

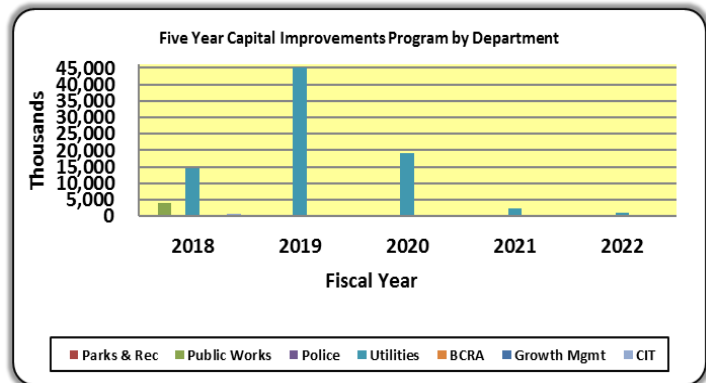
Appendix B

Capital Improvements Program

Appendix B: Capital Improvements Program

The Capital Improvements Program represents a schedule of major public improvement projects and expenditures for the next five years. The plan is developed in a financially feasible manner meaning that a project is not programmed unless it has an identified funding source. This plan allows the City to look ahead to determine the needs for public improvements and then schedule them within the capabilities of the City's financial resources. Projects from the first year of the Plan are recommended by the City Manager as part of the annual budget for the next fiscal year.

The FY 18 Capital Improvements Program (CIP) provides funding for a few of the City's infrastructure needs. Total expenditures for FY 18 are \$20,321,137 with a 5-year total budget of \$88,910,707 needed but funding source not known for future needs.



Because of significantly declining revenues, the City has deferred numerous capital improvement projects such as road paving, facility maintenance, vehicle replacement and information technology investment. This will likely result in higher long term costs.

New capital projects typically funded by grants, also add ongoing maintenance costs to the City's operational budgets. These projects are carefully scrutinized to evaluate the benefit to the community against the ongoing operational costs.

Funding Sources

Community Development Block Grant (CDBG) funds are received from the United States Department of Housing and Urban Development (HUD) for specific community development programs.

Fleet Fund (FLEET) allocations from departments are used for vehicle replacements.

General Fund (GENF) funding provides the City's discretionary monies for projects that do not qualify for other funding sources.

Impact Fees – Fire (IMPF) are one-time charges against new development used to offset the impact of growth.

Space Coast Area Transit (SCAT) funds are received from Brevard County for Bus/Transit Shelter and Bench agreement.

State Revolving Loan Fund (SRF) funds are received from Florida Department of Environmental Protection by low-interest loans for water and wastewater infrastructure projects.

Stormwater Utilities Fund (SWU) revenues through fees charged for services are dedicated for the use of various aspects of stormwater management.

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Utilities Operating Fund (UTO) funds the construction and/or acquisition of water and sewer utility improvement projects.

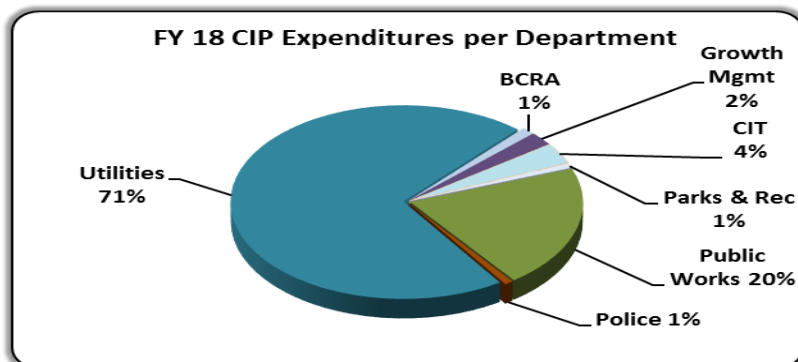
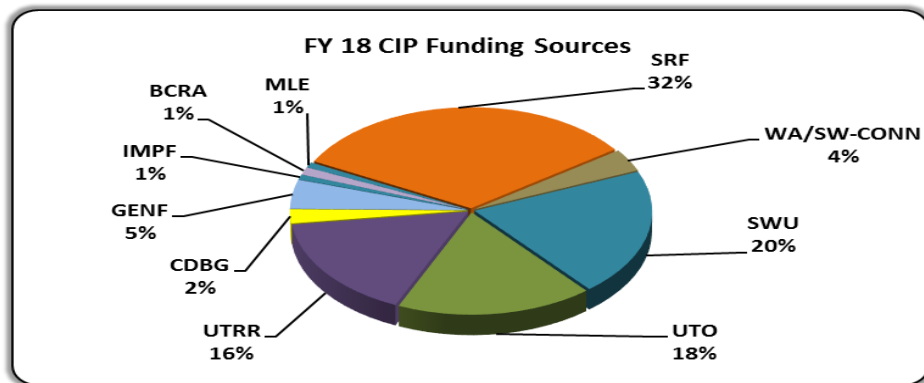
Utilities Renewal and Replacement Fund (UTRR) accounts for the receipt of 5% of the Utilities Operating Fund revenues that are used to repair and replace existing water and sewer facilities.

Five-Year Capital Improvements Program by Department

Departments	Schedule of Estimated Expenditures					Total Project Cost
	FY 18	FY 19	FY 20	FY 21	FY 22	
Utilities	14,414,586	45,283,312	19,292,649	2,473,653	953,358	82,417,558
Police	163,444	-	-	-	-	163,444
Public Works	4,150,000	-	-	-	-	4,150,000
Parks & Recreation	160,000	-	-	-	-	160,000
Growth Management	457,497	-	-	-	-	457,497
Bayfront Community	250,549	-	-	-	-	250,549
CIT	725,061	124,000	134,000	157,908	170,690	1,311,659
Citywide CIP Total	20,321,137	45,407,312	19,426,649	2,631,561	1,124,048	88,910,707

FY 18 Capital Improvement Plan

The following pie charts illustrate the funding source percentages and the expenditure distribution of CIPs for the next fiscal year.



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FY 18 Five-Year Capital Improvements Program Summary (Utility Departments)											
Fund	Dept/Div	Project No.	Project Name	Funding Source	SCHEDULE OF ESTIMATED EXPENDITURES						Total FY 18-FY 22
					Prior Years	FY 18	FY 19	FY 20	FY 21	FY 22	
UTILITIES											
421	8014-536-6401	N/A	Thermography Camera	UTO		14,011					14,011
421	8014-536-6403	N/A	Vehicle Replacements #6903 & #6302	UTO		79,500					79,500
421	8016-536-6403	N/A	Vehicle Replacements #6910	UTO		20,000					20,000
421	8018-536-6401	N/A	Autoclave Equipment	UTO		11,567					11,567
421	8018-536-6403	N/A	Vehicle Replacements #6121	UTO		22,000					22,000
421	8020-533-6322	N/A	Meter Services - New Installations	UTO		225,000	225,000	225,000	225,000	225,000	1,125,000
421	8020-533-6401	N/A	Valve Exercise Machine	UTO		64,375					64,375
421	8020-533-6401	N/A	Mini Excavator	UTO		49,192					49,192
421	8020-533-6403	N/A	Trailer	UTO		10,789					10,789
421	8020-533-6407	N/A	Tokay Software Upgrade	UTO		20,040					20,040
421	8024-533-6221	18WS20	NRWTP Treatment Unit Aerator Tray	UTO		40,000	150,000				190,000
421	8024-533-6323	18WS23	NRWTP Rear Yard Swale & Fenc Impr	UTO		33,000					33,000
421	8030-535-6327	16WS07	Palm Vista Lift Station	UTO		1,380,000					1,380,000
421	8030-535-6327	18WS22	Lift Station 4 Generator Installation	UTO		205,000					205,000
421	8030-535-6403	N/A	Vehicle Replacement #6912 & #6395	UTO		94,000					94,000
421	8034-535-6221	17WS16	WRF Denitrification Project	UTO		1,300,000					1,300,000
421	8034-535-6221	18WS13	WWTP Odor Control at Headworks	UTO		48,000	588,000				636,000
423	8021-533-6221	18WS04	SRWTP Expansion	WA-CONN /WA-SRF		510,000	9,200,000				9,710,000
423	8021-533-6324	18WS03	San Filippo Water Main Extension	WA-CONN /WA-SRF		30,000	2,235,000				2,265,000
423	8021-533-6324	17WS02	I-95 Interchange/Pkwy Water Main & Force Main	WA-CONN SW-CONN		17,325					17,325
423	8031-535-6221	16WS05	South Regional Water Reclamation Fac	/SW-SRF		150,000	18,850,000				19,000,000
423	8031-535-6325	17WS02	I-95 Interchange/Pkwy Water Main & Force Main	SW-CONN		21,175					21,175
424	8022-533-6221	18WS06	NRWTP High Service Pumps Repl	UTRR		105,000	620,000				725,000
424	8022-533-6221	12WS02	Repl of Large Diameter Steel Pipe	UTRR		312,000					312,000
			NRWTP Sulfuric Acid Tank & Feed								
424	8022-533-6221	18WS05	System Repl	UTRR		190,000					190,000
424	8022-533-6221	18WS02	NRWTP Slaker Replacement	UTRR		165,000					165,000
424	8022-533-6221	18WS17	NRWTP Chlorine Analyzers Repl	UTRR		130,000					130,000
			NRWTP Generator & Air Compressor								
424	8022-533-6221	18WS19	Repl	UTRR		65,000	438,000				503,000
424	8022-533-6318	18WS18	Surficial Well Field Flow Meter Repl	UTRR		50,000					50,000
424	8022-533-6322	N/A	Meter Services - Meter Replacements	UTRR		150,000	150,000	150,000	150,000	150,000	750,000
424	8022-533-6407	18WS12	NRWTP SCADA Improvements	UTRR		81,000					81,000
424	8032-535-6221	18WS01	Reuse High Service Pumps Repl	UTRR		566,000					566,000
424	8032-535-6221	18WS09	WWTP Digester 6 Rehabilitation	UTRR		415,000					415,000
424	8032-535-6221	18WS14	WWTP Bar Screen Replacement	UTRR		40,000	368,000				408,000
424	8032-535-6221	18WS15	RAS/WAS Pump Rehabilitation	UTRR		65,000	470,000				535,000
424	8032-535-6221	18WS16	WWTP Grit Pump & MCC Rehab	UTRR		65,000	320,000				385,000
424	8032-535-6221	15WS05	Secondary Ponds Valve Improvements	UTRR		59,000					59,000
424	8032-535-6325	18WS08	ARV Upgrade Program	UTRR		100,000	100,000	100,000	100,000	100,000	500,000
424	8032-535-6325	14WS07	Cable Lane Sewer Replacement	UTRR		200,000					200,000
424	8032-535-6326	17WS15	DIW Reservoir Rehabilitation	UTRR		125,000					125,000
424	8032-535-6327	18WS21	Lift Station Valve Pit Elimination Prog	UTRR		117,500	123375	129,545	136,024	142,827	649,271
424	8032-535-6327	18WS11	Lift Station Electrical Panel Repl Prog	UTRR		136,500	143,325	150,492	158,017	165,919	754,253
424	8032-535-6327	18WS10	Lift Stations RTU Replacment Prog	UTRR		169,612	169,612	169,612	169,612	169,612	848,060
425	8021-533-6324	18WS07	Palm Bay Hospital Water Main Loop	MLE		168,000					168,000
433	8021-533-6324	16WS06	Palm Vista Water Main & Force Main	WA-SRF		1,831,500					1,831,500
			I-95 Interchange/Pkwy Water Main & Force Main								
433	8021-533-6324	17WS02	Force Main	WA-SRF		1,136,250					1,136,250
433	8031-535-6325	16WS06	Palm Vista Water Main & Force Main	SW-SRF		2,238,500					2,238,500
			I-95 Interchange/Pkwy Water Main & Force Main								
433	8031-535-6325	17WS02	Force Main	SW-SRF		1,388,750					1,388,750

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FY 18 Five-Year Capital Improvements Program Summary continued											
(Utility Departments)											
Fund	Dept/Div	Project No.	Project Name	Funding Source	SCHEDULE OF ESTIMATED EXPENDITURES						Total
					Prior Years	FY 18	FY 19	FY 20	FY 21	FY 22	FY 18-FY 22
FY 19-FY 22 Additional (informational purposes only)											
			Utility Relocate - Babcock Street (FDOT Project)			2,300,000.00					2,300,000
Utilities		15WS03									
Utilities		14WS02	Elevated Walkways			284,000.00					284,000
Utilities		17WS08	I-95 Interchange Regional Lift Station			1,370,000.00					1,370,000
Utilities		16WS04	North Regional RO Plant Rehabilitation			355,000.00	4,610,000.00				4,965,000
Utilities		17WS05	WWTP Thickener Installation			787,000.00					787,000
Utilities		17WS06	Replacement of 1.5 MG Storage Tank			1,025,000.00					1,025,000
Utilities		16WS01	Treatment Unit Rehab			1,330,000.00					1,330,000
Utilities		TBD	WWTP & WRF Lights			225,000.00					225,000
Utilities		TBD	Lift Station Generator Replacements			275,000.00	275,000.00	275,000.00			825,000
Utilities		TBD	Lime Drying Unit - NRWTP			235,000.00	3,145,000.00				3,380,000
Utilities		TBD	NRWTP - Lime Silo Rehabilitation			230,000.00					230,000
Utilities		TBD	NRWTP - CO2 Storage Tank & Feed Repl			30,000.00	120,000.00				150,000
Utilities		TBD	Land Needs for Lift Stations			100,000.00	100,000.00	100,000.00			300,000
Utilities		TBD	WWTP 2nd Clarifier			1,490,000.00					1,490,000
Utilities		TBD	Fluoride System Replacement - NRWTP			112,000.00					112,000
Utilities		TBD	Reuse Pond at Majors Golf Course			200,000.00	6,150,000.00				6,350,000
Utilities		TBD	Babcock and Parkway WM/FM			325,000.00	3,075,000.00				3,400,000
			Lift Stations 1 and 2 Force Main								
Utilities		TBD	Replacement			460,000.00					460,000
Utilities		TBD	SR WRF Admin Building				200,000.00	500,000.00			700,000
Utilities		TBD	DIW Acidization				135,000.00				135,000
Utilities		TBD	WWTP/WRF Master Valve				208,000.00				208,000
Utilities		TBD	WRF - 3rd Disc Filter Installation				190,000.00				190,000
Utilities		TBD	WWTP Clarifier Mechanism Rehab				90,000.00	660,000.00			750,000
			WRF - UV Covers - Chlorine Contact Chamber				70,000.00				70,000
						</					

FY 18 Five-Year Community Investment Program Summary (Non Utility Departments)											
Fund	Dept/Div	Project No.	Project Name	Funding Source	Prior Years	SCHEDULE OF ESTIMATED EXPENDITURES					Total
						FY 18	FY 19	FY 20	FY 21	FY 22	FY 18-FY 22
Communications & Information Technology											
001	2310-519-6407	N/A	Servers for Public Administration & Safe	GENF		85,061	0	0	13,908	16,690	115,659
001	2310-519-6413	N/A	VOIP Network & Telephone Upgrade	GENF		640,000	124,000	134,000	144,000	154,000	1,196,000
Growth Management											
112	3353-554-6201	18FD01	Portion of Fire Station 5 Rebuild	CDBG		457,497					457,497
Parks & Recreation											
154	4050-572-6301	18PR01	MUSCO Control Link/Ballfield Lights	IMPR-PR		145,000					145,000
154	4050-572-6401	18PR03	Ballfield Base Enhancement	IMPR-PR		15,000					15,000
Police											
521	7070-519-6403	N/A	(6) Police Vehicles	GENF		163,444					163,444
Public Works											
301	7090-539-6301	13PW02	Bus Shelter Installation	GRANT/ GENF		50,000					50,000
461	7083-538-6309	18SU01	Various Stormwater/Culvert Locations	SWU		4,100,000					4,100,000
TOTAL NON-UTILITY DEPARTMENTS ONLY EXCLUDING BCRA						5,656,002	124,000	134,000	157,908	170,690	6,242,600
Bayfront Community Redevelopment Agency (BCRA)											
181	9110-559-6101	18CR02	Land Acquisition	BCRA-TIF		250,549					250,549
303	3090-541-6101	16CR02	BCRA Redevelopment Plan Projects	BOND		-50,000					-50,000
303	3090-559-6305	18CR01	Palm Bay Entrance Channel Dredging	BOND		50,000					50,000
TOTAL BAYFRONT COMMUNITY REDEVELOPMENT AGENCY (BCRA)						250,549	0	0	0	0	250,549
COMBINED TOTAL UTILITY & NON-UTILITY & BCRA											
						20,321,137	45,407,312	19,426,649	2,631,561	1,124,048	88,910,707

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Project Listing

Page	Project	Description	Anticipated Construction Year
Bayfront Community Redevelopment Agency Projects			
	Palm Bay Entrance Channel Dredging	Increase boating access to the Bay w/ 8' dredging	2019-20

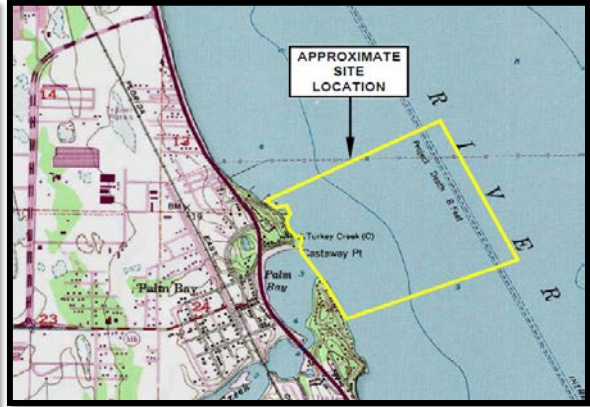
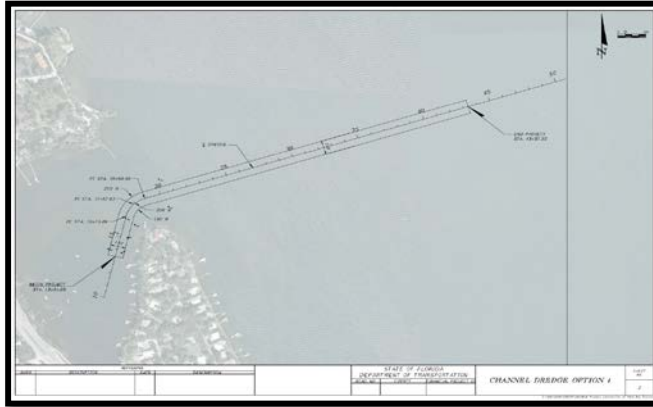
Impact on Operating Budget

Page	Project	Description	Annual Maintenance Costs
Bayfront Community Redevelopment Agency Projects			
	Palm Bay Entrance Channel Dredging	Increase boating access to the Bay w/ 8' dredging	0

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Palm Bay Entrance Channel Dredging Turkey Creek/Palm Bay Entrance Channel



Project Information

Project #: 18CR01
Account #: 303-3090-559-6305
Design Year: 2017
Construction Year: 2019-20
Project Status: Design/Permit Phase
Project Engineer: Infrastructure Engineering, Fank Hickson
Funding Source: BCRA & FIND Grant
Contractor: TBD

Project Description

The project consists of dredging operations from the mouth of Palm Bay to the Intercostal Channel of the Indian River in Palm Bay, Florida. The site is located at the terminus of Turkey Creek in Palm Bay, South of Castaway Point and north of Palm Bay Point. The proposed dredging area extends eastward to the Intercostal Waterway, Some 3,300 feet. We understand the dredging is required to allow for safe boat traffic through this area. It is anticipated that dredging operations will occur to a depth of 2 to 3 feet below the existing mudline in areas where the depth to water is 8 feet or less within the area of the proposed channel. In water depths of 8 feet or more dredging is not required due to sufficient water depth.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$25,000	\$50,000	\$0	\$0	\$0	\$0	\$75,000
Construction	\$0	\$0	\$500,000	\$0	\$0	\$0	\$500,000
Maintenance (every 10 years)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL PROJECT COST:	\$25,000	\$50,000	\$500,000	\$0	\$0	\$0	\$575,000

Impact on Operating Budget

Minimal impact to operating budget based on an expected cost-share grant for funding up to 75% of dredging costs. Any impact will be determined based on the final grant award and analysis of the estimated economic impact to the area by mooring larger boats having greater disposable income benefiting Palm Bay tourism and local restaurants.

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Project Listing

		Anticipated Construction Year
Project	Description	
Fire Projects		
Fire Station 5 Rebuild	Fire Station 5 Rebuild	2018

Impact on Operating Budget

		Annual Maintenance Costs
Project	Description	
Fire Projects		
Fire Station 5 Rebuild	Fire Station 5 Rebuild	minimal

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Fire Station 5 Rebuild 37 San Filippo Dr



Project Information

Project #: 18FD01
Account #: 153-6050-522-6201 TBD; 112-3353-554-6201
Design Year: 2018
Construction Year: 2018-2019
Project Status: In process
Project Engineer: TBD
Funding Source: Multiple (General, CDBG, etc.)
Contractor: TBD

Project Description

Palm Bay Fire Station 5 is in emergency need of replacement. This station was originally established with a residential double-wide manufactured home to serve as a temporary solution for the addition of a needed fire station. After approximately 19 years (1998), this structure has quantifiably outlived functionality, and multiple issues have arisen regarding health and safety of the response personnel assigned and the apparatus parked there—requiring immediate relocation of the response unit and personnel. The cost for repairs and modification of the existing structure to maintain functionality exceeds a responsible cost benefit point and fails to meet modern codes and safety standards. Hurricanes cause for the total evacuation of personnel and vital communications and computer equipment periodically. Impact upon Strategic Plan: City's Relationship with Citizens. Multiple Funding Sources to cover cost of rebuild and final costs to be determined at this time. Known costs so far is what was funded for portion of project by Community Development Block Grant Fund (CDBG) is \$457,497. First estimate was \$760,000 to complete project but funding or total of completed project is unknown at this time.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$0	\$110,000	\$0	\$0	\$0	\$0	\$110,000
Construction	\$0	\$347,497	\$0	\$0	\$0	\$0	\$347,497
Maintenance	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL PROJECT COST:	\$0	\$457,497	TBD	\$0	\$0	\$0	TBD

Impact on Operating Budget

Minimal impact to operating budget based on the addition of CDBG funds and other sources, funding will be determined based on the analysis of all financials.

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Project Listing

Anticipated
Construction
Year

Page	Project	Description	
Public Works Projects			
	Various Locations Stormwater Culvert Repl	Stormwater Culvert Replacements	2018
	SCAT Bus Shelter and Benches	Installation of bus shelters throughout City	2014-2021

Impact on Operating Budget

by Project

Summary

Annual
Maintenance
Costs

Page	Project	Description	
Public Works Projects			
	Various Locations Stormwater Culvert Repl	Stormwater Culvert Replacements	-
	SCAT Bus Shelter and Benches	Installation of bus shelters throughout City	3,000

\$ 3,000

FY18 Stormwater Program

Various culverts throughout the City of Palm Bay



Project Information

Project #: 18SU01
Design year: FY17 to FY18
Construction Year: FY17 to FY18
Project Status: Various
Project Engineer: Various Engineers
Funding Source: SWU
Contractor: Various

Project Description

Various Stormwater projects that require reconstruction, rehabilitation, and other improvements to enhance and maintain stormwater drainage throughout the City.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
Construction	\$0	\$3,935,000	\$3,935,000	\$3,935,000	\$3,935,000	\$3,935,000	\$19,675,000
Maintenance	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
Contingency	\$0	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000
TOTAL PROJECT COST:	\$0	\$4,100,000	\$4,100,000	\$4,100,000	\$4,100,000	\$4,100,000	\$20,500,000

Impact on Operating Budget

Survey and Design to be conducted with in-house staff and consultants as needed. Construction will most likely be contracted out but may be constructed in-house. With planned improvements, operational maintenance cost should be reduced overtime.

SCAT Bus Shelters and Benches

Various locations throughout the City of Palm Bay



Project Information

Project #:	13PW02
Design year:	FY13 to FY16
Construction Year:	FY17 to FY21
Project Status:	Construction
Project Engineer:	Hector I Franco
Funding Source:	SCAT
Contractor:	Various

Project Description

Per SCAT contract Installation of 5 bus shelters and benches at various bus stop locations throughout the city determined by SCAT.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$7,317	\$2,817	\$0	\$0	\$0	\$0	\$10,134
Construction	\$83,229	\$25,416	\$0	\$0	\$0	\$0	\$108,645
Maintenance	\$38,750	\$40,745	\$0	\$0	\$0	\$0	\$79,495
Contingency	\$14,348	\$4,154	\$0	\$0	\$0	\$0	\$18,502
TOTAL PROJECT COST:	\$143,644	\$73,132	\$0	\$0	\$0	\$0	\$216,776

Impact on Operating Budget

The City is required, as part of the interlocal agreement with Space Coast Area Transit (SCAT), to maintain the benches and shelters. Maintenance includes trash removal, cleaning and monitoring the site conditions. If bench or shelter parts are damaged, the City shall get replacement parts from SCAT and makes the needed repairs. The maintenance cost are calculated as follows: currently there are 21 shelters and 32 benches in place, with future projection of 3 shelters and 4 benches. Each location will be checked bi-weekly for trash pick-up and general maintenance at 1 hour for each location (includes travel time). Total maintenance costs per year, per shelter location = 1 hour bi-weekly or 26 hours yearly at \$20.26/hr. (Labor includes overhead), \$5.49/hr. (Equipment) and \$40.00 (Materials) = \$709.54 annually. Total maintenance costs per year, per bench location = 1 hour bi-weekly or 26 hours yearly at \$13.33/hr. (Labor), \$5.49/hr. (Equipment) and \$20.00 (Materials) = \$689.54 yearly. When all the benches and shelters are completed the projected annual cost for 34 locations (1 location is not maintained by the City) will be \$23,724. Future annual maintenance is estimated at a 6% increase to account for increased equipment, fuel and material costs as well a potential future employee raises.

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Project Listing

Page	Project	Description	Anticipated Construction Year
Utilities Projects			
	Reuse High Service Pumps Replacement	Replacement of Vertical Turbine Pumps at the North Regional Water Reclamation Facility	2018
	Palm Vista Lift Station	Construction of Regional Lift Station to Service New Development at West End of the City	2018
	Water Reclamation Facility Denitrification Project	Demolish Steel Tank and Replace with a New Steel Tank Along with Polymer System at the North Regional Water Reclamation Facility	2018
	North Regional Water Treatment Plant Slaker Replacement	Replacement of Second Lime Slaker at the North Regional Water Treatment Plant	2018
	Deep Injection Well Reservoir Rehabilitation	Rehabilitation of the Lining of the Pond Reservoir at the North Regional Wastewater Treatment Plant Deep Injection Well	2018
	Palm Vista Water Main & Force Main	Construction of Force Main and Water Main Along Heritage Parkway, North of Malabar Road	2018
	San Filippo Water Main Extension	Loop Water Mainline from 16" Main at DeGroodt to Proposed Water Main Line on Cogan	2019
	South Regional Water Reclamation Facility	Construction of 1.0 MGD Water Reclamation Facility at the South Regional Utility Site	2019
	I-95 Interchange/Parkway Water Main & Force Main	Construction of Water Main and Force Main Along the Parkway, East of Babcock Street	2018
	South Regional Water Treatment Plant Expansion	Expansion of the South Regional Water Treatment Plant From 4 MGD to 6 MGD	2019
	North Regional Water Treatment Plant Sulfuric Acid Tank & Feed System Replacement	Removal and Replacement of Sulfuric Acid Tank and Feed System at the North Regional Water Treatment Plant	2018
	Replacement of Large Diameter Steel Pipe	Final Phase for Replacement of Above-Ground Large Diameter Water Pipes at the North Regional Water Treatment Plant	2014-2018
	North Regional Water Treatment Plant High Service Pumps Replacement	Replacement of High Service Pumps at the North Regional Water Treatment Plant	2019
	Palm Bay Hospital Water Main Loop	Installation of a Loop Water Main from North of the Hospital Site Along the East Side of the Hospital to Provide Secondary Feed	2018
	Air Release Valves Upgrade Program	Replacement of Air Release Valves on the Force Main Network Throughout the Collection System	2018-2022
	Wastewater Treatment Plant Digester 6 Rehabilitation	Complete Rehabilitation of Digester 6 at the North Regional Wastewater Treatment Plant	2018
	Lift Stations Radio Transmitter Unit Replacement Program	Annual Replacement Program for Radio Transmitter Units on the City's Lift Stations	2018-2022
	Lift Stations Electrical Panel Replacement Program	Replacement of Electrical Panels for Various Lift Stations	2018-2022
	North Regional Water Treatment Plant Supervisory Control & Data Acquisition Improvements	Update SCADA Software, Hardware and Programmable Logic Control at the North Regional Water Treatment Plant	2018
	Cable Lane Sewer Replacement	Replacement of 800' of 8" Vitrified Clay Pipe in Rear Lot Line Behind Homes on Cable Lane NE	2018
	Wastewater Treatment Plant Odor Control at Headworks	Addition of Odor Control at the Headworks at the North Regional Wastewater Treatment Plant	2019
	Wastewater Treatment Plant Bar Screen Replacement	Replacement of the Bar Screen at the North Regional Wastewater Treatment Plant	2019
	Return Activated Sludge/Waste Activated Sludge Pump Rehabilitation	Rehabilitation of Pumps and Roof Structure at the Return Activated Sludge/Waste Activated Sludge Pump Pad at North Regional Wastewater Treatment Plant	2019
	Wastewater Treatment Plant Grit Pump & Motor Control Center Rehabilitation	Replacement of Grit Pump and Shelter for Mechanical Control Center at the North Regional Wastewater Treatment Plant	2019
	North Regional Water Treatment Plant Chlorine Analyzers Replacement	Replacement of All Chlorine Analyzers at the North Regional Water Treatment Plant	2018
	Surficial Well Field Flow Meters Replacement	Replacement of Meter Flow Heads for All Surficial Wells (35)	2018
	North Regional Water Treatment Plant Generator & Air Compressor Replacement	Replacement of Generator and Air Compressor at the North Regional Water Treatment Plant	2019
	North Regional Water Treatment Plant Treatment Unit Aerator Tray	Installation of Aerator Tray on Treatment Unit #2 at North Regional Water Treatment Plant	2019
	Lift Station Valve Pit Elimination Program	Program to Eliminate Lift Station Valve Pits and Replace with Epoxy-lined or Stainless Steel Pipe and Fittings	2018-2022
	Lift Station 4 Generator Installation	Installation of Stand-by Generator at Lift Station 4	2018
	North Regional Water Treatment Plant Rear Yard Swale & Fence Improvements	Installation of Chain Link Fencing and Swale at the North Regional Water Treatment Plant	2018
	Secondary Ponds Valve Improvements	Replacement of Valve and Pipe that Connect Secondary Pond No. 1 to No. 2 at North Regional Wastewater Treatment Plant	2018

Appendix B

Impact on Operating Budget

Page	Project	Description	Annual Maintenance Costs
Utilities Projects			
	Reuse High Service Pumps Replacement	Replacement of Vertical Turbine Pumps at the North Regional Water Reclamation Facility	\$ -
	Palm Vista Lift Station	Construction of Regional Lift Station to Service New Development at West End of the City	\$ 10,000
	Water Reclamation Facility Denitrification Project	Demolish Steel Tank and Replace with a New Steel Tank Along with Polymer System at the North Regional Water Reclamation Facility	\$ -
	North Regional Water Treatment Plant Slaker Replacement	Replacement of Second Lime Slaker at the North Regional Water Treatment Plant	\$ -
	Deep Injection Well Reservoir Rehabilitation	Rehabilitation of the Lining of the Pond Reservoir at the North Regional Wastewater Treatment Plant Deep Injection Well	\$ -
	Palm Vista Water Main & Force Main	Construction of Force Main and Water Main Along Heritage Parkway, North of Malabar Road	\$ -
	San Filippo Water Main Extension	Loop Water Mainline from 16" Main at DeGroodt to Proposed Water Main Line on Cogan	\$ -
	South Regional Water Reclamation Facility	Construction of 1.0 MGD Water Reclamation Facility at the South Regional Utility Site	\$ 728,050
	I-95 Interchange/Parkway Water Main & Force Main	Construction of Water Main and Force Main Along the Parkway, East of Babcock Street	\$ -
	South Regional Water Treatment Plant Expansion	Expansion of the South Regional Water Treatment Plant From 4 MGD to 6 MGD	\$ 20,000
	North Regional Water Treatment Plant Sulfuric Acid Tank & Feed System Replacement	Removal and Replacement of Sulfuric Acid Tank and Feed System at the North Regional Water Treatment Plant	\$ -
	Replacement of Large Diameter Steel Pipe	Final Phase for Replacement of Above-Ground Large Diameter Water Pipes at the North Regional Water Treatment Plant	\$ -
	North Regional Water Treatment Plant High Service Pumps Replacement	Replacement of High Service Pumps at the North Regional Water Treatment Plant	\$ -
	Palm Bay Hospital Water Main Loop	Installation of a Loop Water Main from North of the Hospital Site Along the East Side of the Hospital to Provide Secondary Feed	\$ -
	Air Release Valves Upgrade Program	Replacement of Air Release Valves on the Force Main Network Throughout the Collection System	\$ -
	Wastewater Treatment Plant Digester 6 Rehabilitation	Complete Rehabilitation of Digester 6 at the North Regional Wastewater Treatment Plant	\$ -
	Lift Stations Radio Transmitter Unit Replacement Program	Annual Replacement Program for Radio Transmitter Units on the City's Lift Stations	\$ -
	Lift Stations Electrical Panel Replacement Program	Replacement of Electrical Panels for Various Lift Stations	\$ -
	North Regional Water Treatment Plant Supervisory Control & Data Acquisition Improvements	Update SCADA Software, Hardware and Programmable Logic Control at the North Regional Water Treatment Plant	\$ -
	Cable Lane Sewer Replacement	Replacement of 800' of 8" Vitrified Clay Pipe in Rear Lot Line Behind Homes on Cable Lane NE	\$ -
	Wastewater Treatment Plant Odor Control at Headworks	Addition of Odor Control at the Headworks at the North Regional Wastewater Treatment Plant	\$ -
	Wastewater Treatment Plant Bar Screen Replacement	Replacement of the Bar Screen at the North Regional Wastewater Treatment Plant	\$ -
	Return Activated Sludge/Waste Activated Sludge Pump Rehabilitation	Rehabilitation of Pumps and Roof Structure at the Return Activated Sludge/Waste Activated Sludge Pump Pad at North Regional Wastewater Treatment Plant	\$ -
	Wastewater Treatment Plant Grit Pump & Motor Control Center Rehabilitation	Replacement of Grit Pump and Shelter for Mechanical Control Center at the North Regional Wastewater Treatment Plant	\$ -
	North Regional Water Treatment Plant Chlorine Analyzers Replacement	Replacement of All Chlorine Analyzers at the North Regional Water Treatment Plant	\$ -
	Surficial Well Field Flow Meters Replacement	Replacement of Meter Flow Heads for All Surficial Wells (35)	\$ -
	North Regional Water Treatment Plant Generator & Air Compressor Replacement	Replacement of Generator and Air Compressor at the North Regional Water Treatment Plant	\$ -
	North Regional Water Treatment Plant Treatment Unit Aerator Tray	Installation of Aerator Tray on Treatment Unit #2 at North Regional Water Treatment Plant	\$ -
	Lift Station Valve Pit Elimination Program	Program to Eliminate Lift Station Valve Pits and Replace with Epoxy-lined or Stainless Steel Pipe and Fittings	\$ -
	Lift Station 4 Generator Installation	Installation of Stand-by Generator at Lift Station 4	\$ -
	North Regional Water Treatment Plant Rear Yard Swale & Fence Improvements	Installation of Chain Link Fencing and Swale at the North Regional Water Treatment Plant	\$ -
	Secondary Ponds Valve Improvements	Replacement of Valve and Pipe that Connect Secondary Pond No. 1 to No. 2 at North Regional Wastewater Treatment Plant	\$ -
			<u>\$ 758,050</u>

Appendix B

Reuse High Service Pumps Replacement North Regional Water Reclamation Facility



Project Information

Project #: 18WS01
Account #: 424-8032-535-6221
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is the replacement of the vertical turbine pumps that distribute reuse to our customers. The existing pumps are over twenty-five (25) years old (beyond their useful life) and one pump is inoperable.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$50,000					\$50,000
Permitting		\$1,000					\$1,000
Equipment/Materials		\$250,000					\$250,000
Construction/Installation		\$250,000					\$250,000
Construction Services		\$15,000					\$15,000
TOTAL PROJECT COST:	\$0	\$566,000	\$0	\$0	\$0	\$0	\$566,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Palm Vista Lift Station

Malabar Road in New Development Where FPL Line is Located



Project Information

Project #: 16WS07
Account #: 421-8030-535-6327
Design Year: FY 16-17
Construction Year: FY 18
Project Status: Design is Underway
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Operating (UTO)
Contractor: TBD

Project Description

The purpose of this project is to construct a regional lift station to service the new development on the west end of the City, west of the Department of Public Works facility. This regional lift station will reduce force main system pressures throughout the City, and require new developments to have smaller pumps for their lift stations due to the reduced pressures.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$114,980						\$114,980
Construction/Installation		\$1,300,000					\$1,300,000
Construction Services		\$80,000					\$80,000
TOTAL PROJECT COST:	\$114,980	\$1,380,000	\$0	\$0	\$0	\$0	\$1,494,980

Impact on Operating Budget

Upon construction of the lift station, anticipate an annual operational impact of approximately \$10,000 for electricity, chemicals, maintenance, etc.

Appendix B

Water Reclamation Facility Denitrification Project

North Regional Water Reclamation Facility



Project Information

Project #: 17WS16
Account #: 421-8034-535-6221
Design Year: FY 17
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Indian River Lagoon Tax (IRLT)
Contractor: TBD

Project Description

This project was identified in the development of the Brevard County Indian River Lagoon Improvements. The scope of work is to demo an existing onsite steel tank and replace it with an appropriately sized new steel tank along with a polymer system to remove nitrogen and phosphorus prior to distributing it in our reuse system. The purpose of reducing nitrogen and phosphorus for reuse is that these components cause algae blooms in the Lagoon reducing the amount of dissolved oxygen. By reducing nitrogen and phosphorus in the reuse, this will limit the amount that makes its way into our waterways by means of runoff.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$196,000						\$196,000
Construction/Installation		\$1,300,000					\$1,300,000
TOTAL PROJECT COST:	\$196,000	\$1,300,000	\$0	\$0	\$0	\$0	\$1,496,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

North Regional Water Treatment Plant Slaker Replacement

North Regional Water Treatment Plant



Project Information

Project #: 18WS02
Account #: 424-8022-533-6221
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is for the replacement of the second of two lime slakers at the North Regional Water Treatment Plant (NRWTP). The first lime slaker is being replaced as an emergency purchase in FY 17 as a result of both being beyond their service life, one being inoperable and the second in substandard level. Without these slakers in operation, the NRWTP cannot provide potable water. Installation will be done in-house.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$5,000					\$5,000
Equipment/Materials		\$160,000					\$160,000
TOTAL PROJECT COST:	\$0	\$165,000	\$0	\$0	\$0	\$0	\$165,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Deep Injection Well Reservoir Rehabilitation

North Regional Wastewater Treatment Plant Deep Injection Well



Project Information

Project #: 17WS15
Account #: 424-8032-535-6326
Design Year: FY 17
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

Currently, the deep injection well (DIW) reservoir has begun to develop cracks that need to be addressed. The effort is to develop a bid document to rehabilitate the lining of the pond reservoir. The reservoir of the pond contains treated wastewater which goes down the DIW.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$30,000						\$30,000
Construction/Installation		\$125,000					\$125,000
TOTAL PROJECT COST:	\$30,000	\$125,000	\$0	\$0	\$0	\$0	\$155,000

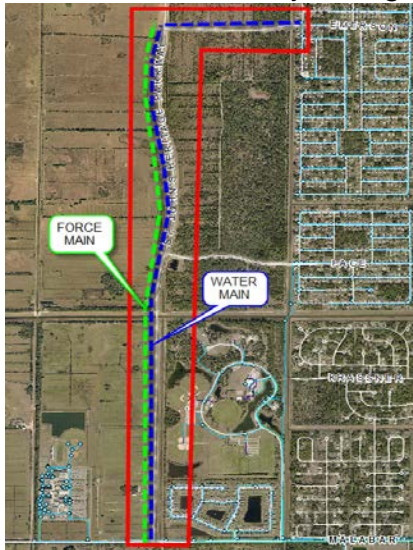
Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Palm Vista Water Main & Force Main

Northwest Palm Bay Along Heritage Parkway



Project Information

Project #:	16WS06
Account #:	421-8020-533-6324; 421-8030-535-6325; 433-8021-533-6324; 433-8031-535-6325
Design Year:	FY 16-FY17
Construction Year:	FY 18
Project Status:	Design Underway
Project Engineer:	Utilities Engineer/Wade Trim
Funding Source:	Utilities Operating (UTO), Water State Revolving Fund (WA-SRF) and Sewer State Revolving Fund (SW-SRF)
Contractor:	TBD

Project Description

This project is for a mainline force main and water main along the Heritage Parkway, north of Malabar Road. These lines will serve as the utility backbone to provide water and sewer services for all future development along this corridor. Currently, there are no utility service lines in this area, and without these lines future developments will not be able to connect to the City's utilities system.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$135,635						\$135,635
Construction/Installation		\$4,000,000					\$4,000,000
Construction Services		\$70,000					\$70,000
TOTAL PROJECT COST:	\$135,635	\$4,070,000	\$0	\$0	\$0	\$0	\$4,205,635

Impact on Operating Budget

Upon completion of the project, anticipate an annual operational impact of approximately \$225,035 for debt service.

Appendix B

San Filippo Water Main Extension

San Filippo from DeGroodt to Cogan



Project Information

Project #: 18WS03
Account #: 423-8021-533-6324 and 433-8021-533-6324
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Water Connection Fees (WA-CONN) and Water State Revolving Fund (WA-SRF)
Contractor: TBD

Project Description

This project will loop a mainline water, connecting it from the 16 inch main at DeGroodt to the proposed water mainline on Cogan. The bid documents for this project that were created in 2008 will be revised for advertisement of construction bid.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$25,000					\$25,000
Permitting		\$5,000					\$5,000
Construction/Installation			\$2,200,000				\$2,200,000
Construction Services			\$35,000				\$35,000
TOTAL PROJECT COST:	\$0	\$30,000	\$2,235,000	\$0	\$0	\$0	\$2,265,000

Impact on Operating Budget

Upon completion of the project, anticipate an annual operational impact of approximately \$123,576 for debt service.

Appendix B

South Regional Water Reclamation Facility

South Regional Campus



Project Information

Project #: 16WS05
Account #: 423-8031-535-6221 and 433-8031-535-6221
Design Year: FY 16-FY 18
Construction Year: FY 19
Project Status: Design Underway
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Sewer Connection Fees (SW-CONN) and Sewer State Revolving Fund (SW-SRF)
Contractor: TBD

Project Description

Construction of a 1.0 million gallon per day (MGD) water reclamation facility (WRF) expandable to 2.0 MGD at the South Regional Utility site. Included is the force main to the treatment facility. This wastewater facility will serve all of southeast Palm Bay, including the new developments anticipated. Our existing collection and treatment system cannot accommodate the anticipated wastewater flows without this new facility.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$480,000	\$150,000					\$630,000
Construction/Installation			\$18,000,000				\$18,000,000
Construction Services			\$850,000				\$850,000
TOTAL PROJECT COST:	\$480,000	\$150,000	\$18,850,000	\$0	\$0	\$0	\$19,480,000

Impact on Operating Budget

Upon completion of the Water Reclamation Facility, force mains and reclaimed water distribution main, anticipate an annual operational impact of approximately \$728,050 to include personnel and operating/maintenance costs, and approximately \$1,042,236 for debt service.

Appendix B

I-95 Interchange/Parkway Water Main & Force Main

I-95 and Proposed Parkway



Project Information

Project #:	17WS02
Account #:	423-8021-533-6324; 423-8031-535-6325; 433-8021-533-6324; 433-8031-535-6325
Design Year:	FY 17-FY 18
Construction Year:	FY 18-FY 19
Project Status:	Design Underway
Project Engineer:	Utilities Engineer/Wade Trim
Funding Source:	Water Connection Fees (WA-CONN), Sewer Connection Fees (SW-CONN), Water State Revolving Fund (WA-SRF), Sewer State Revolving Fund (SW-SRF)
Contractor:	TBD

Project Description

This project is for the design and construction of the mainline water main and force main along the parkway, east of Babcock Street. This line will serve as the utility backbone for all developments along this corridor. Definite sizing of the utilities will be determined based on developer agreements providing their ERC density.

Project Costs	2017/Prior	2018	2019	2020	2021	2022	TOTAL
Survey, Engineering and Design	\$139,374	\$38,500					\$177,874
Construction/Installation		\$2,500,000					\$2,500,000
Construction Services		\$25,000					\$25,000
TOTAL PROJECT COST:	\$139,374	\$2,563,500	\$0	\$0	\$0	\$0	\$2,702,874

Impact on Operating Budget

Upon completion of the project, anticipate an annual operational impact of approximately \$141,739 for debt service.

Appendix B

South Regional Water Treatment Plant Expansion

South Regional Water Treatment Plant



Project Information

Project #: 18WS04
Account #: 423-8021-533-6221
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Water Connection Fees (WA-CONN) and Water State Revolving Fund (WA-SRF)
Contractor: TBD

Project Description

This project is to expand the South Regional Water Treatment Plant (SRWTP) treatment capacity from 4 million gallons per day (MGD) to 6 MGD. In doing so this will require new Reverse Osmosis (RO) skids, replacement of existing RO membranes, and installation of new RO well. In addition, with the plant being over ten (10) years old, this project will include various other projects to replace or modify existing process equipment. This project will meet the future water demands with the anticipated development.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$500,000					\$500,000
Permitting		\$10,000					\$10,000
Construction/Installation			\$9,000,000				\$9,000,000
Construction Services			\$200,000				\$200,000
TOTAL PROJECT COST:	\$0	\$510,000	\$9,200,000	\$0	\$0	\$0	\$9,710,000

Impact on Operating Budget

Upon completion of the treatment capacity expansion, anticipate an annual operational impact of approximately \$20,000 for electricity, chemicals, maintenance, etc. and approximately \$508,678 for debt service.

Appendix B

North Regional Water Treatment Plant Sulfuric Acid Tank & Feed System Replacement

North Regional Water Treatment Plant



Project Information

Project #:	18WS05
Account #:	424-8022-533-6221
Design Year:	FY 18
Construction Year:	FY 18
Project Status:	Not Started
Project Engineer:	Utilities Engineer/Wade Trim
Funding Source:	Utilities Renewal & Replacement (UTRR)
Contractor:	TBD

Project Description

This project is for the removal and replacement of the existing sulfuric acid tank and feed system at the North Regional Water Treatment Plant (NRWTP). Currently, the existing system is leaking; when the tank begins to leak, as it is currently, it is a sign that replacement is necessary. This project is a key process for the NRWTP in providing potable water for our customers.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$40,000					\$40,000
Construction/Installation		\$150,000					\$150,000
TOTAL PROJECT COST:	\$0	\$190,000	\$0	\$0	\$0	\$0	\$190,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Replacement of Large Diameter Steel Pipe North Regional Water Treatment Plant



Project Information

Project #: 12WS02
Account #: 424-8022-533-6221
Design Year: FY 13-FY 17
Construction Year: FY 14-FY 18
Project Status: Ongoing
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: Mechanical Industrial Services, Inc., Florida Design Drilling Corporation and L7 Construction Inc.

Project Description

This project is the final phase of a three phase initiative to replace all the above-ground large diameter water pipes at the NRWTP. Per the 2013 Lime Softening Plant Condition Assessment by Wade Trim, it was identified that the majority of the large diameter pipe had less than desirable structural integrity. This is in large part to the age of the pipes being approximately forty (40) years old. If this work is not completed, there is the risk for pipe break causing a stoppage in the production of potable water.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$223,915						\$223,915
Construction/Installation	\$1,297,781	\$300,000					\$1,597,781
Construction Services	\$25,000	\$12,000					\$37,000
Other	\$34,288						\$34,288
TOTAL PROJECT COST:	\$1,580,984	\$312,000	\$0	\$0	\$0	\$0	\$1,892,984

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

North Regional Water Treatment Plant High Service Pumps Replacement

North Regional Water Treatment Plant



Project Information

Project #: 18WS06
Account #: 424-8022-533-6221
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is the replacement of the high service pumps at the North Regional Water Treatment Plant (NRWTP). These pumps are how the water system pressures are controlled in the north part of the City. These pumps are over twenty-five (25) years old and beyond their useful life.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$105,000					\$105,000
Construction/Installation			\$600,000				\$600,000
Construction Services			\$20,000				\$20,000
TOTAL PROJECT COST:	\$0	\$105,000	\$620,000	\$0	\$0	\$0	\$725,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Palm Bay Hospital Water Main Loop

Palm Bay Hospital



Project Information

Project #: 18WS07
Account #: 425-8021-533-6324
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Main Line Extension (MLE)
Contractor: TBD

Project Description

Currently, Palm Bay Hospital is provided water service from the water main on Malabar Road. This project will add a loop water main from north of the site along the east side of the hospital to provide a secondary feed for the hospital. This will provide a greater reliability of water for the hospital.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$13,000					\$13,000
Construction/Installation		\$150,000					\$150,000
Construction Services		\$5,000					\$5,000
TOTAL PROJECT COST:	\$0	\$168,000	\$0	\$0	\$0	\$0	\$168,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Air Release Valves Upgrade Program Throughout the Collection System



Project Information

Project #: 18WS08
Account #: 424-8032-535-6325
Design Year: N/A
Construction Year: FY 18-FY 22
Project Status: Not Started
Project Engineer: N/A
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

Several air release valves (ARVs) on the force main network throughout the City are undersized for current flow and amount of air entrapment within the pipeline. Installation of these units will allow release of air entrapment and lower system pressures throughout the City, allowing more efficient use of lift station pumps running less frequently due to lower head conditions. We also need to replace an air release valve to the incoming force main at Lift Station 9 to reduce hydrogen sulfide gas buildup within the lift station. To be replaced in FY18: (1) Lift Station 9 force main; (2) SARV-02-N016-0511 Mobil gas station west of I-95 on Malabar Road (20"); (3) SARV-02-N021-0512 Babcock Street and C-1 canal crossing (16"); (4) SARV-02-10-000A-01 City Hall canal crossing (16"); (5) SARV-02-N015-0017 Malabar Road east of Dunkin Donuts (16").

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Equipment/Materials		\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$300,000
Construction/Installation		\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$200,000
TOTAL PROJECT COST:	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Wastewater Treatment Plant Digester 6 Rehabilitation North Regional Wastewater Treatment Plant



Project Information

Project #: 18WS09
Account #: 424-8032-535-6221
Design Year: FY 18
Construction Year: FY18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is to perform a complete rehabilitation of Digester 6 which will include the inside of the tank and pipes which feed into the tank. This digester is over thirty (30) years old without any rehabilitation. Digester 6 is critical to our operation in creating Class B biosolids which can be sent to sod farms. Otherwise, the biosolids will have to go to the land fill.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$30,000					\$30,000
Construction/Installation		\$370,000					\$370,000
Construction Services		\$15,000					\$15,000
TOTAL PROJECT COST:	\$0	\$415,000	\$0	\$0	\$0	\$0	\$415,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Lift Stations Radio Transmitter Units Replacement Throughout the Lift Station Collection Area



Project Information

Project #: 18WS10
Account #: 424-8032-535-6327
Design Year: N/A
Construction Year: FY 18-FY 22
Project Status: Not Started
Project Engineer: N/A
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is an annual replacement program to replace the Radio Transmitter Units (RTU) on the City's lift stations. The RTUs function as the programmable logic for the lift stations to our supervisory control and data acquisition (SCADA) system, and provides the radio signal to our facilities of how they are functioning. Currently, the RTUs are over twenty (20) years old and beyond their useful life. This annual program will allow us to replace approximately twenty (20) RTUs per year with a complete replacement within five (5) years.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Construction/Installation		\$169,612	\$169,612	\$169,612	\$169,612	\$169,612	\$848,060
TOTAL PROJECT COST:	\$0	\$169,612	\$169,612	\$169,612	\$169,612	\$169,612	\$848,060

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Lift Station Electrical Panel Replacements

Lift Stations 15, 19, 24, 25, 28 and 33



Project Information

Project #: 18WS11
Account #: 424-8032-535-6327
Design Year: N/A
Construction Year: FY 18-FY 22
Project Status: Not Started
Project Engineer: N/A
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

Various lift station panels are old, worn, and obsolete. Superior products available today have longer life expectancy, are more efficient and are safer than existing electrical panels. Installation is required due to high workload of other types of preventative maintenance on Electrical Technicians assigned to the Collections Section. Costs are based on FY 18 quotes, allowing 5% annual increases. Five (5) panels will be completed per year based upon wear and condition of the panels.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Equipment/Materials		\$106,500	\$111,825	\$117,417	\$123,288	\$129,453	\$588,483
Construction/Installation		\$30,000	\$31,500	\$33,075	\$34,729	\$36,466	\$165,770
TOTAL PROJECT COST:	\$0	\$136,500	\$143,325	\$150,492	\$158,017	\$165,919	\$754,253

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

North Regional Water Treatment Plant Supervisory Control & Data Acquisition Improvements

North Regional Water Treatment Plant



Project Information

Project #: 18WS12
Account #: 424-8022-533-6407
Design Year: N/A
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

The purpose of this project is as follows: update the Supervisory Control and Data Acquisition (SCADA) software at the North Regional Water Treatment Plant (NRWTP) with the most current version, replace SCADA computers, replace one (1) programmable logic control (PLC), and develop new screenshots. The current SCADA system is over fifteen (15) years old and much out of date. This project will address the upgrades to software and hardware needed for the operators to oversee the NRWTP.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Equipment/Materials		\$8,000					\$8,000
Computers		\$8,000					\$8,000
Construction/Installation		\$65,000					\$65,000
TOTAL PROJECT COST:	\$0	\$81,000	\$0	\$0	\$0	\$0	\$81,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Cable Lane Sewer Replacement

Cable Lane NE



Project Information

Project #: 14WS07
Account #: 424-8032-535-6325
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

Project is to replace 800' of 8" Vitrified Clay Pipe (VCP) in the rear lot line behind homes on Cable Lane NE and add one sanitary sewer manhole. The 8" VCP mainline and customer laterals have become degraded over time due to root, age, and soil conditions.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$10,000					\$10,000
Construction/Installation	\$195,000	\$190,000					\$385,000
TOTAL PROJECT COST:	\$195,000	\$200,000	\$0	\$0	\$0	\$0	\$395,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Wastewater Treatment Plant Odor Control at Headworks North Regional Wastewater Treatment Plant



Project Information

Project #: 18WS13
Account #: 421-8034-535-6221
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Operating (UTO)
Contractor: TBD

Project Description

This project is for the improvement of the odor situation at the Wastewater Treatment Plant. Adding an odor control at the headworks will reduce odors which will reduce complaints from the surrounding area.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$48,000					\$48,000
Construction/Installation			\$560,000				\$560,000
Construction Services			\$28,000				\$28,000
TOTAL PROJECT COST:	\$0	\$48,000	\$588,000	\$0	\$0	\$0	\$636,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Wastewater Treatment Plant Bar Screen Replacement

North Regional Wastewater Treatment Plant



Project Information

Project #: 18WS14
Account #: 424-8032-535-6221
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is for the replacement of the bar screen at the North Regional Wastewater Treatment Plant (NRWWTP). The bar screen removes large debris, especially rags, prior to the flow entering the treatment process. Currently, the bar width is too wide causing rags to flow into the process units causing excess mechanical breakdowns and additional effort of maintenance staff to address. The replacement bar screen will be a fine bar screen with smaller spacing thus removing more rags from the influent flow.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$40,000					\$40,000
Equipment/Materials			\$150,000				\$150,000
Construction/Installation			\$200,000				\$200,000
Construction Services			\$18,000				\$18,000
TOTAL PROJECT COST:	\$0	\$40,000	\$368,000	\$0	\$0	\$0	\$408,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Return Activated Sludge/Waste Activated Sludge Pump Rehabilitation

North Regional Wastewater Treatment Plant RAS/WAS Pump Pad



Project Information

Project #: 18WS15
Account #: 424-8032-535-6221
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is the complete rehabilitation of the all the pumps and the roof structure at the return activated sludge (RAS)/waste activated sludge (WAS) pump pad. The pumps to be rehabilitated include the RAS, WAS and scum disposal. In addition, all variable frequency drives (VFDs) for the pumps are to be replaced, plus the demolition of the existing roof structure with a replacement roof and vertical walls. The existing facility is over thirty (30) years old, well beyond its useful life. The existing roof provides no UV protection for the equipment which the new structure will address.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$65,000					\$65,000
Construction/Installation			\$450,000				\$450,000
Construction Services			\$20,000				\$20,000
TOTAL PROJECT COST:	\$0	\$65,000	\$470,000	\$0	\$0	\$0	\$535,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Wastewater Treatment Plant Grit Pump & Mechanical Control Center Rehabilitation

North Regional Wastewater Treatment Plant



Project Information

Project #: 18WS16
Account #: 424-8032-535-6221
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is to provide adequate shelter for the Wastewater Treatment Plant (WWTP) Mechanical Control Center (MCC). Currently, this area is exposed to UV rays and the roof leaks onto the equipment. This project will demolish the existing shelter and replace it with vertical walls to block out the UV from critical MCCs. In addition, the grit pump is located in the area and will be replaced due to its age of over twenty (20) years.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$65,000					\$65,000
Construction/Installation			\$320,000				\$320,000
TOTAL PROJECT COST:	\$0	\$65,000	\$320,000	\$0	\$0	\$0	\$385,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

North Regional Water Treatment Plant Chlorine Analyzers Replacement

North Regional Water Treatment Plant



Project Information

Project #: 18WS17
Account #: 424-8022-533-6221
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is for the replacement of all of the chlorine analyzers at the North Regional Water Treatment Plant (NRWTP). These analyzers are critical for the operation of the treatment plant and provides chlorine readings throughout the treatment process to allow the operators to make adjustments as needed. The current analyzers are beyond their useful life.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$10,000					\$10,000
Construction/Installation		\$120,000					\$120,000
TOTAL PROJECT COST:	\$0	\$130,000	\$0	\$0	\$0	\$0	\$130,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Surficial Well Field Flow Meters Replacement

All Surficial Wells for North Regional Water Treatment Plant



Project Information

Project #: 18WS18
Account #: 424-8022-533-6318
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

The purpose of this project is to replace all of the meter flow heads for all the surficial wells (35 wells). The flow meter heads are what keeps measure of the water withdrawn which is a permit requirement of the St. Johns River Water Management District (SJRWMD). The current meter heads are past their useful life.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$10,000					\$10,000
Construction/Installation		\$40,000					\$40,000
TOTAL PROJECT COST:	\$0	\$50,000	\$0	\$0	\$0	\$0	\$50,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

North Regional Water Treatment Plant Generator & Air Compressor Replacement

North Regional Water Treatment Plant



Project Information

Project #: 18WS19
Account #: 424-8022-533-6221
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

This project is to address the beyond useful life of the North Regional Water Treatment Plant (NRWTP) emergency backup generator and the undersized air compressor. The generator is over thirty (30) years old (beyond its useful life) and requires replacement. The generator serves the NRWTP when FPL power is ceased for whatever reason. The air compressor located adjacent to the generator serves as a secondary compressor, however, it is only 80% of the needed capacity.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$65,000					\$65,000
Equipment/Materials			\$120,000				\$120,000
Construction/Installation			\$300,000				\$300,000
Construction Services			\$18,000				\$18,000
TOTAL PROJECT COST:	\$0	\$65,000	\$438,000	\$0	\$0	\$0	\$503,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

North Regional Water Treatment Plant Treatment Unit Aerator Tray

North Regional Water Treatment Plant



Project Information

Project #: 18WS20
Account #: 421-8024-533-6221
Design Year: FY 18
Construction Year: FY 19
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Operating (UTO)
Contractor: TBD

Project Description

The addition of an aerator tray on Treatment Unit #2 to remove Total Organic Carbon (TOC) from the water.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$40,000					\$40,000
Construction/Installation			\$150,000				\$150,000
TOTAL PROJECT COST:	\$0	\$40,000	\$150,000	\$0	\$0	\$0	\$190,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Lift Station Valve Pit Elimination Program

Lift Stations 11, 15, 17, 18 and 19 (FY 18)



Project Information

Project #: 18WS21
Account #: 424-8032-535-6327
Design Year: N/A
Construction Year: FY 18-FY 22
Project Status: Not Started
Project Engineer: N/A
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

Remove pump pedestals, discharge piping lift station wet well, valve vault and all associated valve vault piping, and replace with new epoxy-lined or stainless steel pipe and fittings. When completed, valve pit will no longer exist, allowing employees to maintain infrastructure without entering potentially deadly confined spaces. Chosen locations to be determined based upon those lift stations that have pipe and fittings that are heavily corroded due to age and exposure to both the elements and wastewater flow. Costs are based on FY 18 quotes, allowing 5% annual increases. Five per year to be completed.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Equipment/Materials		\$32,500	\$34,125	\$35,832	\$37,624	\$39,506	\$179,587
Construction/Installation		\$75,000	\$78,750	\$82,688	\$86,823	\$91,165	\$414,426
Other		\$10,000	\$10,500	\$11,025	\$11,577	\$12,156	\$55,258
TOTAL PROJECT COST:	\$0	\$117,500	\$123,375	\$129,545	\$136,024	\$142,827	\$649,271

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Lift Station 4 Generator Installation Port Malabar Boulevard NE at Turkey Creek



Project Information

Project #: 18WS22
Account #: 421-8030-535-6327
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Operating (UTO)
Contractor: TBD

Project Description

Install stand-by generator at Lift Station 4. This lift station is located in the median of Port Malabar Blvd NE on a main thoroughfare through the old part of the City and also adjacent to a tributary of Turkey Creek. During a power outage or hurricane, this is the first location where we set up a portable unit to ensure raw wastewater does not breach our system and flow into the Turkey Creek.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design		\$40,000					\$40,000
Land		\$50,000					\$50,000
Equipment/Materials		\$55,000					\$55,000
Construction/Installation		\$60,000					\$60,000
TOTAL PROJECT COST:	\$0	\$205,000	\$0	\$0	\$0	\$0	\$205,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

North Regional Water Treatment Plant Rear Yard Swale & Fence Improvements

North Regional Water Treatment Plant



Project Information

Project #: 18WS23
Account #: 421-8024-533-6323
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer
Funding Source: Utilities Operating (UTO)
Contractor: TBD

Project Description

Installation of approximately 1,120 linear feet of 6 foot chain link fencing at the North Regional Water Treatment Facility. This fence will replace a 6 foot wooden fence damaged during Hurricane Matthew. This will provide a physical deterrent from unauthorized access.
Installation of swale.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Construction/Installation		\$33,000					\$33,000
TOTAL PROJECT COST:	\$0	\$33,000	\$0	\$0	\$0	\$0	\$33,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

Secondary Ponds Valve Improvements

North Regional Wastewater Treatment Plant



Project Information

Project #: 15WS05
Account #: 424-8032-535-6221
Design Year: FY 18
Construction Year: FY 18
Project Status: Not Started
Project Engineer: Utilities Engineer/Wade Trim
Funding Source: Utilities Renewal & Replacement (UTRR)
Contractor: TBD

Project Description

Replacement of valve and pipe that connects wastewater secondary pond No. 1 to No. 2. This includes installation of a new actuator valve with Supervisory Control and Data Acquisition (SCADA) control along with resloping of ponds in disturbed areas. The pipe and valve between the two wastewater ponds are critical to the function of the ponds when they are used during an emergency operation (i.e., clarifier malfunction, excessive high flows into the WWTP, etc.). The current pipe and valve are over thirty (30) years old, with the valve having issues of closing properly. The replacement of these items assures the dependence of the ponds during emergency operations. The SCADA control will allow staff to operate remotely through SCADA. In addition, designated stair access will be installed with lighting for operator access to the top of the ponds.

<u>Project Costs</u>	<u>2017/Prior</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>TOTAL</u>
Survey, Engineering and Design	\$33,000						\$33,000
Equipment/Materials	\$10,000						\$10,000
Construction/Installation	\$155,000	\$50,000					\$205,000
Construction Services		\$9,000					\$9,000
TOTAL PROJECT COST:	\$198,000	\$59,000	\$0	\$0	\$0	\$0	\$257,000

Impact on Operating Budget

This project is not expected to have a significant effect on the operating budget.

Appendix B

RESOLUTION NO 2017-50

A RESOLUTION OF THE CITY OF PALM BAY, BREVARD COUNTY, FLORIDA, ADOPTING THE FIVE-YEAR CAPITAL IMPROVEMENT PLAN FOR FISCAL YEARS 2017-2018 THROUGH 2021-2022 FOR THE CITY OF PALM BAY, PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the City Manager has prepared the Five-Year Capital Improvement Plan for the City for Fiscal Years 2017 2018 through 2021-2022, and

WHEREAS, the City Council has reviewed the Five Year Capital Improvement Plan for Fiscal Years 2017-2018 through 2021-2022 and has determined that it is in the interest of the health safety, and welfare of the citizens of Palm Bay to adopt the Plan

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PALM BAY, BREVARD COUNTY, FLORIDA, as follows

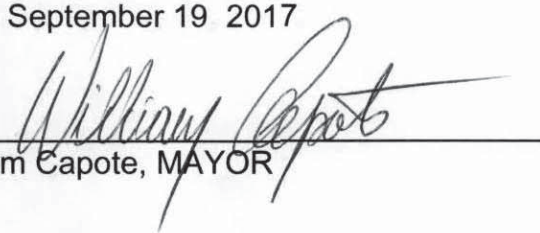
SECTION 1. The City Council of the City of Palm Bay hereby adopts the Five Year Capital Improvement Plan for Fiscal Years 2017-2018 through 2021-2022 for the City of Palm Bay budget which is by reference, incorporated herein as Exhibit "A"

SECTION 2. The provisions within this resolution shall take effect on October 1 2017

This resolution was duly enacted at Meeting No 2017 25, of the City Council of the City of Palm Bay Brevard County Florida on September 19 2017

ATTEST


Terese M. Jones, CITY CLERK


William Capote, MAYOR



Appendix B

EXHIBIT A

FY 18 Five-Year Capital Improvements Program Summary (Utility Departments)

Fund	Dept/Div	Project No.	Project Name	Funding Source	SCHEDULE OF ESTIMATED EXPENDITURES					Total
					FY 18	FY 19	FY 20	FY 21	FY 22	FY 18-FY 22
UTILITIES										
421	8014-536-6401	N/A	Thermography Camera	UTO	14,011					14,011
421	8014-536-6403	N/A	Vehicle Replacements #6903 & #6302	UTO	79,500					79,500
421	8016-536-6403	N/A	Vehicle Replacements #6910	UTO	20,000					20,000
421	8018-536-6401	N/A	Autoclave Equipment	UTO	11,567					11,567
421	8018-536-6403	N/A	Vehicle Replacements #6121	UTO	22,000					22,000
421	8020-533-6322	N/A	Meter Services New Installations	UTO	225,000	225,000	225,000	225,000	225,000	1,125,000
421	8020-533-6401	N/A	Valve Exercise Machine	UTO	64,375					64,375
421	8020-533-6401	N/A	Mini Excavator	UTO	49,192					49,192
421	8020-533-6403	N/A	Trailer	UTO	10,789					10,789
421	8020-533-6407	N/A	Tokay Software Upgrade	UTO	20,040					20,040
421	8024-533-6221	18WS20	NRWTP Treatment Unit Aerator Tray	UTO	40,000	150,000				190,000
421	8024-533-6323	18WS23	NRWTP Rear Yard Swale & Fenc Impr	UTO	33,000					33,000
421	8030-535-6327	16WS07	Palm Vista Lift Station	UTO	1,380,000					1,380,000
421	8030-535-6327	18WS22	Lift Station 4 Generator Installation	UTO	205,000					205,000
421	8030-535-6403	N/A	Vehicle Replacement #6912 & #6395	UTO	94,000					94,000
421	8034-535-6221	17WS16	WRF Denitrification Project	UTO	1,300,000					1,300,000
421	8034-535-6221	18WS13	WWTP Odor Control at Headworks	UTO	48,000	588,000				636,000
423	8021-533-6221	18WS04	SRWTP Expansion	WA-CONN /WA-SRF	510,000	9,200,000				9,710,000
423	8021-533-6324	18WS03	San Filippo Water Main Extension	WA-CONN /WA-SRF	30,000	2,235,000				2,265,000
423	8021-533-6324	17WS02	I-95 Interchange/Pkwy Water Main & Force Main	WA-CONN	17,325					17,325
423	8031-535-6221	16WS05	South Regional Water Reclamation Fac	SW-CONN /SW-SRF	150,000	18,850,000				19,000,000
423	8031-535-6325	17WS02	I-95 Interchange/Pkwy Water Main & Force Main	SW-CONN	21,175					21,175
424	8022-533-6221	18WS06	NRWTP High Service Pumps Repl	UTRR	105,000	620,000				725,000
424	8022-533-6221	12WS02	Repl of Large Diameter Steel Pipe	UTRR	312,000					312,000
424	8022-533-6221	18WS05	NRWTP Sulfuric Acid Tank & Feed System Repl	UTRR	190,000					190,000
424	8022-533-6221	18WS02	NRWTP Slaker Replacement	UTRR	165,000					165,000
424	8022-533-6221	18WS17	NRWTP Chlorine Analyzers Repl	UTRR	130,000					130,000
424	8022-533-6221	18WS19	NRWTP Generator & Air Compressor Repl	UTRR	65,000	438,000				503,000
424	8022-533-6318	18WS18	Surficial Well Field Flow Meter Repl	UTRR	50,000					50,000
424	8022-533-6322	N/A	Meter Services Meter Replacements	UTRR	150,000	150,000	150,000	150,000	150,000	750,000
424	8022-533-6407	18WS12	NRWTP SCADA Improvements	UTRR	81,000					81,000
424	8032-535-6221	18WS01	Reuse High Service Pumps Repl	UTRR	566,000					566,000
424	8032-535-6221	18WS09	WWTP Digester 6 Rehabilitation	UTRR	415,000					415,000
424	8032-535-6221	18WS14	WWTP Bar Screen Replacement	UTRR	40,000	368,000				408,000
424	8032-535-6221	18WS15	RAS/WAS Pump Rehabilitation	UTRR	65,000	470,000				535,000

Appendix B

EXHIBIT A'

FY 18 Five-Year Capital Improvements Program Summary (Utility Departments)

Fund	Dept/Div	Project No.	Project Name	Funding Source	SCHEDULE OF ESTIMATED EXPENDITURES					Total
					FY 18	FY 19	FY 20	FY 21	FY 22	FY 18-FY 22
UTILITIES										
424	8032-535-6221	18WS16	WWTP Grit Pump & MCC Rehab	UTRR	65,000	320,000			385,000	
424	8032-535-6221	15WS05	Secondary Ponds Valve Improvements	UTRR	59,000				59,000	
424	8032-535-6325	18WS08	ARV Upgrade Program	UTRR	100,000	100,000	100,000	100,000	500,000	
424	8032-535-6325	14WS07	Cable Lane Sewer Replacement	UTRR	200,000				200,000	
424	8032-535-6326	17WS15	DIW Reservoir Rehabilitation	UTRR	125,000				125,000	
424	8032-535-6327	18WS21	Lift Station Valve Pit Elimination Prog	UTRR	117,500	123,375	129,545	136,024	142,827	649,271
424	8032-535-6327	18WS11	Lift Station Electrical Panel Repl Prog	UTRR	136,500	143,325	150,492	158,017	165,919	754,253
424	8032-535-6327	18WS10	Lift Stations RTU Replacment Prog	UTRR	169,612	169,612	169,612	169,612	169,612	848,060
425	8021-533-6324	18WS07	Palm Bay Hospital Water Main Loop	MLE	168,000					168,000
433	8021-533-6324	16WS06	Palm Vista Water Main & Force Main	WA-SRF	1,831,500					1,831,500
433	8021-533-6324	17WS02	I-95 Interchange/Pkwy Water Main & Force Main	WA-SRF	1,136,250					1,136,250
433	8031-535-6325	16WS06	Palm Vista Water Main & Force Main	SW-SRF	2,238,500					2,238,500
433	8031-535-6325	17WS02	I-95 Interchange/Pkwy Water Main & Force Main	SW-SRF	1,388,750					1,388,750
									0	
FY 19-FY 22 Additional (informational purposes only)										
Utilities		15WS03	Utility Relocate Babcock Street (FDOT Project)			2,300,000.00			2,300,000	
Utilities		14WS02	Elevated Walkways			284,000.00			284,000	
Utilities		17WS08	I-95 Interchange Regional Lift Station			1,370,000.00			1,370,000	
Utilities		16WS04	North Regional RO Plant Rehabilitation			355,000.00	4,610,000.00		4,965,000	
Utilities		17WS05	WWTP Thickener Installation			787,000.00			787,000	
Utilities		17WS06	Replacement of 1.5 MG Storage Tank			1,025,000.00			1,025,000	
Utilities		16WS01	Treatment Unit Rehab			1,330,000.00			1,330,000	
Utilities		TBD	WWTP & WRF Lights			225,000.00			225,000	
Utilities		TBD	Lift Station Generator Replacements			275,000.00	275,000.00	275,000.00	825,000	
Utilities		TBD	Lime Drying Unit NRWTP			235,000.00	3,145,000.00		3,380,000	
Utilities		TBD	NRWTP Lime Silo Rehabilitation			230,000.00			230,000	
Utilities		TBD	NRWTP CO2 Storage Tank & Feed Repl			30,000.00	120,000.00		150,000	
Utilities		TBD	Land Needs for Lift Stations			100,000.00	100,000.00	100,000.00	300,000	
Utilities		TBD	WWTP 2nd Clarifier			1,490,000.00			1,490,000	
Utilities		TBD	Fluoride System Replacement NRWTP			112,000.00			112,000	
Utilities		TBD	Reuse Pond at Majors Golf Course			200,000.00	6,150,000.00		6,350,000	
Utilities		TBD	Babcock and Parkway WM/FM			325,000.00	3,075,000.00		3,400,000	
Utilities		TBD	Lift Stations 1 and 2 Force Main Replacement			460,000.00			460,000	
Utilities		TBD	SR WRF Admin Building				200,000.00	500,000.00	700,000	
Utilities		TBD	DIW Acidization				135,000.00		135,000	
Utilities		TBD	WWTP/WRF Master Valve				208,000.00		208,000	

Appendix B

EXHIBIT A

FY 18 Five-Year Capital Improvements Program Summary (Utility Departments)

Fund	Dept/Div	Project No.	Project Name	Funding Source	SCHEDULE OF ESTIMATED EXPENDITURES					Total
					FY 18	FY 19	FY 20	FY 21	FY 22	FY 18-FY 22
UTILITIES										
Utilities		TBD	WRF - 3rd Disc Filter Installation				190,000.00		190,000	
Utilities		TBD	WWTP Clarifier Mechanism Rehab				90,000.00	660,000.00	750,000	
Utilities		TBD	WRF UV Covers Chlorine Contact Chamber				70,000.00		70,000	
			UTILITIES TOTAL		14,414,586	45,283,312	19,292,649	2,473,653	953,358	

Appendix B

EXHIBIT A

FY 18 Five-Year Community Investment Program Summary (Non-Utility Departments)										
Fund	Dept/Div	Project No.	Project Name	Funding Source	SCHEDULE OF ESTIMATED EXPENDITURES					Total
					FY 18	FY 19	FY 20	FY 21	FY 22	FY 18-FY 22
Communications & Information Technology										
001	2310-519-6407	N/A	Servers for Public Administration & Safety	GENF	85,061	0	0	13,908	16,690	115,659
001	2310-519-6413	N/A	VOIP Network & Telephone Upgrade	GENF	640,000	124,000	134,000	144,000	154,000	1,196,000
Growth Management										
112	3353-554-6201	18FD01	Portion of Fire Station 5 Rebuild	CDBG	457,497					457,497
Parks & Recreation										
154	4050-572-6301	18PR01	MUSCO Control Link/Ballfield Lights	IMPR-PR	145,000					145,000
154	4050-572-6401	18PR03	Ballfield Base Enhancement	IMPR-PR	15,000					15,000
Police										
521	7070-519-6403	N/A	(6) Police Vehicles	GENF	163,444					163,444
Public Works										
301	7090-539-6301	13PW02	Bus Shelter Installation	GRANT/GENF	50,000					50,000
461	7083-538-6309	18SU01	Various Stormwater/Culvert Locations	SWU	4,100,000					4,100,000
TOTAL NON-UTILITY DEPARTMENTS ONLY EXCLUDING BCRA					5,656,002	124,000	134,000	157,908	170,690	6,242,600
Bayfront Community Redevelopment Agency (BCRA)										
181	9110-559-6101	18CR02	Land Acquisition	BCRA-TIF	250,549					
303	3090-541-6101	16CR02	BCRA Redevelopment Plan Projects	BOND	-50,000					
303	3090-559-6305	18CR01	Palm Bay Entrance Channel Dredging	BOND	50,000					
TOTAL BAYFRONT COMMUNITY REDEVELOPMENT AGENCY (BCRA)					250,549	0	0	0	0	0
COMBINED TOTAL UTILITY & NON-UTILITY & BCRA					20,321,137	45,407,312	19,426,649	2,631,561	1,124,048	88,660,158

Appendix B



LEGISLATIVE MEMORANDUM

TO Honorable Mayor and Members of the City Council
FROM Gregg Lynk City Manager
DATE September 19, 2017
RE Budget Hearing

A handwritten signature in black ink, appearing to read "Gregg Lynk".

The City Council is required by Florida Statute to hold a public hearing on the final millage rate and the FY 18 budget.

Staff will begin the meeting by reading a statement regarding the tax rate and providing a brief summary of the final budget

Following the initial staff commentary, the public hearing should commence.

At the close of the public hearing, the Council will consider

- Adoption of changes to fees, rates, and charges pursuant to the Code of Ordinances
- Adoption of Classification and Pay Plans and the Position Control Plan
- Adoption of the Five Year Capital Improvement Plan,
- Adoption of the final millage rate
- Second reading of Utility Rate Ordinances amending Chapters 200, 201 and 202 to codify the rate adjustments previously approved
- Second reading of the Budget Adoption Ordinance

RECOMMENDATION

Motion to adopt the Resolutions and Ordinances above as listed under Business on the agenda

Attachments 1) Ordinance Nos 2017 58 through 2017 61
2) Resolutions as outlined above

PG/ab

Down to Earth And Up To Great Things