

CAPITAL AND DEBT

CAPITAL IMPROVEMENT BUDGET

PROJECT SUMMARIES

CAPITAL OUTLAY BUDGET DETAIL

CAPITAL FINANCING PLAN SUMMARY

DEBT SERVICE REQUIREMENTS

DEBT SERVICE COVERAGE ANALYSIS



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Capital Improvement Budget

For fiscal years 2023-2027

Description	2023	2024	2025	2026	2027	Estimated five-year expenditures
Water Projects						
J. Robert Dean WTP K2 Building Rehabilitation	1,000,000	-				1,000,000
J. Robert Dean WTP Roof Replacements	500,000					500,000
Kermit H Lewin Reverse Osmosis Emergency Generator Facility	6,500,000	800,000				7,300,000
J. Robert Dean WTP Painting and Filter Gallery Upgrade	80,000	1,000,000				1,080,000
Ramrod Pump Station Diesel Storage	75,000	650,000				725,000
Rockland Yard Construction Crew Building	250,000					250,000
Kermit H Lewin Building Rehabilitation		275,000	2,000,000	1,000,000		3,275,000
Stock Island Garage Replacement			400,000	3,600,000	1,400,000	5,400,000
New Wellfield		4,000,000				4,000,000
J. Robert Dean WTP Accelerator No. 1	450,000	800,000				1,250,000
Kermit H Lewin Reverse Osmosis Facility	25,000,000	4,000,000				29,000,000
J. Robert Dean WTP Wastewater Forcemain	250,000					250,000
J. Robert Dean WTP Diesel Pump Upgrades	2,500,000	2,500,000				5,000,000
J. Robert Dean WTP Chemical Feed Improvements		100,000	1,200,000			1,300,000
J. Robert Dean WTP Electrical Improvements- (Phase 2)			400,000	6,400,000		6,800,000
J. Robert Dean WTP Storage Tank (5 MG)				250,000	7,000,000	7,250,000
Islamorada Transmission Line Replacement (MM79-84)	13,000,000	20,000,000				33,000,000
Pump Station Electrical Improvements	80,000	920,000				1,000,000
Transmission Terminus Replacement	300,000	3,750,000				4,050,000
Transmission Marathon (Knights Key)	200,000	3,000,000				3,200,000
Transmission Ocean Reef	300,000	4,000,000				4,300,000
Cathodic Protection System Repair and Improvements	200,000	2,000,000				2,200,000
Transmission Snake Creek Crossing (Directional Drill)	200,000	2,000,000				2,200,000
Transmission C111 Crossing (Directional Drill)	200,000	2,000,000				2,200,000
Transmission Ramrod System Connections		50,000	500,000			550,000
Transmission Indian Key Crossing		200,000	2,000,000			2,200,000
Transmission Lignumvitae Channel (Directional Drill)		125,000	1,250,000			1,375,000
Transmission Channel 2 Crossing		200,000	2,500,000			2,700,000
Transmission Channel 5 Crossing		400,000	5,000,000			5,400,000
Marathon Pump Station Tank		300,000	5,000,000			5,300,000
Transmission System Valve Replacement		100,000	1,000,000	1,000,000	1,000,000	3,100,000
Transmission Long Key Bridge (Box Girder)				300,000	6,000,000	6,300,000
Distribution Valve Replacement Program	150,000	150,000	150,000	150,000	150,000	750,000
Distribution Middle-Big Torch	1,200,000					1,200,000
Distribution Replacement South Street	600,000					600,000
Distribution and Storage Ocean Reef	500,000	4,000,000	4,000,000			8,500,000
Distribution Storage Tank Replacement Crawl Key	2,000,000	-	-			2,000,000
Distribution Duck Key Inner Island	1,900,000					1,900,000
Distribution Desal Storage Tank	30,000	400,000				430,000
Distribution Replacement Middle Keys			1,800,000	1,800,000	1,400,000	5,000,000
Meter Gateways	200,000	200,000	200,000			600,000
Stock Island Distribution Pump Station	1,000,000					1,000,000
NAS Key West Boca Chica Field - East Fire Pumping Station	1,500,000	500,000				2,000,000
NAS Connection A & B Distribution Boca Chica			1,500,000	1,500,000	1,500,000	4,500,000
Total water projects	\$ 60,165,000	\$ 58,420,000	\$ 28,900,000	\$ 16,000,000	\$ 18,450,000	\$ 181,935,000

Capital Improvement Budget (cont.)

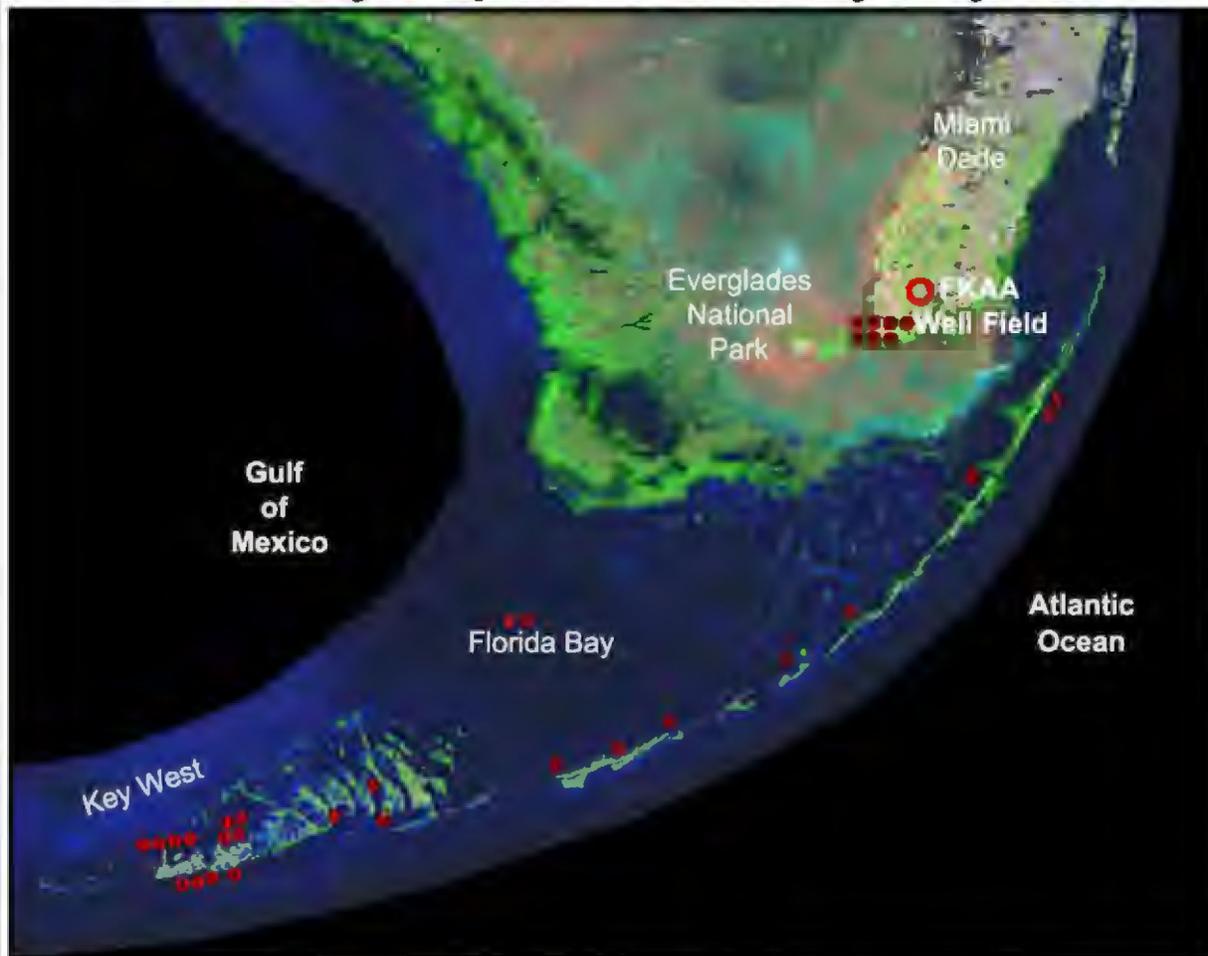
For fiscal years 2023-2027

Description	2023	2024	2025	2026	2027	Estimated five-year expenditures
Wastewater projects						
Big Coppitt Wastewater force main	2,000,000	1,000,000				3,000,000
Big Coppitt and Cudjoe manholes	1,800,000					1,800,000
Big Coppitt WW treatment plant improvements	900,000	400,000				1,300,000
Cudjoe Dewatering building improvements	50,000	500,000				550,000
Summerland Wastewater Pump station	150,000	1,600,000	400,000			2,150,000
Duck Key collection system rehabilitation	150,000					150,000
Total wastewater projects	5,050,000	3,500,000	400,000	-	-	8,950,000
Total capital improvement projects	\$ 65,215,000	\$ 61,920,000	\$ 29,300,000	\$ 16,000,000	\$ 18,450,000	\$ 190,885,000
Funding sources						
Funds from retail rates and cash on hand	\$ 24,715,000	\$ 34,920,000	\$ 15,800,000	\$ 14,500,000	\$ 16,950,000	\$ 106,885,000
Navy water rates	1,500,000	500,000	1,500,000	1,500,000	1,500,000	6,500,000
Federal and state appropriations	31,000,000	18,500,000	4,000,000	-	-	53,500,000
Bond proceeds	8,000,000	8,000,000	8,000,000			24,000,000
Total	\$ 65,215,000	\$ 61,920,000	\$ 29,300,000	\$ 16,000,000	\$ 18,450,000	\$ 190,885,000

Project Summaries

For fiscal years 2023-2027

Florida Keys Aqueduct Authority Projects



Project Legend

● Transmission Terminus Replacement(Key West)	● Distribution Storage Tank Replacement(Crawl Key)
● Distribution Replacement-South Street(Key West)	● Duck Key Collection System Rehabilitation
● Distribution Valve Replacement(Key West)	● Islamorada Transmission Line Replacement
● Kermit H. Lewin RO Emergency Generator Facility	● Transmission Snake Creek Crossing
● Kermit H. Lewin Reverse Osmosis Facility	● Transmission C111 Crossing
● Distribution Desal Storage Tank	● Distribution and Storage(Ocean Reef)
● Stock Island Distribution Pump Station	● Transmission Ocean Reef
● NAS Boca Chica Field-East Fire Pumping Station	● J. Robert Dean WTP K2 Building Rehabilitation
● Rockland Yard Construction Crew Building	● J. Robert Dean WTP Roof Replacements
● Big Coppitt Wastewater Forcemain	● J. Robert Dean WTP Painting & Filter Gallery Upgrade
● Big Coppitt WWTP Improvements	● J. Robert Dean WTP Electrical Upgrades
● Big Coppitt and Cudjoe Manholes	● J. Robert Dean WTP Accelerator No. 1
● Cudjoe Dewatering Building Improvements	● J. Robert Dean WTP Wastewater Forcemain
● Ramrod Pump Station Diesel Storage	● J. Robert Dean WTP Diesel Pump Upgrades
● Distribution Middle-Big Torch	● Pump Station Electrical Improvements
● Transmission Marathon(Knights Key)	● Meter Gateways

Project Summaries (continued)

For fiscal years 2023-2027

J. Robert Dean WTP K2 Building Rehabilitation

Facility

Project Information

Location	J. Robert Dean Water Treatment Plant
Project Type	Water
Category	Renewal and Replacement
Project Number	3236-20
Design Engineer	Black and Veatch
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2021
Completion Date	2023
Bond Funded	No



Description/Justification:

The K2 Building was originally design and built in 1943 by the U.S. Navy as a water treatment structure. The building was repurposed as an administration/maintenance building between 1943 and 1997 and renovated in 1997. Currently, the building houses critical components of FKAAs Supervisory Control and Data Aquisition (SCADA) system. In 2020, a structural assessment was performed on the building and deficiencies were noted that have a high priority for repair.

Status/Recent Developments:

FKAAs is currently in design phase for the project. The design phase should be complete by July 2022 and construction is scheduled to occur in FY2023 after the 2022 Hurricane season.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 1,200,000	-	-	-	-	\$ 1,200,000
Total Costs	\$ 1,200,000	\$ -	\$ -	\$ -	\$ -	\$ 1,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

J. Robert Dean WTP Roof Replacements

Facility

Project Information

Location	J. Robert Dean Water Treatment Plant
Project Type	Water
Category	Renewal and Replacement
Project Number	To be determined
Design Engineer	Jolynn Reynolds
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2022
Completion Date	2023
Bond Funded	No



Description/Justification:

The roofs for three buildings (K4, K5, and K12) at the J Robert Dean Water Treatment Plant are in need of replacement. All other roofs at the WTP have been recently replaced, with the exception of the K2 building which will also be replaced in 2023.

Status/Recent Developments:

FKAA's Engineering Department will prepare the bid documents for the roof replacements.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 500,000	-	-	-	\$ -	\$ 500,000
Total Costs	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	-	-	-	-	-	-
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

J. Robert Dean WTP Painting and Filter Gallery Upgrade

Facility

Project Information

Location	J. Robert Dean Water Treatment Plant
Project Type	Water
Category	Renewal and Replacement
Project Number	To be determined
Design Engineer	To be determined
Project Manager	David Hackworth
Contractor	To be determined
Start Date	2023
Completion Date	2024
Bond Funded	No



Description/Justification:

This project includes various large scale maintenance projects that require the use of a contractor. This project will include painting the three water storage tanks (5 MG, 5 MG, 1 MG), K3 Building (interior and exterior), replace the windows in the filter gallery, and repair the weeping walls in the filter gallery.

Status/Recent Developments:

FCAA is currently in the planning phase of this project.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 80,000	\$ 1,000,000			\$ -	\$ 1,080,000
Total Costs	\$ 80,000	\$ 1,000,000	\$ -	\$ 0	\$ -	\$ 1,080,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Kermit H Lewin Reverse Osmosis Emergency Generator Facility

Facility

Project Information

Location	Kermit H. Lewin Seawater Desalination Facility, Stock Island
Project Type	Water
Category	Resiliency
Project Number	3237-20
Design Engineer	Black and Veatch
Project Manager	Brian Stark
Contractor	Reynolds Construction
Start Date	2021
Completion Date	2024
Bond Funded	No



Description/Justification:

The generator facility will provide standby power to the new Kermit H Lewin Reverse Osmosis Facility, the Stock Island Desal Pump Station and the existing Stock Island RO Building. FCAA received a \$7.2 million grant from the Florida Department of Emergency Management to construct the new generator facility at Stock Island.

Status/Recent Developments:

Reynolds Construction was issued a Notice to Proceed on May 2, 2022. The project is scheduled to be completed by October 14, 2023.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 6,500,000	\$ 800,000			\$ -	\$ 7,300,000
Total Costs	\$ 6,500,000	\$ 800,000	\$ -	\$ 50	\$ -	\$ 7,300,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	100,000.00	100,000.00	100,000.00	100,000.00	400,000
Total Operating Costs	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 400,000

Project Summaries (continued)

For fiscal years 2023-2027

Ramrod Pump Station Diesel Storage

Facility

Project Information

Location	Ramrod Pump Station
Project Type	Water
Category	Renewal and Replacement
Project Number	3231-19
Design Engineer	To be determined
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2023
Completion Date	2024
Bond Funded	No



Description/Justification:

The existing diesel tanks have reached the end of their useful lives and are in need of replacement. FCAA has purchased and installed a replacement tank, but has not connected the new tank to the fuel system.

Status/Recent Developments:

The project is currently in the planning phase for the fuel system piping improvements

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 75,000	\$ 650,000			\$ -	\$ 725,000
Total Costs	\$ 75,000	\$ 650,000	\$ -	\$ 0	\$ -	\$ 725,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Rockland Yard Construction Crew Building

Facility

Project Information

Location	Rockland Key
Project Type	Facilities
Category	Renewal and Replacement
Project Number	7049-18AC
Design Engineer	K2M
Project Manager	David Hackworth
Contractor	To be determined
Start Date	2020
Completion Date	2023
Bond Funded	No



Description/Justification:

The storage building for the Construction Crew equipment was recently replaced. The construction crew offices were also damaged during Hurricane Irma and the crew has since been using a temporary trailer. This project would construct new offices inside the storage facility.

Status/Recent Developments:

FKAA is starting the design of the interior office space

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 250,000	-	-	-	\$ -	\$ 250,000
Total Costs	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 250,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

J. Robert Dean WTP Electrical Upgrades

Facility

Project Information

Location	J. Robert Dean Water Treatment Plant
Project Type	Water
Category	Resiliency
Project Number	1170-19
Design Engineer	Black and Veatch
Project Manager	David Hackworth
Contractor	Florida Design Contractors, Inc.
Start Date	2021
Completion Date	2023
Bond Funded	No



Description/Justification:

This project replaces the electrical equipment at the J. Robert Dean Water Treatment Plant that has the highest priority for repair.

Status/Recent Developments:

This project is currently under construction with an anticipated completion date of December 2022.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 1,300,000	-	-	-	\$ -	\$ 1,300,000
Total Costs	\$ 1,300,000	\$ -	\$ -	\$ -	\$ -	\$ 1,300,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

J. Robert Dean WTP Accelerator No. 1

Water Treatment

Project Information

Location	J. Robert Dean Water Treatment Plant
Project Type	Water Supply and Treatment
Category	Renewal and Replacement
Project Number	To be determined
Design Engineer	Carollo Engineers, Inc.
Project Manager	David Hackworth
Contractor	Moss Kelly, Inc
Start Date	2023
Completion Date	2024
Bond Funded	No



Description/Justification:

The Accelerator Clarifier (Accelerator) is used to soften the groundwater at the J Robert Dean Water Treatment Plant. The existing Accelerator No. 1 was installed in 1988 has a maximum capacity of 16.3 MGD. The condition of the Accelerator has deteriorated due to corrosion of its internal components.

Status/Recent Developments:

FKAA is currently rehabilitating Accelerator No. 2. This project will commence once Accelerator No. 2 is completed.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 400,000	\$ 800,000			\$ -	\$ 1,200,000
Total Costs	\$ 400,000	\$ 800,000	\$ -	\$0	\$ -	\$ 1,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Kermit H Lewin Reverse Osmosis Facility

Water Supply and Treatment

Project Information

Location	Kermit H. Lewin Seawater Desalination Facility, Stock Island
Project Type	Water Supply and Treatment
Category	Resiliency
Project Number	1150-17A
Design Engineer	Carollo Engineers
Project Manager	David Hackworth
Contractor	TLC Diversified
Start Date	2018
Completion Date	2024
Bond Funded	Yes



Description/Justification:

The existing 2 Million Gallon per Day (MGD) Stock Island Reverse Osmosis (SIRO) is maintenance intensive, lacks reliability, and fails to meet production goals. To promote public health and safety, the goal of this project is develop a 4 MGD water production facility on Stock Island that will provide sufficient capacity during emergency conditions, provide system reliability, new equipment, and membrane technology.

Status/Recent Developments:

This project is currently under construction with a final completion date of May 2024. This project will partially be funded by a \$30.6 million dollar grant from Department of Economic Opportunity and a low interest federal loan administered by the Water Infrastructure Finance and Innovation Act (WIFIA).

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 25,000,000	\$ 4,000,000	-	-	-	\$ 29,000,000
Total Costs	\$ 25,000,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 29,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	-	-	-	-	-	-
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

J. Robert Dean WTP Wastewater Forcemain

Project Information

Location	J. Robert Dean Water Treatment Plant
Project Type	Water
Category	Renewal and Replacement
Project Number	4076-18
Design Engineer	Jolynn Reynolds
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2019
Completion Date	2023
Bond Funded	No



Description/Justification:

This project includes the installation of a new main sewer connection to Miami-Dade sewer from the Water Treatment Plant (WTP). The sewer force main is approximately 1,500 feet of 4" Ductile Iron Pipe, with a metering station.

Status/Recent Developments:

The project is currently being designed by FKAA staff and should bid in 2022.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 700,000		\$ -	\$ -	\$ -	\$ 700,000
Total Costs	\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ 700,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	8,000	10,000	10,000	10,000	10,000	48,000
Other Operating Costs	\$ 8,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 48,000

Project Summaries (continued)

For fiscal years 2023-2027

J. Robert Dean WTP Diesel Pump Upgrades

Water Transmission

Project Information

Location	J. Robert Dean Water Treatment Plant
Project Type	Water
Category	Renewal and Replacement
Project Number	1003-21
Design Engineer	To be determined
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2022
Completion Date	2024
Bond Funded	No



Description/Justification:

The J. Robert Dean Water Treatment Plant is equipped with diesel pumps that are used to maintain transmission system flow during electric power outages. The pumps have reached the end of their useful life and need to be replaced. Additionally, the pumps have a maximum capacity of 18 mgd and cannot meet peak demand. Therefore, this project will also include a standby generator to power one of the electric pumps to supplement the pumping capacity and provide necessary redundancy during construction.

Status/Recent Developments:

FKAA is currently in the planning phase of this project.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 2,500,000	\$ 2,500,000	-	-	-	\$ 5,000,000
Total Costs	\$ 2,500,000	\$ 2,500,000	\$ -	\$ -	\$ -	\$ 5,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	-	-	-	-	-	-
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Islamorada Transmission Line Replacement (MM79-84)

Water Transmission

Project Information

Location	Islamorada
Project Type	Water
Category	Renewal and Replacement
Project Number	1163-18
Design Engineer	Wade Trim
Project Manager	Emmy Koenig
Contractor	To Be Determined
Start Date	2020
Completion Date	2024
Bond Funded	No



Description/Justification:

As transmission pipe condition assessments are performed, sections of transmission main that pose the highest risk of failure are identified for future replacement. A portion of transmission main in Islamorada has been determined as one of these high risk areas.

Status/Recent Developments:

FKAA is currently in the the design phase for this project. The subaqueous portion of the project will be bid in June/July 2022 and the remaining portion will be bid in Sept/Oct 2022.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	13,000,000	20,000,000				\$33,000,000
Total Costs	\$ 13,000,000	\$ 20,000,000	-	\$ -	\$ -	\$33,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	30,000	30,000	(30,000)	(30,000)	(30,000)	
Total Operating Costs	\$ 30,000	\$ 30,000	\$ (30,000)	\$ (30,000)	\$ (30,000)	\$ (30,000)

Project Summaries (continued)

For fiscal years 2023-2027

Pump Station Electrical Improvements

Water Transmission

Project Information

Location	Long Key/Marathon/Ramrod
Project Type	Water
Category	Renewal and Replacement
Project Number	To Be Determined
Design Engineer	To Be Determined
Project Manager	Emmy Koenig
Contractor	To Be Determined
Start Date	2023
Completion Date	2024
Bond Funded	No



Description/Justification:

Long Key Pump Station historically has had numerous power issues. During the winter months the power dips within milliseconds, which is enough to disrupt the pump motor drives and causes the pump station to shutdown. Additionally, the drives at Marathon and Ramrod are discontinued and are over 10 years old. This project would include drive upgrades and capacitor banks that would allow VFD's to operate during these electrical disruptions.

Status/Recent Developments:

FKAA is currently in the planning phase for this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	80,000	920,000				\$1,000,000
Total Costs	\$ 80,000	\$ 920,000	-	\$ -	\$ -	\$1,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Transmission Terminus Replacement

Water Transmission

Project Information

Location	Key West
Project Type	Water
Category	Renewal and Replacement
Project Number	1153-17
Design Engineer	To Be Determined
Project Manager	Emmy Koenig
Contractor	To Be Determined
Start Date	2021
Completion Date	2023
Bond Funded	No



Description/Justification:

This project includes the final section of the transmission main in Key West that needs to be replaced. This section is the remaining original 18" pipeline that was installed in the 1940's which has pressure limitations and poses a high risk of failure. This project is included in FCAA's low interest loan through the Water Infrastructure Finance and Innovation Act (WIFIA)

Status/Recent Developments:

FCAA is currently in the planning phase for this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 300,000	\$ 3,750,000	-	-	-	\$ 4,050,000
Total Costs	\$ 300,000	\$ 3,750,000	\$ -	\$ -	\$ -	\$ 4,050,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	50,000	50,000	(50,000)	(50,000)	(50,000)	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ 50,000	\$ 50,000	\$ (50,000)	\$ (50,000)	\$ (50,000)	\$ (50,000)

Project Summaries (continued)

For fiscal years 2023-2027

Transmission Marathon (Knights Key)

Water Transmission

Project Information

Location	Marathon
Project Type	Water
Category	Renewal and Replacement
Project Number	To Be Determined
Design Engineer	To Be Determined
Project Manager	Emmy Koenig
Contractor	To Be Determined
Start Date	2023
Completion Date	2024
Bond Funded	No



Description/Justification:

Florida Department of Transportation constructed a retaining wall very close to FCAA's transmission main in Marathon approximately seven years ago. If the transmission main fails in this location, it would be very difficult and time consuming for FCAA's operations department to repair. This project will replace approximately 2600 LF of the transmission main to a location further from the embankment

Status/Recent Developments:

FCAA is currently in the planning phase for this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 200,000	\$ 3,000,000				\$ 3,200,000
Total Costs	\$ 200,000	\$ 3,000,000	\$ -	\$ -	\$ -	\$ 3,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs						
Other Operating Costs	50,000	50,000	(50,000)	(50,000)	(50,000)	
Total Operating Costs	\$ 50,000	\$ 50,000	\$ (50,000)	\$ (50,000)	\$ (50,000)	\$ (50,000)

Project Summaries (continued)

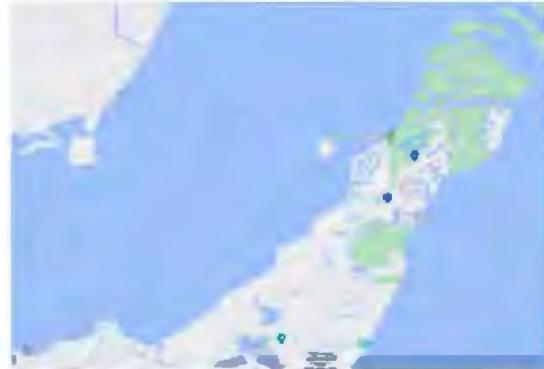
For fiscal years 2023-2027

Transmission Ocean Reef

Water Transmission

Project Information

Location	Ocean Reef
Project Type	Water
Category	Renewal and Replacement
Project Number	To Be Determined
Design Engineer	To Be Determined
Project Manager	Emmy Koenig
Contractor	To Be Determined
Start Date	2023
Completion Date	2024
Bond Funded	No



Description/Justification:

The Ocean Reef distribution pump station and storage tanks are in need of rehabilitation and capacity upgrades to meet the current demands. Due to site constraints, FCAA is unable to maintain the required level of service during the system upgrades. This project will rehabilitate the old 12-inch transmission that is no longer in use to provide supplemental capacity needed during the upgrade. This project will also provide a tap between the transmission main and Ocean Reef distribution system to increase system capacity and provide additional redundancy.

Status/Recent Developments:

FCAA is currently in the planning phase for this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 300,000	\$ 4,000,000				\$ 4,300,000
Total Costs	\$ 300,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 4,300,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

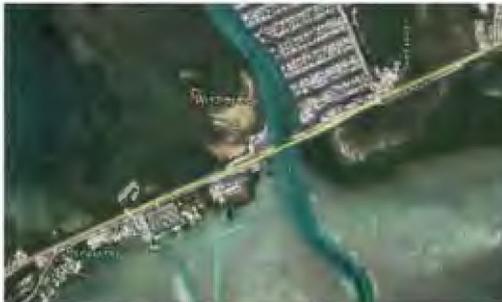
For fiscal years 2023-2027

Transmission Snake Creek Crossing (Directional Drill)

Water Transmission

Project Information

Location	Snake Creek
Project Type	Water
Category	Resiliency
Project Number	1155-17
Design Engineer	To Be Determined
Project Manager	Emrry Koenig
Contractor	To Be Determined
Start Date	2023
Completion Date	2024
Bond Funded	No



Description/Justification:

The 30" water transmission main is an extremely critical part of FCAA's infrastructure. It crosses under the Snake Creek canal as a submerged pipeline section under the draw bridge; one of only two remaining under deep waterways on the entire transmission system. To increase reliability and reduce system vulnerability, a parallel pipe is planned to be constructed via horizontal directional drilling below the US1 draw bridge which crosses the channel at this location.

Status/Recent Developments:

FCAA is currently in the planning phase for this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 200,000	\$ 2,000,000				\$ 2,200,000
Total Costs	\$ 200,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Transmission C111 Crossing (Directional Drill)

Water Transmission

Project Information

Location	18-mile stretch
Project Type	Water
Category	Resiliency
Project Number	1137-15
Design Engineer	To be determined
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2023
Completion Date	2024
Bond Funded	No



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 pipe is planned to be installed beneath the canal via Horizontal Directional Drilling method.

Status/Recent Developments:

FKAA is currently in the planning phase for this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 200,000	\$ 2,000,000		\$ -	\$ -	\$ 2,200,000
Total Costs	\$ 200,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,200,000

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)						
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs						
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

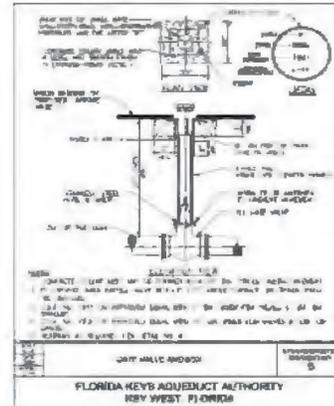
For fiscal years 2023-2027

Distribution Valve Replacement Program

Water Distribution

Project Information

Location	Key West
Project Type	Water
Category	Renewal and Replacement
Project Number	2336-17
Design Engineer	Jolynn Reynolds
Project Manager	David Hackworth
Contractor	FKAA
Start Date	2018
Completion Date	2027
Bond Funded	No
Facilities Master Plan Project	Yes



Description/Justification:

FKAA has identified distribution valves that are in need of replacement. This project will require the installation of new valves in Areas 1 and 2 that will be used to isolate sections of main for repair of leaks, maintenance, and leak survey.

Status/Recent Developments:

The FKAA Construction Crew recently replaced many valves in Key West as part of the on-going valve replacement program

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 750,000
Total Costs	\$ 150,000	\$ 750,000				

Operating Impact:

	Annual Operating Cost (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Distribution Middle-Big Torch

Water Distribution

Project Information

Location	Middle and Big Torch Keys
Project Type	Water
Category	New Distribution
Project Number	2331-17
Design Engineer	Jolynn Reynolds
Project Manager	David Hackworth
Contractor	FCAA
Start Date	2018
Completion Date	2023
Bond Funded	No



Description/Justification:

Residents of Middle Torch and Big Torch Keys are not currently served by FCAA with potable water. Residents in these areas are reliant upon cisterns and non-potable water deliveries for water and have expressed interest in connecting to the FCAA distribution system to improve their water quality. This purpose of this project is to install the approximately 37,000 linear feet of distribution mains to serve Middle Torch and Big Torch Keys and connect the system to the FCAA Transmission Main.

Status/Recent Developments:

FCAA has designed this project. Construction is scheduled to start August 2022.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 1,000,000	\$ -	-	-	-	\$ 1,000,000
Total Costs	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000

Operating Impact:

	Annual Operating Costs (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

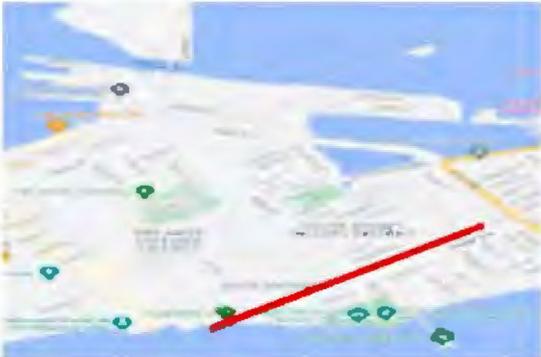
For fiscal years 2023-2027

Distribution Replacement South Street

Water Distribution

Project Information

Location	Key West
Project Type	Water
Category	Renewal and Replacement
Project Number	2218-06
Design Engineer	To be determined
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2021
Completion Date	2023
Bond Funded	No



Description/Justification:

This project will replace approximately 3,000 LF of 8-inch and 12-inch water mains along South Street between Elizabeth and George. The existing main has reached the end of its useful life and is in need of replacement. Additionally, the City of Key West plans to pave South Street, thus significantly reducing FCAA's restoration costs.

Status/Recent Developments:

FCAA has completed the 60% design

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 600,000	\$ -	-	-	-	\$ 600,000
Total Costs	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ 600,000

Operating Impact:

	Annual Operating Costs (Savings)					Total Cost
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Distribution and Storage Ocean Reef

Water Distribution

Project Information

Location	Ocean Reef
Project Type	Water
Category	Renewal and Replacement
Project Number	2352-18
Design Engineer	To be determined
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2023
Completion Date	2025
Bond Funded	No



Description/Justification:

The distribution pumps and tanks serving Ocean Reef Club are approaching their end-of-life. Additionally, the current system does not meet FCAA's level of service requirements. This project will replace the aging equipment and increase the capacity of the pump station.

Status/Recent Developments:

FCAA is currently in the planning phase of this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 500,000	\$ 4,000,000	\$ 4,000,000	-	-	\$ 8,500,000
Total Costs	\$ 500,000	\$ 4,000,000	\$ 4,000,000	\$ -	\$ -	\$ 8,500,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Distribution Storage Tank Replacement Crawl Key

Water Distribution

Project Information

Location	Crawl Key
Project Type	Water
Category	Renewal and Replacement
Project Number	2352-18
Design Engineer	CPH
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2022
Completion Date	2023
Bond Funded	No



Description/Justification:

The Crawl Key Water Storage tank is approaching the end of its design life and has structural deficiencies that were identified in the recent inspection report. This project will replace the tank and upgrade the influent piping to improve the level of redundancy.

Status/Recent Developments:

FCAA is currently in the design phase of this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 2,000,000	-	-	-	-	\$ 2,000,000
Total Costs	\$ 2,000,000	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Distribution Desal Storage Tank

Water Distribution

Project Information

Location	Stock Island
Project Type	Water
Category	Renewal and Replacement
Project Number	To be determined
Design Engineer	To be determined
Project Manager	Emmy Koenig
Contractor	To be determined
Start Date	2023
Completion Date	2024
Bond Funded	No



Description/Justification:

This project will repair and paint the existing 5 million gallon storage tank located at the Stock Island Desalination Facility.

Status/Recent Developments:

FCAA is currently in the design phase of this project

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 30,000	\$ 400,000	-	-	-	\$ 430,000
Total Costs	\$ 30,000	\$ 400,000	\$ -	\$ -	\$ -	\$ 430,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	-	-	-	-	-	-
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Summaries (continued)

For fiscal years 2023-2027

Meter Gateways

Water Distribution

Project Information

Location	System-wide
Project Type	Water
Category	System Upgrade
Project Number	2337-17
Design Engineer	Justin Dacey
Project Manager	Justin Dacey
Contractor	To be determined
Start Date	2017
Completion Date	2025
Bond Funded	No



Description/Justification:

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

Status/Recent Developments:

This is a multi-year project. FCAA installed six meter reading data collectors in FY2022.

Financial Information:

Capital Funding:

	Five Year Plan					Total Cost
	2023	2024	2025	2026	2027	
Capital Engineering & Construction Costs	\$ 200,000	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ 600,000
Total Costs	\$ 200,000	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ 600,000

Operating Impact:

	Annual Operating Cost (Savings)					Total
	2023	2024	2025	2026	2027	
New Personnel (FTEs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personal Services Costs	-	-	-	-	-	-
Other Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Capital Outlay Budget Detail

For fiscal year 2023

Additions to Utility Plant 2023 Budget Detail

			Amount	Water cost centers	Wastewater cost centers	Total
Executive Division						
<u>Executive</u>						
1011	Executive Office	None	\$ -	\$ -		
1012	Public Information	None	-	-		\$ -
<hr/>						
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	New Forklift for LKWH	40,000			
		Backflow meter change out program	175,000			
		Replacement MIUs	900,000			
		Meters (new service)	100,000			
		Small meter replacement	35,000			
		Large meter replacement	100,000	1,350,000		
6040	Records	None	-	-		1,350,000
<u>Human Resources</u>						
7010	Human Resources	None	-	-		
<u>Information Technology</u>						
8010	Information Technology	SCADA Infrastructure Servers	14,000			
		Cooperate Infrastructure Servers	84,000			
		Printers (replacements)	12,000			
				110,000		
						110,000
<hr/>						
Utility Operations Division						
<u>Engineering</u>						
2022	General Engineering	None	-	-		
2023	Contract Management	None	-	-		
2023	Water Quality	None	-	-		
2024	Design	None	-	-		
2025	Construction Crew	Hydraulic excavator (replacement #13617)	190,000			
		Skid steer (replacement #12509)	40,000	190,000		
						190,000
<u>Water Operations</u>						
4001	Operations Office Key West	None	-	-		
4101	Operations Office Stock Island/lower keys	Upgrade to motorized gate for Desal	14,500	14,500		
4102	Distribution/Maintenance-Area I	Sigsbee pump (replacement)	25,000			
		AC unit for Truman pump room (replacement)	6,200			
		Forklift (replace # 241)	41,000	72,200		
4103	Distribution/Maintenance-Area II	Vachunter (replace # 824)	130,000	130,000		
4104	Distribution Pump Station-Key West	AC unit for KWPS office (replacement)	6,500	6,500		
4105	Distribution Pump Station-Stock Island	None	-	-		