

Department of Public Utilities

**City Manager's Proposed CIP
FY 2020-2021 through FY 2025-2026**

Donald S. Piron, P.E.

March 24, 2020

Department of Public Utilities

Major Assets

- ▶ 413 sewer pump stations
- ▶ 1,510 miles of sewer main
- ▶ 30,151 sewer manholes
- ▶ 8 potable water pump stations
- ▶ 2 raw water pump stations
- ▶ 11 potable water storage tanks
- ▶ 1,701 miles of water distribution pipe

Supported by the Water and Sewer Enterprise Funds

CIP Categories:

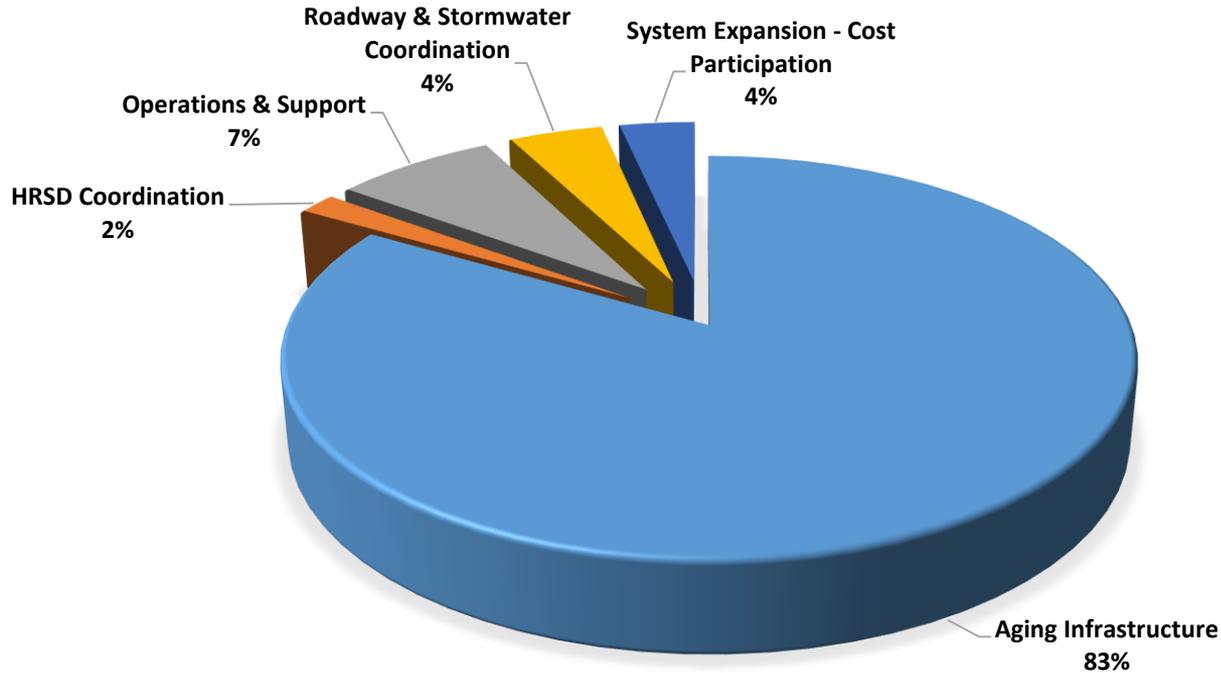
- ▶ Water Utility
- ▶ Sewer Utility

CIP 6-year average is \$31.6M/year

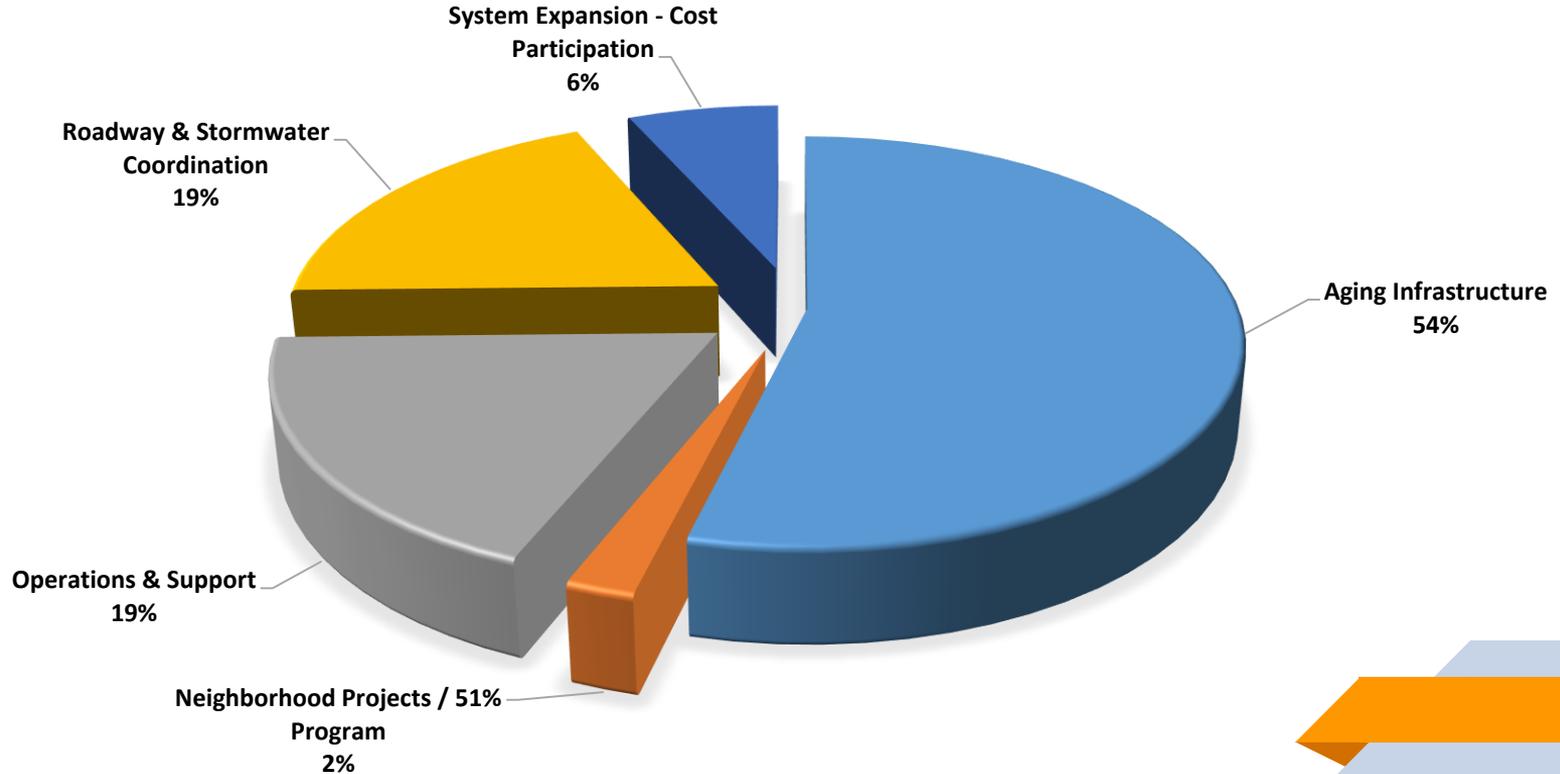
Six-Year Capital Improvement Program

	Water	Sewer	Total
FY 21	\$ 9,318,000	\$ 16,581,515	\$ 25,899,515
FY 22	\$ 10,855,000	\$ 23,777,000	\$ 34,632,000
FY 23	\$ 3,942,000	\$ 32,207,000	\$ 36,149,000
FY 24	\$ 10,710,000	\$ 24,372,000	\$ 35,082,000
FY 25	\$ 4,261,000	\$ 24,270,000	\$ 28,531,000
FY 26	\$ 4,460,000	\$ 24,595,000	\$ 29,055,000
FY 21 - 26	\$ 43,546,000	\$ 145,802,515	\$ 189,348,515

Six-Year Sanitary Sewer Capital Improvement Program

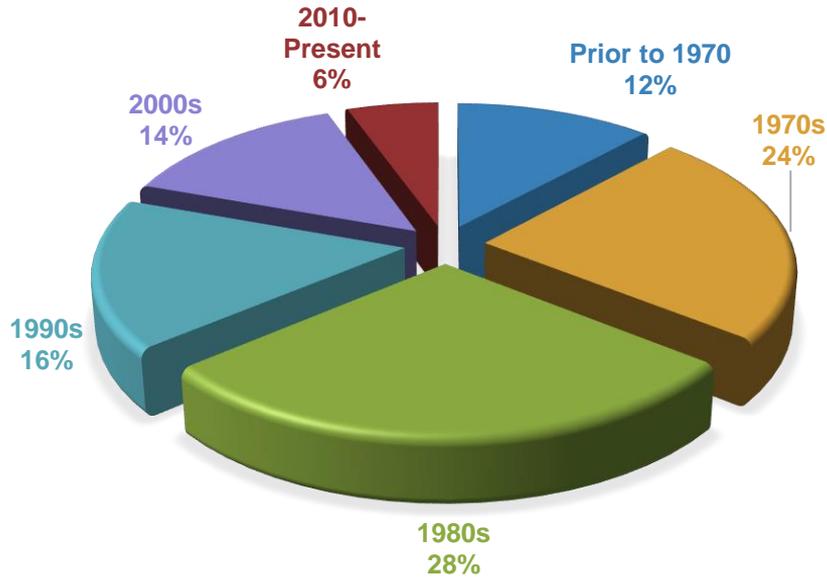


Six-Year Water Capital Improvement Program

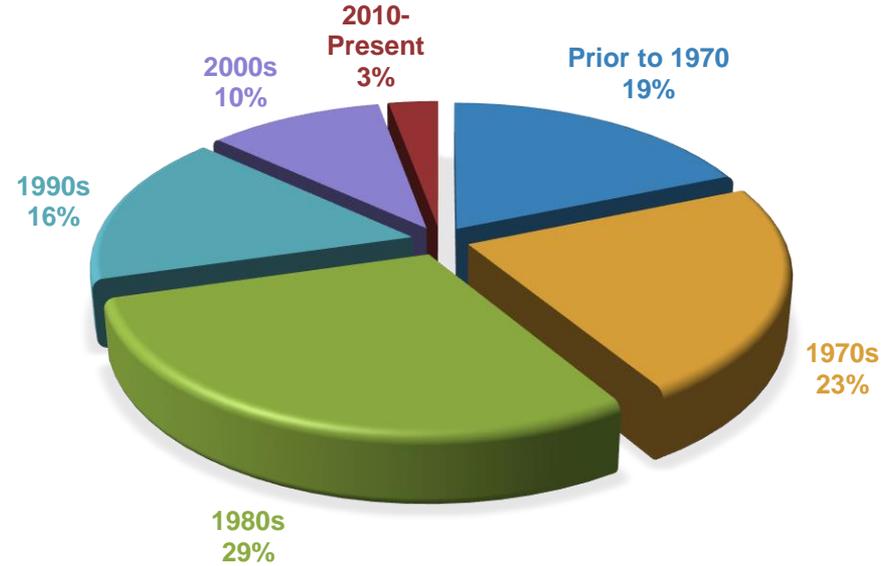


Infrastructure Age

SEWER MAINS



WATER MAINS





Projects & Programs with No Changes

Projects with No Changes

Project	Current Phase	Appropriated to Date	FY 21	FY 22 to FY 26	Total	BTC
5-019 Advanced Water Metering	Study	300,000	0	0	300,000	TBD
5-023 Great Neck Tank Replacement	Design	2,200,000	2,800,000	0	5,000,000	0
5-030 Shore Drive Water Line Improvements Phase III	Construction	3,385,000	0	0	3,385,000	0
5-043 Landstown Road Water Improvements	Construction	720,000	0	0	720,000	0
6-043 Landstown Road Sewer Improvements	Construction	370,000	0	0	370,000	0
5-045 Rosemont Road Ph V Water Improvements	Construction	1,740,000	0	0	1,740,000	0
5-101 ViBe District Water Improvements	Construction	600,000	1,100,000	0	1,700,000	0
6-101 ViBe District Sewer Improvements	Construction	1,000,000	1,100,000	0	2,100,000	0

Projects with No Changes

Project	Current Phase	Appropriated to Date	FY 21	FY 22 to FY 26	Total	BTC
5-156 Virginia Beach Blvd Water System Improvements	Study	350,000	0	0	350,000	TBD
5-207 Laskin Road Water Improvements Phase I	Construction	3,310,458	0	0	3,310,458	0
6-075 Laskin Road Sewer Improvements Phase I	Construction	3,950,264	0	0	3,950,264	0
5-405/6-405 CIS Version Migration	Implementation	3,700,000	0	0	3,700,000	0
5-601 First Colonial Rd/VA Beach Blvd Intersection Imp.	Construction	1,095,000	0	0	1,095,000	0
6-601 First Colonial Rd/VA Beach Blvd Intersection Imp.	Construction	1,510,000	0	0	1,510,000	0
5-604 Princess Anne Road Water Improvements Ph VII	Construction	1,130,000	0	0	1,130,000	0
6-092 Vacuum Valve Monitoring	Construction	2,345,000	0	0	2,345,000	0

Programs with No Changes*

Program	Appropriated to Date	FY 21	FY 22 to FY 26	Total
5-031 Sys Exp Cost Participation Agreements III	400,000	120,000	600,000	1,120,000
6-551 Sys Exp Cost Participation Agreements III	3,150,000	120,000	600,000	3,870,000
5-251 Var Roadway & Storm Water Coord VI	3,050,000	800,000	4,000,000	7,850,000
6-556 Var Roadway & Storm Water Coord VI	4,300,000	800,000	4,000,000	9,100,000
6-557 SGA Sanitary Sewer Sys Improvements	2,943,738	0	0	2,943,738

*Year 6 funding added



Projects with Funding Modification for FY 2020-2021

5-010 Lake Gaston Raw Water Transmission System Rehabilitation I

- Program maintains Lake Gaston raw water pump station and 76-mile pipeline
- Programmed projects include:
 - ▷ Meherrin River subaqueous crossing
 - ▷ Repainting pipeline aerial crossings
 - ▷ Security improvements
 - ▷ Pump & valve rebuilds

BEFORE

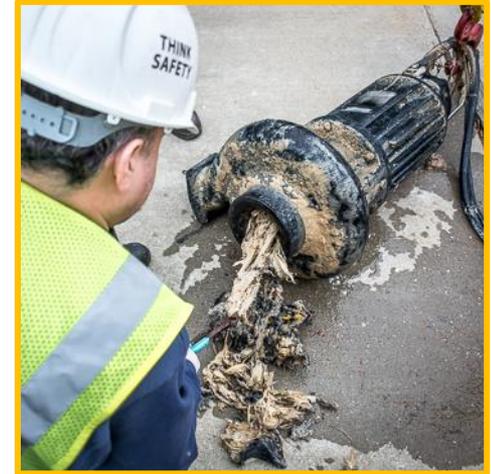
AFTER



	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	6,900,000	1,710,000	1,760,000	2,110,000	1,260,000	1,500,000	0	16,980,000
Change	1,740,000	(1,650,000)	(1,700,000)	(2,050,000)	3,600,000	(1,440,000)	60,000	(3,180,000)
FY 2021 Proposed	8,640,000	60,000	60,000	60,000	4,860,000	60,000	60,000	13,800,000

5-014 Water Pump Repairs and Replacements 6-107 Sewer Pump Repairs and Replacements

- In FY20, scope increased to include variable frequency drives, controllers and other appurtenances necessary for pump operation
- Funding increase needed to accommodate scope change and increase in pump replacements



5-014	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	250,000	275,000	275,000	300,000	300,000	300,000	0	1,950,000
Change	125,000	125,000	125,000	125,000	125,000	125,000	425,000	925,000
FY 2021 Proposed	375,000	400,000	400,000	425,000	425,000	425,000	425,000	2,875,000
6-107	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	400,000	450,000	450,000	500,000	500,000	500,000	0	3,200,000
Change	525,000	175,000	175,000	250,000	250,000	300,000	800,000	2,075,000
FY 2021 Proposed	925,000	625,000	625,000	750,000	750,000	800,000	800,000	5,275,000

5-020 Cleveland Street Water Improvements

6-088 Cleveland Street Sewer Improvements

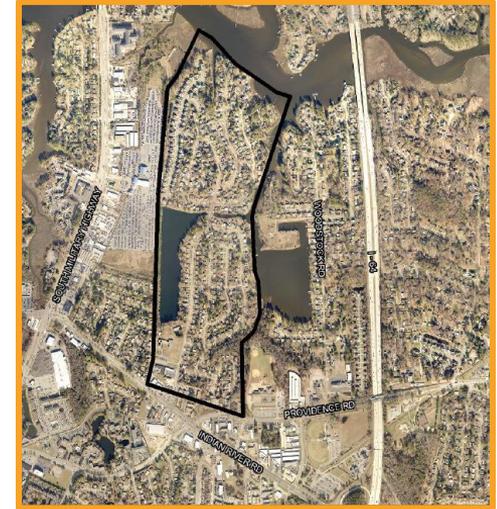
- Project to improve water & sanitary sewer system in area of Greenwich Road & Cleveland Street
- Coordinated with CIP 2-401 Greenwich Road Crossover / Cleveland Improvements



5-020/6-088	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	700,000	0	300,000	0	0	0	0	1,000,000
Change	0	300,000	(300,000)	0	0	0	0	0
FY 2021 Proposed	700,000	300,000	0	0	0	0	0	1,000,000

5-022 Cardamon Water Rehabilitation

6-109 Cardamon Sanitary Sewer Rehabilitation



Project to replace approx. 30,000 linear feet of water main, 26,000 linear feet of sanitary sewer main, 75 sanitary sewer manholes, and 800 service connections

Added funding for Phase II construction in FY26

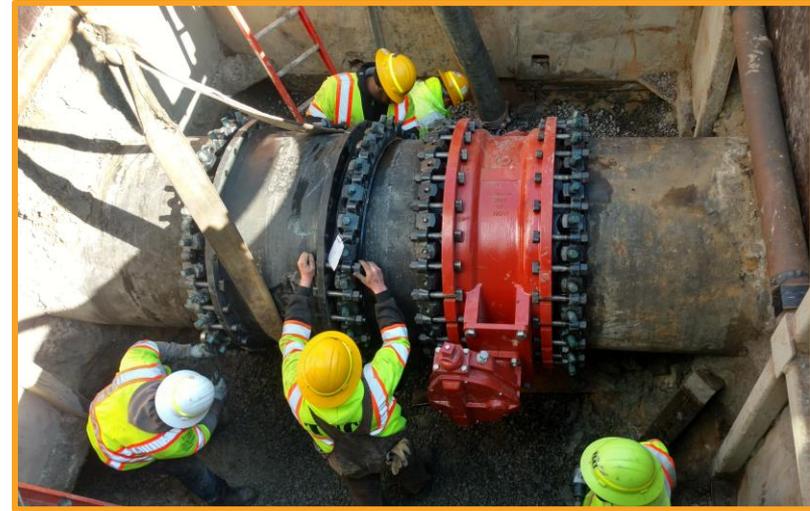
5-022	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	0	0	0	0	200,000	2,062,500	0	2,262,500
Change	0	0	0	0	30,000	(6,500)	2,076,000	2,099,500
FY 2021 Proposed	0	0	0	0	230,000	2,056,000	2,076,000	4,362,000
6-109	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	0	0	0	0	250,000	2,502,500	0	2,752,500
Change	0	0	0	0	0	(2,500)	2,500,000	2,497,500
FY 2021 Proposed	0	0	0	0	250,000	2,500,000	2,500,000	5,250,000

5-033 Water Transmission System Upgrade Program II

Program to construct new water transmission mains, pumping stations, & storage tanks, and to upgrade or rehabilitate existing water transmission infrastructure

Programmed projects include:

- ▷ Columbus Loop valves & site improvements
- ▷ Storage tank condition assessment improvements
- ▷ Pump station condition assessment improvements

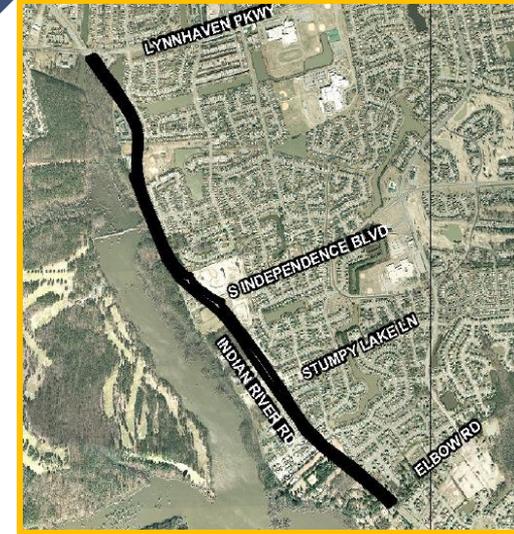


	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	1,320,000	1,000,000	1,000,000	1,000,000	4,250,000	5,050,000	0	14,520,000
Change	900,000	(1,000,000)	(1,000,000)	(900,000)	(3,337,000)	(4,950,000)	279,000	(10,908,000)
FY 2021 Proposed	2,220,000	0	0	100,000	913,000	100,000	279,000	3,612,000

5-149 Indian River Road Water Improvements Phase VII

6-051 Indian River Road Sewer Improvements Phase VII

- Coordinated with roadway project
2-256 Indian River Road VII-A
- Moved funding to FY22
- Reduced scope of project



5-149	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	153,548	1,000,000	1,000,000	25,000	25,000	0	0	2,303,548
Change	100,000	(1,000,000)	345,000	(25,000)	(25,000)	0	0	(705,000)
FY 2021 Proposed	253,548	0	1,345,000	0	0	0	0	1,598,548
6-051	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	29,717	3,000,000	0	0	0	0	0	3,129,717
Change	100,000	(3,000,000)	252,000	0	0	0	0	(2,748,000)
FY 2021 Proposed	129,717	0	252,000	0	0	0	0	381,717

5-151/6-151 Landstown Yard Improvements IV

Programmed projects include:

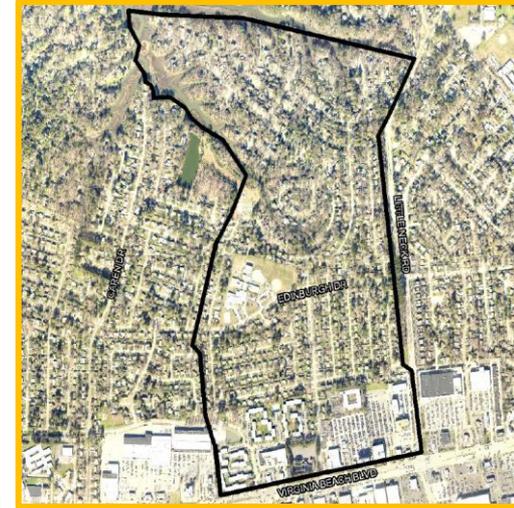
- ▷ Shed restoration of Buildings 1603, 1604, and 1979 in FY21
- ▷ Enclosed vehicle shed to replace Building 1337 in FY22 & FY23
- ▷ New enclosed material storage facility in FY23 & FY24



5-151	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	4,821,000	500,000	320,000	1,350,000	0	0	0	7,891,000
Change	900,000	(137,000)	(90,000)	387,000	1,812,000	0	0	1,972,000
FY 2021 Proposed	5,721,000	363,000	230,000	1,737,000	1,812,000	0	0	9,863,000
6-151	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	4,005,000	500,000	0	1,350,000	0	0	0	6,755,000
Change	900,000	(137,000)	230,000	387,000	1,812,000	0	0	2,292,000
FY 2021 Proposed	4,905,000	363,000	230,000	1,737,000	1,812,000	0	0	9,047,000

5-158 Royal Palm Arch Water System Rehabilitation

6-058 Royal Palm Arch Sanitary Sewer System Rehabilitation



Renewal & replacement of water and sanitary sewer infrastructure in the King's Forest and Malibu subdivisions

Consolidated funding in three phases:

Phase IA – Under construction

Phase IB – Moved to FY21

Phase II – Moved to FY22

5-158	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	0	0	800,000	800,000	800,000	0	0	2,400,000
Change	0	1,650,000	400,000	(800,000)	(800,000)	0	0	450,000
FY 2021 Proposed	0	1,650,000	1,200,000	0	0	0	0	2,850,000
6-058	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	5,350,000	0	3,800,000	3,700,000	3,500,000	0	0	16,350,000
Change	0	4,000,000	(470,000)	(3,700,000)	(3,500,000)	0	0	(3,670,000)
FY 2021 Proposed	5,350,000	4,000,000	3,330,000	0	0	0	0	12,680,000

5-168 Shore Drive Water Line Improvements Phase IV

- Project to improve water mains along Shore Drive between Marlin Bay Drive and Stratford Road
- Coordinated with roadway project 2-118 Shore Drive Corridor Improvements Phase IV
- Added funding for construction in FY24



	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	175,000	0	0	0	0	0	0	175,000
Change	0	0	0	0	850,000	0	0	850,000
FY 2021 Proposed	175,000	0	0	0	850,000	0	0	1,025,000

5-708/6-019 Resort Area Neighborhood Revitalization

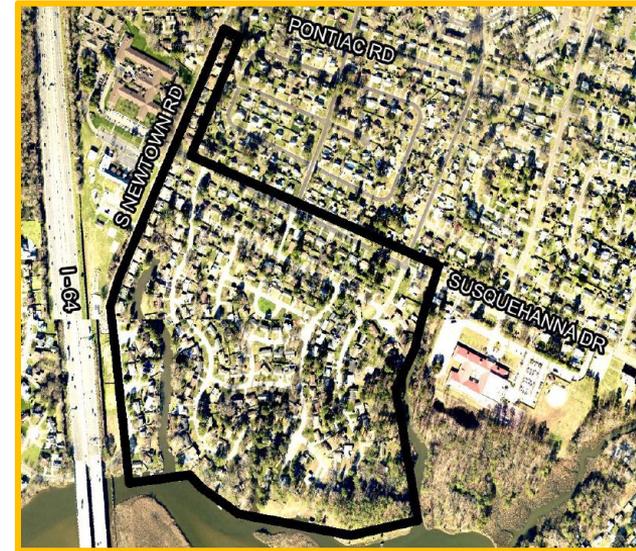
Added funding needed in FY21 for construction of North Lake Holly Water & Sewer Improvements – Section 3B



5-708	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	6,896,636	0	0	0	0	0	0	6,896,636
Change	0	550,000	0	0	0	0	0	550,000
FY 2021 Proposed	6,896,636	550,000	0	0	0	0	0	7,446,636
6-019	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	14,820,000	0	0	0	0	0	0	15,333,000
Change	513,000	550,000	0	0	0	0	0	550,000
FY 2021 Proposed	15,333,000	550,000	0	0	0	0	0	15,883,000

6-099 Arrowhead Susquehanna Sanitary Sewer Rehabilitation Ph III

- Project to renew & replace approx. 13,000 linear feet of sanitary sewer main and associated manholes & service laterals
- Phases I & II complete
- Phase III schedule dependent on associated pump station replacement project
- Moved Phase III construction to FY23 and consolidated funding
- Updated estimate from final design



	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	250,000	0	0	2,650,000	2,200,000	0	0	5,100,000
Change	0	0	0	4,750,000	(2,200,000)	0	0	2,550,000
FY 2021 Proposed	250,000	0	0	7,400,000	0	0	0	7,650,000

6-111 Sanitary Sewer System Revitalization Program III

- Find-and-fix program mandated under the Regional Consent Order to repair significant sanitary sewer defects promptly
- 23 projects programmed in FY21



	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	0	5,500,000	6,500,000	7,000,000	7,000,000	7,000,000	0	38,600,000
Change	6,316,539	(2,000,000)	(500,000)	0	0	0	7,000,000	5,216,539
FY 2021 Proposed	6,316,539	3,500,000	6,000,000	7,000,000	7,000,000	7,000,000	7,000,000	43,816,539

6-153 Pump Station Program VI

Program for sanitary sewer pump station upgrades, rehabilitation, major repairs, or replacement

Overall reduction FY21-FY25

FY 21 Replacement Pump Stations

PS117 14 th & Parks (Beach)	PS455 Brigadoon (Centerville)
PS259 Point O Woods (Beach)	PS403 Arrowhead (Kempsville)
PS234 Kings Trail (Lynnhaven)	

FY21 Rehabilitated Pump Stations

PS358 Columbus Center (Bayside)	PS322 Thoroughgood (Bayside)
PS309 Lake Front Village (Bayside)	PS454 Brandon (Kempsville)
PS310 Lake Shores West (Bayside)	PS472 Tallwood (Centerville)
PS333 Lake Smith Ewell (Bayside)	PS574 Hillcrest (Princess Anne)

	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	3,799,029	6,660,000	9,000,000	10,000,000	10,600,000	11,000,000	0	59,260,000
Change	10,712,854	(4,252,485)	(1,000,000)	605,000	(615,000)	1,015,000	9,885,000	6,119,398
FY 2021 Proposed	14,511,883	2,407,515	8,000,000	10,605,000	9,985,000	9,985,000	9,885,000	65,379,398

Projects with Minor Funding Modifications

5-122/6-122 Service Order Automation Phase II								
5-122	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	413,095	0	0	0	0	0	0	413,095
Change	50,000	25,000	0	0	0	0	0	75,000
FY 2021 Proposed	463,095	25,000	0	0	0	0	0	488,095
6-122	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	413,095	0	0	0	0	0	0	413,095
Change	49,800	25,000	0	0	0	0	0	74,800
FY 2021 Proposed	462,895	25,000	0	0	0	0	0	487,895
5-155/6-155 Utilities Technology Support Program								
5-155/6-155	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2020 Adopted	250,000	200,000	200,000	200,000	200,000	200,000	0	1,450,000
Change	200,000	50,000	0	0	0	0	0	250,000
FY 2021 Proposed	450,000	250,000	200,000	200,000	200,000	200,000	200,000	1,700,000

New Projects



6-112 Sanitary Sewer Force Main Rehabilitation I

- The Department of Public Utilities maintains about 1.1 million linear feet of sanitary sewer force main
- Addresses recommendations from the Force Main Condition Assessment Program
- Funds projects to correct deficient sanitary sewer force mains through replacement or rehabilitation
- Previously funded through other CIPs



	Appropriated to Date	FY21	FY22	FY23	FY24	FY25	FY26	Total
FY 2021 Proposed	0	250,000	2,405,000	2,780,000	2,640,000	2,050,000	2,475,000	12,600,000

Public Utilities Capital Improvement Program

- Supports essential services to customers
- Addresses aging infrastructure
- Ensures continued compliance with Regional Consent Order and other regulatory mandates

