees	127	127	145
Positions budgeted last year that are eliminated	-	-	-
Positions transferred in (out)	3	3	18
Number of vehicles in the department		-	207
Water treated (billions of gallons)	6,558	6,558	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
Brackish water RO plants	1	1	1
Reclaimed water lines maintained (feet)	19,000	19,000	19,000
Seawater reverse osmosis plants operated	2	2	2
Wastewater treatment plants operated	7	7	7
Transmission booster pump stations operated	6	6	6
Distribution pump stations operated	20	20	20
Water storage tanks on line	34	34	34
Reclaimed water pump stations operated	2	2	2
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	169	172	174

OPERATIONS DEPARTMENT SUMMARY, *CONTINUED*

FOR FISCAL YEAR 2018

DEPARTMENT GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Strategic Goal Supported

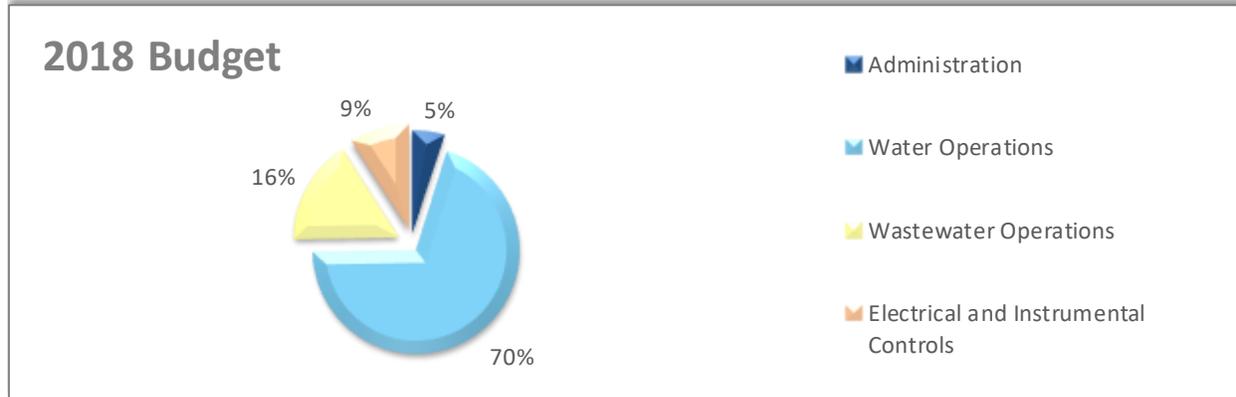
- Continue to allocate staff resources to Implement Monroe County wastewater systems
- Implement new projects identified in the Navy wastewater contract.
- Expand internal resources and engage experts to strengthen wellfield protection program.
- Engage experts to assist with assessment of the integrity of the transmission system.
- Begin valve replacement program.
- Develop a defensible utility and related infrastructure.
- Financial Optimization.
- Insure financial efficiency of capital projects.
- Improvements plan (CIP) delivery. Develop condition assessment of transmission system.
- Improvements plan (CIP) delivery. Develop condition assessment of transmission system.

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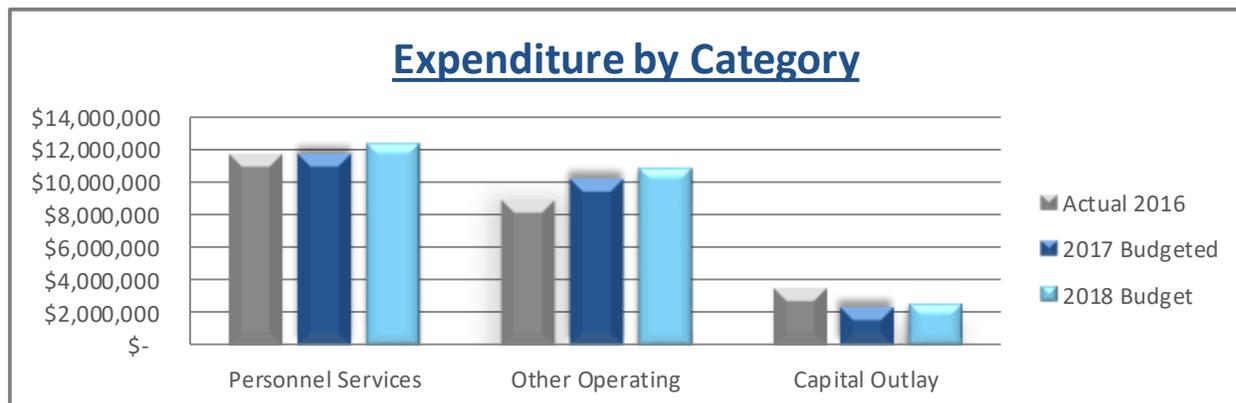
OPERATIONS DEPARTMENT SUMMARY, CONTINUED

FOR FISCAL YEAR 2018

Operations



Division	2018 Budget
Administration	\$ 1,238,900
Water Operations	17,975,600
Wastewater Operations	4,172,700
Electrical and Instrumental Controls	2,322,500
Total	\$ 25,709,700



Expenditure	Actual 2016	2017 Budgeted	2018 Budget
Personnel Services	\$ 11,654,133	\$ 11,627,900	\$ 12,342,100
Other Operating	8,895,321	10,155,800	10,822,100
Capital Outlay	3,414,243	2,320,600	2,545,500
Total	\$ 23,963,697	\$ 24,104,300	\$ 25,709,700

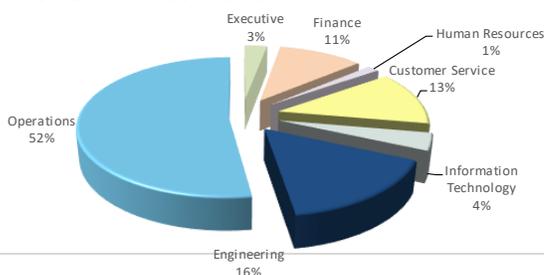
POSITION AND FLEET SUMMARY

FOR FISCAL YEAR 2018

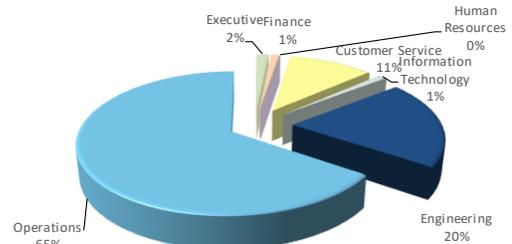
Positions	Executive	Finance	Human Resources	Customer Service	Information Technology	Engineering	Operations	Total
Budgeted positions in 2016	7	29	5	40	25	37	129	272
New positions								
Journeyman Electrician					1			1
Data Analyst						1		1
WW Maintenance Mechanic							2	2
Valve/Hydrant Tech B						1		1
Transferred positions								
Public Information	1					(1)		-
Water Demand Mgt/Loss program positions						4	(4)	-
Training Manager			(1)				1	-
Eliminated positions								
Contract Field Representative						(1)		(1)
Field Office Clerical Assistant							(1)	(1)
Customer Service Coordinator				(1)				(1)
Budgeted positions in 2017	8	29	4	39	26	41	127	274
New positions								
Engineer						1		1
WW Maintenance Mechanic C							3	3
Leak Control Tech B						1		1
Application Support Specialist					1			1
Meter Technician & Billing Analyst		1						1
Asset management system manager							1	1
Transferred positions								
Advanced Metering Specialist					(1)	1		-
GIS Tech Support Specialist					(1)	1		-
Technical Services Group					(14)		14	-
Eliminated positions								
Assistant Manager of Engineering						(1)		(1)
Manager of Customer Service				(1)				(1)
Customer Service Representative				(1)				(1)
Field Representatives				(2)				(2)
Budgeted positions in 2018	8	30	4	35	11	44	145	277

Fleet	Executive	Finance	Human Resources	Customer Service	Information Technology	Engineering	Operations	Total
Budgeted vehicles in 2016	3	2	-	21	17	38	108	169
Added vehicles								
Trucks for new wastewater positions							2	2
Van for new electrician					1			1
Eliminated vehicles								
None								-
Transferred vehicles								
Spares moved to Cudjoe inspectors								-
Budgeted vehicles in 2017	3	2	-	21	18	38	110	172
Added vehicles								
Bucket Truck							1	1
Dump truck							1	1
Eliminated vehicles								
None								-
Transferred vehicles								
GIS Tech Support Specialist					(1)	1		-
Electrical vehicles					(15)		15	-
Budgeted vehicles in 2018	3	2	-	21	2	39	127	174

BUDGETED POSITIONS BY DEPARTMENT



BUDGETED VEHICLES BY DEPARTMENT



OPERATING EXPENDITURE BUDGET BY FUNCTIONAL UNIT

FOR FISCAL YEAR 2018

	Cost center budgets	Total department budget	Capitalized salaries and outlay	Total operating budget	Change from previous year budget
<u>Executive Division</u>					
Executive Office	\$ 1,365,200		\$ -		
Public Information	267,800		-		
Totals		1,633,000	-	1,633,000	3.8%
<u>Finance Department</u>					
Finance	2,239,700		-		
Billing	883,700		-		
Purchasing and Inventory	439,400		-		
Records	320,600		-		
Totals		3,883,400	-	3,883,400	9.0%
<u>Human Resources Department</u>					
Human Resources	5,846,200		-		
Totals		5,846,200	-	5,846,200	1.4%
<u>Customer Service Department</u>					
Customer Service Administration	33,000		-		
Customer Service	1,090,100		-		
Field Services	1,364,100		-		
Totals		2,487,200	-	2,487,200	-9.0%
<u>Information Technology Department</u>					
Information Technology	3,455,700		(541,000)		
Totals		3,455,700	(541,000)	2,914,700	10.7%
<u>Engineering Department</u>					
General Engineering	1,402,500		(184,000)		
Contract Management	712,300		(449,200)		
Water Quality	980,900		(33,000)		
Design	506,800		(112,600)		
Construction Crew	957,700		(562,800)		
Water Data Management and Loss	1,544,300		(338,000)		
Totals		6,104,500	(1,679,600)	4,424,900	7.9%
<u>Operations Department</u>					
Operations Administration	1,238,900		(29,000)		
Water Operations	17,975,600		(2,246,800)		
Wastewater Operations	4,172,700		(210,300)		
Electrical and Instrumental Controls	2,322,500		(59,400)		
Totals		25,709,700	(2,545,500)	23,164,200	6.3%
Grand Totals		\$ 49,119,700	\$ (4,766,100)	44,353,600	5.2%

A high-speed photograph of a water splash, creating a large, clear, arching shape that frames the central text. The water is captured in mid-air, with numerous small droplets and bubbles visible, giving it a dynamic and textured appearance. The background is a clean, light blue gradient.

GLOSSARY

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GLOSSARY OF TERMS AND ACRONYMS

FOR FISCAL YEAR 2018

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

GLOSSARY OF TERMS AND ACRONYMS, CONTINUED

FOR FISCAL YEAR 2018

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.

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

GLOSSARY OF TERMS AND ACRONYMS, *CONTINUED*

FOR FISCAL YEAR 2018

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

Transmission Force Mains – Pipes through which 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.