

**Fiscal Years 2022 through 2026 Capital Improvement Program
Project cost and Means of Finance Summary**

Unappropriated Years

Project Number	Project Title	Appropriations to Date	Unappropriated Years					Total Programmed Costs
			FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
Capital Projects								
<u>Storm Water</u>								
49-250	Arboretum Channel Improvements	300,000	399,000	-	-	-	-	699,000
73-120	BMP Restoration Citywide	2,050,000	100,000	100,000	-	-	-	2,250,000
05-260	Broadlawn Apartments Outfall Improvements	-	1,820,000	-	-	-	-	1,820,000
50-250	Chesapeake Ave. Area Drainage Improvements	2,000,000	1,600,000	-	-	-	-	3,600,000
03-160	Citywide Outfall Re-Grading and Restoration	2,934,332	750,000	1,000,000	200,000	300,000	-	5,184,332
43-170	Citywide System Rehab	3,400,000	700,000	700,000	300,000	200,000	-	5,300,000
07-150	Citywide Undesignated Drainage - Phase III	976,347	50,000	50,000	-	-	-	1,076,347
51-250	Cooper's Ditch Re-Grading, Phase II	1,000,000	-	-	-	-	-	1,000,000
04-130	D Street Drainage Improvements	370,000	-	-	-	-	-	370,000
24-240	Drum Creek Farms Drainage Improvements - Phase II	-	-	-	1,400,000	-	-	1,400,000
25-230	Elmwood Landing Area Drainage Improvements	1,550,000	-	-	-	-	-	1,550,000
26-230	Forest Lakes Outfall Improvements	900,000	-	-	-	-	-	900,000
26-240	Greenbrier Outfall Improvements	1,100,000	-	-	-	-	-	1,100,000
27-230	Hickory Ridge Outfall Improvements	-	200,000	650,000	-	-	-	850,000
25-240	John Street Area Outfall Improvements	800,000	86,000	-	-	-	-	886,000
07-130	Lamberts Trail Area Drainage Improvements	2,100,000	-	-	-	-	-	2,100,000
23-220	Loxley Gardens Drainage Improvements - Phase II	-	1,100,000	-	-	-	-	1,100,000
07-180	Major Equipment Purchases - PW Stormwater Division	6,274,000	200,000	200,000	-	-	-	6,674,000
05-142	Meads Court Storm Water improvements	652,587	-	-	-	-	-	652,587
05-121	Neighborhood Drainage Improvements - Phase I	2,221,983	-	-	-	-	-	2,221,983

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			FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
08-150	Neighborhood Drainage Improvements - Phase II	3,799,600	700,000	700,000	200,000	200,000	-	5,599,600
27-240	Nina Drive Area Outfall Improvements	1,500,000	-	-	-	-	-	1,500,000
52-250	Norfolk Highlands Drainage Improvements	-	600,000	600,000	-	-	-	1,200,000
09-150	Oakdale Area BMP and Drainage Improvements	5,000,000	-	-	-	-	-	5,000,000
24-220	Old Mill Rd. Drainage Improvements (Crossing Replacement)	750,000	-	-	-	-	-	750,000
28-230	Parkview Area Drainage Improvements	650,000	250,000	350,000	-	-	-	1,250,000
29-230	Resiliency & Reliability Program	1,600,000	-	-	-	-	-	1,600,000
76-120	Scenic Blvd. Drainage Improvements	260,000	-	-	-	-	-	260,000
77-120	Shillelagh Rd. Drainage Outfall Improvements	3,100,000	-	-	-	-	-	3,100,000
10-150	Stormwater Mapping & Master Drainage Plan III	601,124	-	100,000	-	-	-	701,124
11-150	Stormwater Quality Program - Phase II	4,140,565	100,000	100,000	-	-	-	4,340,565
05-140	Stormwater Quality Program/VPDES Permit Compliance	5,043,336	-	-	-	-	-	5,043,336
19-200	Welch Lane Drainage Improvements	480,000	-	-	-	-	-	480,000
Total		55,553,874	8,655,000	4,550,000	2,100,000	700,000	-	71,558,874

Means of Financing

Cash - Greenbrier TIF	1,100,000	-	-	-	-	-	-	1,100,000
Cash - South Norfolk TIF	2,000,000	1,600,000	-	-	-	-	-	3,600,000
Cash - Stormwater	49,403,874	1,500,925	4,550,000	2,100,000	700,000	-	-	60,903,874
Developer Pro Rata	400,000	485,000	-	-	-	-	-	885,000
Fund Balance - Stormwater	2,500,000	2,649,075	-	-	-	-	-	2,500,000
Grants	150,000	-	-	-	-	-	-	150,000
Fund Balance - Storm Water Capital Projects Fund	-	2,420,000	-	-	-	-	-	2,420,000

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Unappropriated Years

Project Number	Project Title	Appropriations to Date	Unappropriated Years					Total Programmed Costs
			FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
	Total	55,553,874	8,655,000	4,550,000	2,100,000	700,000	-	71,558,874

49-250: Arboretum Channel Improvements

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2021	Planning Area:	Greenbrier
Start Date:	7/1/2020	Project Status:	Proposed
Est. Completion Date:	6/30/2022		

Description:

This project will provide for channel restoration, which will include repairing and stabilizing channel banks, increasing system capacity, and providing a higher level of protection.

Justification:

Severe erosion of channel banks, access limitations, and environmental regulations have limited the City's ability to conduct standard maintenance on the subject section of the channel. If the channel bank continues to erode, it has the potential to impact the foundation of adjacent apartment buildings as well as restrict flow from the outfall channel draining approximately 281 acres.

Comments:

The Operations and Maintenance Contractor will provide a temporary bank stabilization plan (12-15 months) to allow the time necessary for proper design and permitting of the jurisdictional channel. Both an in-house survey and a wetlands delineation have been completed, and an in-house design is now underway.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	399,000	399,000	0
	399,000	399,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Fund Balance - Stormwater	300,000				300,000
Developer Pro Rata		399,000			399,000
Total Revenue	300,000	399,000			699,000
Expense					
Design & Engineering	30,000	30,000			60,000
Construction	240,000	339,000			579,000
Land Acquisition	30,000	30,000			60,000
Total Expense	300,000	399,000			699,000

73-120: BMP Restoration Citywide

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2008	Planning Area:	Deep Creek/Camelot
Start Date:	7/1/2011	Project Status:	Proposed
Est. Completion Date:	7/30/2023		

Description:

The project will provide for the removal of significant accumulated amounts of sediment and silt in order to restore storage capacity and improve control of stormwater. This project will be completed at various locations citywide, including the following stormwater facilities: Bahama Way BMP, Southern Pines BMP, Fentress Road BMP, and Major Hillard Library BMP.

Justification:

Over the years significant amounts of silt and sediment have accumulated within City retention ponds limiting their capacity. This project is needed to maintain the hydraulic capacity and water quality functionality by limiting runoff to area creeks and streams.

Comments:

Due to the substantial amount of stormwater quality requirements met through the SWIFT program, the project plan was revised for FY 2019 and the annual investment in BMP restorations was revised to \$100,000 for FY 2020 - FY 2023.

Best Management Practices (BMPs) are devices used to reduce pollution in stormwater runoff, thereby protecting area waterways. These practices are often permanent facilities designed to handle stormwater runoff in a specific area. BMPs reduce the flow that allows for the filtration of pollutants before the stormwater enters our streams, rivers, lakes, and bays. BMPs must be maintained to ensure they perform properly.

Types of BMPs include infiltration trenches/basins (stone-filled excavations that temporarily store stormwater runoff and soak into the soil beneath it), detention basins or dry ponds (man-made basins that detain water for specific periods of time after a storm), retention ponds (permanent pools of water that are very effective at improving water quality because they allow more time for sediment settling and removal), grassed swales (gently sloped vegetation areas that slow runoff), and filter strips/buffers (vegetation that removes sediment in runoff).

The May of 2020 City Council amended the CIP and suspended funding of this project for one year with funding to resume in FY 2022 due to COVID-19.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	100,000	100,000	0
2023	100,000	100,000	0
	200,000	200,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	2,050,000	100,000	100,000		2,250,000
Total Revenue	2,050,000	100,000	100,000		2,250,000
Expense					
Construction	2,050,000	100,000	100,000		2,250,000
Total Expense	2,050,000	100,000	100,000		2,250,000

05-260: Broadlawn Apartments Outfall Improvements

Department:	Storm Water Capital Projects		
Project Type:	Replacement	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2022	Planning Area:	South Norfolk
Start Date:	7/1/2021	Project Status:	Proposed
Est. Completion Date:	1/1/2023		

Description:

This project will address the failing public outfall system for Broadlawn Apartments. Improvements include replacement and resizing of +/-1,500 linear feet of storm pipe and installation of additional storm pipe under the railroad track.

Justification:

The existing system is inadequate causing frequent flooding and citizen complaints in the surrounding area. The existing system is deteriorated beyond repair and requires reconstruction. Improvements will reduce the current ongoing maintenance demands.

Comments:

There are several City properties impacted by this damaged and undersized pipe system, including a public school. There is written documentation dating back 20 years for work orders and citizen call-ins regarding flooding concerns and ingress/egress during flooding events.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	1,820,000	1,820,000	0
	1,820,000	1,820,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Fund Balance - Storm Water CP Fund		1,820,000			1,820,000
Total Revenue		1,820,000			1,820,000
Expense					
Design & Engineering		330,000			330,000
Construction		1,390,000			1,390,000
Land Acquisition		100,000			100,000
Total Expense		1,820,000			1,820,000

50-250: Chesapeake Ave. Area Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2021	Planning Area:	South Norfolk
Start Date:	7/1/2020	Project Status:	Proposed
Est. Completion Date:	6/30/2024		

Description:

This project will provide for the replacement, improvement, and realignment of the stormwater system along Guerrier St., Chesapeake Ave., Ohio St., Rodgers St., Jefferson St., and Stewart St., located within the Quincy neighborhood of South Norfolk. It will also include re-grading and improvements to the existing channels between Jefferson St. and Park Ave., and Park Ave. and Holly Ave.

Justification:

PW and PU are coordinating the stormwater system improvements needed with the utility replacement planned for this area (Replacement of approximately 919 feet of sanitary sewer mains, effected manholes, and service laterals on Chesapeake Ave., Jackson Ave., and Ohio St. by Public Utilities).

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	1,600,000	1,600,000	0
	1,600,000	1,600,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - South Norfolk TIF	2,000,000	1,600,000			3,600,000
Total Revenue	2,000,000	1,600,000			3,600,000
Expense					
Design & Engineering	500,000				500,000
Construction	1,300,000	1,600,000			2,900,000
Land Acquisition	200,000				200,000
Total Expense	2,000,000	1,600,000			3,600,000

03-160: Citywide Outfall Re-Grading and Restoration

Department: **Storm Water Capital Projects**
 Project Type: Renovation or Rehabilitation Comprehensive Plan Goal Area: Stormwater Management
 Year identified: 2012 Planning Area: Citywide
 Start Date: 7/1/2012 Project Status: Proposed
 Est. Completion Date: 12/30/2024

Description:

This project will provide for removal of accumulated sediment and silt from ditches and outfalls.

Justification:

Accumulated sediment and silt removal is required on a regular basis in order to maintain ditch capacity and improve stormwater runoff quality. Additional funding is needed to continue to restore drainage systems across the City. Identified areas in need of drainage improvements include Hazel Court, Haledon Drive, and Wesley Road.

Comments:

Once major capital work to clear ditches and outfalls is completed, cleared areas will be maintained through the ongoing ditch access and bank mowing program funded in the Stormwater Operating Budget.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	750,000	750,000	0
2023	1,000,000	1,000,000	0
2024	200,000	200,000	0
2025	300,000	300,000	0
	2,250,000	2,250,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	2,934,332	600,925	1,500,000		5,035,257
Fund Balance - Stormwater		149,075			149,075
Total Revenue	2,934,332	750,000	1,500,000		5,184,332
Expense					
Design & Engineering	1,025,000				1,025,000
Construction	1,559,332	750,000	1,500,000		3,809,332
Land Acquisition	350,000				350,000
Total Expense	2,934,332	750,000	1,500,000		5,184,332

43-170: Citywide System Rehab

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2013	Planning Area:	Citywide
Start Date:	7/1/2012	Project Status:	Proposed
Est. Completion Date:	6/30/2025		

Description:

This project will provide for the replacement and upgrade of aging pipe systems and structures within selected neighborhoods in order to provide a ten year level of protection.

Justification:

The presence of numerous cave-ins and sinkholes in the area indicates there is a need for system improvement.

Comments:

Funding for this project has been curtailed in order to meet increasing operating costs. In May of 2020 City Council amended the CIP and suspended funding for this project for one year.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	700,000	700,000	0
2023	700,000	700,000	0
2024	300,000	300,000	0
2025	200,000	200,000	0
	1,900,000	1,900,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	3,400,000		1,200,000		4,600,000
Fund Balance - Stormwater		700,000			700,000
Total Revenue	3,400,000	700,000	1,200,000		5,300,000
Expense					
Design & Engineering	750,000				750,000
Construction	2,650,000	680,000	1,140,000		4,470,000
Land Acquisition		20,000	60,000		80,000
Total Expense	3,400,000	700,000	1,200,000		5,300,000

07-150: Citywide Undesignated Drainage - Phase III

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2011	Planning Area:	Citywide
Start Date:	7/1/2012	Project Status:	Proposed
Est. Completion Date:	6/30/2023		

Description:

This project will provide for citywide drainage improvements including acquisition of easements, replacement of pipes, re-grading ditches, and associated activities.

Justification:

Major expenditures are necessary to increase drainage capacity in systems that experienced flooding from recent storm events. Many of these were brought to the City's attention by citizens' concerns raised during and after the 1999 hurricane season.

Comments:

Due to the substantial amount of stormwater quality requirements met through the SWIFT program, the project plan was revised in FY 2019 and the annual investment to complete citywide drainage projects was revised to \$50,000 for FY 2020 - FY 2023.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	50,000	50,000	0
2023	50,000	50,000	0
	100,000	100,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	976,347	50,000	50,000		1,076,347
Total Revenue	976,347	50,000	50,000		1,076,347
Expense					
Construction	976,347	50,000	50,000		1,076,347
Total Expense	976,347	50,000	50,000		1,076,347

51-250: Cooper's Ditch Re-Grading, Phase II

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2021	Planning Area:	Great Bridge
Start Date:	7/1/2020	Project Status:	Proposed
Est. Completion Date:	6/30/2023		

Description:

This project will provide for the maintenance re-grading of Cooper's Ditch, from the Gloria Drive bridge to the Forest Road bridge.

Justification:

This project is needed to maintain the hydraulic capacity to serve the Cooper's Ditch Watershed.

Comments:

Cooper's ditch was excavated as a canal facility in the early 1990s. Over the years significant amounts of silt and sediment have accumulated along the ditch, particularly in the vicinity of roadway crossings.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Fund Balance - Stormwater		1,000,000			1,000,000
Total Revenue		1,000,000			1,000,000
Expense					
Design & Engineering		150,000			150,000
Construction		800,000			800,000
Land Acquisition		50,000			50,000
Total Expense		1,000,000			1,000,000

04-130: D Street Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2009	Planning Area:	South Norfolk
Start Date:	1/1/2014	Project Status:	Proposed
Est. Completion Date:	11/30/2021		

Description:

This project will provide for the installation of a new drainage system along D Street including structures and basins.

Justification:

This segment of D Street lacks a drainage system to carry stormwater runoff resulting in flooding along the street.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	370,000				370,000
Total Revenue	370,000				370,000
Expense					
Design & Engineering	35,000				35,000
Construction	300,000				300,000
Land Acquisition	35,000				35,000
Total Expense	370,000				370,000

24-240: Drum Creek Farms Drainage Improvements - Phase II

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2020	Planning Area:	Western Branch
Start Date:	7/1/2023	Project Status:	Proposed
Est. Completion Date:	6/30/2025		

Description:

This project will complete drainage improvements that are necessary to provide relief to an overtaxed outfall ditch on Drum Creek Road in the Drum Creek Farms area. A new conveyance system will be designed and constructed.

Justification:

The purpose of this project is to curb flooding in the neighborhood and provide relief for the residents along Drum Creek Road. The ditch is experiencing major erosion due to the high velocities within the system. The capacity of the ditch is compromised by displaced sediment.

Comments:

For years, the ditch along the rear of the 2400 block of Drum Creek Road has needed improvements and additional capacity. A secondary outfall is planned in this phase of Drum Creek Farms Drainage Improvements.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2024	1,400,000	1,400,000	0
	1,400,000	1,400,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater			1,400,000		1,400,000
Total Revenue			1,400,000		1,400,000
Expense					
Design & Engineering			175,000		175,000
Construction			1,125,000		1,125,000
Other			100,000		100,000
Total Expense			1,400,000		1,400,000

25-230: Elmwood Landing Area Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2019	Planning Area:	Deep Creek/Camelot
Start Date:	7/1/2018	Project Status:	Proposed
Est. Completion Date:	5/31/2022		

Description:

This project will provide for drainage improvements in the Elmwood Landing area. It will include related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. It will also include the replacement of three downstream culvert crossings.

Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

Comments:

In the FY 2020-24 CIP, the project funding source for FY 2020 was modified from Grant Proceeds to Stormwater Cash because the grant was not awarded.

This area was identified in a study after the 1999 storms caused significant flooding in this area. During major storm events, the adjacent Dismal Swamp area contributes to this flooding.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Grant		150,000			150,000
Cash - Stormwater		1,400,000			1,400,000
Total Revenue		1,550,000			1,550,000
Expense					
Design & Engineering		150,000			150,000
Construction		1,200,000			1,200,000
Other		200,000			200,000
Total Expense		1,550,000			1,550,000

26-230: Forest Lakes Outfall Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2019	Planning Area:	Great Bridge
Start Date:	7/1/2018	Project Status:	Proposed
Est. Completion Date:	5/31/2022		

Description:

This project will provide for drainage and outfall improvements in the Forest Lakes area. It will include related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. This project will also include the replacement of downstream culverts.

Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

Comments:

This area was identified in a drainage study after the 1999 storms caused significant flooding in this area.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	900,000				900,000
Total Revenue	900,000				900,000
Expense					
Design & Engineering	100,000				100,000
Construction	725,000				725,000
Land Acquisition	75,000				75,000
Total Expense	900,000				900,000

26-240: Greenbrier Outfall Improvements

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2020	Planning Area:	Greenbrier
Start Date:	7/1/2019	Project Status:	Proposed
Est. Completion Date:	9/30/2022		

Description:

This project will provide for drainage improvements with the related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to provide a higher level of protection and an improved stormwater system in this watershed with inter-connected lake systems that are dependent on a single outlet control structure. This project will explore the provision of an improved outlet control structure, and the capacity to reduce flooding during major storm events.

Justification:

The frequency and intensity of storms impacting the City of Chesapeake and the region as a whole have been observed to be much greater than in the past. These project improvements will provide critical systems with added levels of protection that will help reduce the impact of flooding during major storm events.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Greenbrier TIF		1,100,000			1,100,000
Total Revenue		1,100,000			1,100,000
Expense					
Design & Engineering		100,000			100,000
Construction		950,000			950,000
Other		50,000			50,000
Total Expense		1,100,000			1,100,000

27-230: Hickory Ridge Outfall Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2019	Planning Area:	South Chesapeake
Start Date:	7/1/2021	Project Status:	Proposed
Est. Completion Date:	7/30/2023		

Description:

This project will provide for drainage improvements in the Hickory Ridge area. It will include related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. This project will also include the replacement of downstream culverts.

Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

Comments:

This area was identified in the 1999 drainage studies after storms caused significant flooding in this area.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	200,000	200,000	0
2023	650,000	650,000	0
	850,000	850,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater		200,000	650,000		850,000
Total Revenue		200,000	650,000		850,000
Expense					
Design & Engineering		75,000			75,000
Construction		25,000	650,000		675,000
Land Acquisition		100,000			100,000
Total Expense		200,000	650,000		850,000

25-240: John Street Area Outfall Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2020	Planning Area:	Western Branch
Start Date:	10/1/2020	Project Status:	Proposed
Est. Completion Date:	6/30/2022		

Description:

This project will complete drainage improvements in the John Street Area Outfall that are necessary to provide relief to undersized outfall pipes that receive outfall from hundreds of acres in Suffolk's Pughsville area. Several pipes will be upgraded with this project. An improved conveyance system will also be designed and constructed. Easements and wetland mitigation may also be required.

Justification:

The purpose of this project is to ensure the stormwater system accommodates the upstream system to curb flooding in the neighborhood and provide relief for the residents.

Comments:

A recent Watershed Study performed on the Drum Point Creek watershed revealed a deficiency within the John Street Area Outfall. For years, during larger storms, the Pughesville neighborhood has been dealing with undersized outfalls and associated flooding. During Hurricane Matthew in 2016, several feet of water backed up to the homes. This project will be funded by cash from the Stormwater Fund (\$500,000) and Drainage Pro-Rata funds (\$300,000).

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	86,000	86,000	0
	86,000	86,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	500,000				500,000
Developer Pro Rata	300,000	86,000			386,000
Total Revenue	800,000	86,000			886,000
Expense					
Design & Engineering	150,000				150,000
Construction	550,000	86,000			636,000
Other	100,000				100,000
Total Expense	800,000	86,000			886,000

07-130: Lamberts Trail Area Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2009	Planning Area:	Deep Creek/Camelot
Start Date:	7/1/2011	Project Status:	Proposed
Est. Completion Date:	10/31/2021		

Description:

This project will improve the outfall using adequate sized pipe systems along Deep Creek Boulevard, re-grade roadside ditches, and re-set driveway pipes as needed within the Lamberts Trail area.

Justification:

This project was identified after flooding occurred due to several storms in the Fall of 1999. There is a need to improve the area's outfall along Deep Creek Boulevard, re-grade roadside ditches, and re-set driveway pipes.

Comments:

Design has been completed. Construction is underway.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater		2,100,000			2,100,000
Total Revenue		2,100,000			2,100,000
Expense					
Design & Engineering		100,000			100,000
Construction		1,950,000			1,950,000
Land Acquisition		50,000			50,000
Total Expense		2,100,000			2,100,000

23-220: Loxley Gardens Drainage Improvements - Phase II

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2018	Planning Area:	Deep Creek/Camelot
Start Date:	7/1/2021	Project Status:	Proposed
Est. Completion Date:	12/30/2023		

Description:

This project will provide for Phase II of the Loxley Gardens Drainage Improvements, which includes the acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. Phase II will also replace the downstream culvert crossing of Gilmerton Road and elevate the roadway at this crossing.

Justification:

Major expenditures are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

Comments:

This area experiences frequent flooding during rainfall events due to tidal impacts and an undersized stormwater system. Phase I improvements were completed in 2008. Phase II will continue improvements in the area to increase drainage capacity and performance.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	1,100,000	1,100,000	0
	1,100,000	1,100,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Fund Balance - Stormwater		1,100,000			1,100,000
Total Revenue		1,100,000			1,100,000
Expense					
Design & Engineering		100,000			100,000
Construction		950,000			950,000
Land Acquisition		50,000			50,000
Total Expense		1,100,000			1,100,000

07-180: Major Equipment Purchases - PW Stormwater Division

Department:	Storm Water Capital Projects		
Project Type:	Equipment	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2014	Planning Area:	Citywide
Start Date:	3/1/2014	Project Status:	Proposed
Est. Completion Date:	6/30/2024		

Description:

This project will provide for the purchase of replacement vehicles and major equipment for the Public Works Stormwater Division.

Justification:

Over 50% of the current fleet has exceeded its useful service life, which results in increased maintenance costs and equipment downtime.

Comments:

Annual funding of \$200,000 is provided for new major equipment purchases planned for FY 2020 – FY 2023. On November 18, 2014, City Council added \$500,000 to this project to purchase two street sweepers.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	200,000	200,000	0
2023	200,000	200,000	0
	400,000	400,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	5,074,000	200,000	200,000		5,474,000
Fund Balance - Stormwater	1,200,000				1,200,000
Total Revenue	6,274,000	200,000	200,000		6,674,000
Expense					
Equipment	6,274,000	200,000	200,000		6,674,000
Total Expense	6,274,000	200,000	200,000		6,674,000

05-142: Meads Court Storm Water Improvements

Department:	Storm Water Capital Projects		
Project Type:	Study	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2018	Planning Area:	Deep Creek/Camelot
Start Date:	7/1/2017	Project Status:	Proposed
Est. Completion Date:	3/31/2022		

Description:

This project will provide for storm water improvements for Meads Court.

Comments:

In 2017, City Council appropriated funds for a best management practice (BMP) project based on a prospective grant from the Virginia Department of Environmental Quality (DEQ). The City was unable to acquire the land needed for the BMP, but will use the local funds appropriated to improve storm water management at Meads Court.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	652,587				652,587
Total Revenue	652,587				652,587
Expense					
Design & Engineering	100,000				100,000
Construction	552,587				552,587
Total Expense	652,587				652,587

05-121: Neighborhood Drainage Improvements - Phase I

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2011	Planning Area:	Citywide
Start Date:	7/1/2011	Project Status:	Proposed
Est. Completion Date:	6/30/2022		

Description:

This project will provide for citywide drainage improvements including the acquisition of easements, replacement of pipes, re-grading ditches, and associated activities to address existing neighborhood drainage deficiencies. (See also CIP 08-150 "Neighborhood Drainage Improvements - Phase II").

Justification:

Major improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in existing neighborhoods Citywide.

Comments:

This project will include the neighborhoods of Phyllis Drive, Jarvis Road, Buskey Road outfall, Bainbridge Boulevard, Ohio Street, Jefferson Street, Chesapeake Drive, Inland Colony area, Fernwood Farm outfalls, Cedarville/Sanderson Road area, Shell Road outfall, and Oleander Avenue outfall improvement, and Greenbrier outfall improvements.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater		2,221,983			2,221,983
Total Revenue		2,221,983			2,221,983
Expense					
Design & Engineering		175,927			175,927
Construction		2,046,056			2,046,056
Total Expense		2,221,983			2,221,983

08-150: Neighborhood Drainage Improvements - Phase II

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2011	Planning Area:	Citywide
Start Date:	7/1/2012	Project Status:	Proposed
Est. Completion Date:	6/30/2024		

Description:

This project will provide for citywide drainage improvements including acquisition of easements, replacement of pipes, re-grading ditches, and associated activities to address existing neighborhood drainage deficiencies.

Justification:

Major improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in existing neighborhoods citywide.

Comments:

In May of 2020 City Council reduced funding for this project for FY 2021 from \$500,000 to \$125,000.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	700,000	700,000	0
2023	700,000	700,000	0
2024	200,000	200,000	0
2025	200,000	200,000	0
	1,800,000	1,800,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	3,799,600		1,100,000		4,899,600
Fund Balance - Stormwater		700,000			700,000
Total Revenue	3,799,600	700,000	1,100,000		5,599,600
Expense					
Design & Engineering	100,000	40,000	120,000		260,000
Construction	3,674,600	645,000	935,000		5,254,600
Land Acquisition	25,000	15,000	45,000		85,000
Total Expense	3,799,600	700,000	1,100,000		5,599,600

27-240: Nina Drive Area Outfall Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2020	Planning Area:	Western Branch
Start Date:	7/1/2019	Project Status:	Proposed
Est. Completion Date:	9/30/2021		

Description:

This project will complete drainage improvements to the Lisa Cove Outfall portion of the Nina Drive Area Outfall. The project will include drainage improvements to the system from the Lisa Cove Outfall to Salvadore Drive and to Colombo Avenue. It will also include improvements along Colombo Avenue across Coffman Boulevard and Pinta Drive to the Nina Drive intersection. Several pipes will be upgraded with this project. An improved conveyance system will also be designed and constructed. Easements and wetland mitigation may also be required.

Justification:

The purpose of this project is to ensure that this stormwater system accommodates the upstream system to curb flooding in the neighborhood and provide relief for the residents.

Comments:

A recent study performed for this area revealed a system deficiency. For years, during the larger storms, the neighborhood has been dealing with undersized outfalls and associated flooding.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	1,500,000				1,500,000
Total Revenue	1,500,000				1,500,000
Expense					
Design & Engineering	240,000				240,000
Construction	1,160,000				1,160,000
Other	100,000				100,000
Total Expense	1,500,000				1,500,000

52-250: Norfolk Highlands Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2021	Planning Area:	Citywide
Start Date:	7/1/2020	Project Status:	Proposed
Est. Completion Date:	12/31/2028		

Description:

This project will provide for the replacement, improvement, and realignment of the public stormwater system and outfalls within the Norfolk Highlands area neighborhood to improve system capacity and mitigate flooding issues.

Justification:

This project is needed to improve the hydraulic capacity required to serve the Norfolk Highlands neighborhood and reduce flooding conditions.

Comments:

The Norfolk Highlands Area Neighborhood Drainage Study was completed in July 2019 by City Consultant. The Study analyzed existing conditions and recommended several improvements to remediate existing drainage issues.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	600,000	600,000	0
2023	600,000	600,000	0
2025			0
	1,200,000	1,200,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Fund Balance - Storm Water CP Fund		600,000			600,000
Cash - Stormwater			600,000		600,000
Total Revenue		600,000	600,000		1,200,000
Expense					
Construction		600,000	600,000		1,200,000
Total Expense		600,000	600,000		1,200,000

09-150: Oakdale Area BMP and Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2011	Planning Area:	South Norfolk
Start Date:	1/1/2017	Project Status:	Proposed
Est. Completion Date:	6/30/2022		

Description:

This project will provide for an updated study and construction of stormwater pipes, ditches, and lakes/BMPs to provide flood and water quality improvements.

Justification:

This area experiences frequent flooding due to the old and undersized drainage system. A study completed in 1999 recommended several large size drainage facilities to improve the conditions and prevent flooding.

Comments:

Best Management Practices (BMPs) are devices used to reduce pollution in stormwater runoff, thereby protecting area waterways.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater		5,000,000			5,000,000
Total Revenue		5,000,000			5,000,000
Expense					
Design & Engineering		200,000			200,000
Construction		4,500,000			4,500,000
Land Acquisition		300,000			300,000
Total Expense		5,000,000			5,000,000

24-220: Old Mill Rd. Drainage Improvements (Crossing Replacement)

Department:	Storm Water Capital Projects		
Project Type:	Replacement	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2018	Planning Area:	Deep Creek/Camelot
Start Date:	7/1/2018	Project Status:	Proposed
Est. Completion Date:	11/30/2021		

Description:

The project will provide for design and construction of Master Drainage Facility Improvements in the Deep Creek Watershed, which will include a crossing replacement at Old Mill Road.

Justification:

This project is needed to complete the improvements identified in master drainage studies and watershed studies.

Comments:

For the FY 2019-23 CIP, the total project cost was increased due to most recent estimates. The City has completed many master drainage and watershed studies that have identified necessary improvements. This project will address some of the needs. Project funding includes \$100,000 toward the total project cost from the Drainage Pro-Rata account for the Deep Creek (DC) Watershed.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater		650,000			650,000
Developer Pro Rata		100,000			100,000
Total Revenue		750,000			750,000
Expense					
Design & Engineering		75,000			75,000
Construction		600,000			600,000
Other		75,000			75,000
Total Expense		750,000			750,000

28-230: Parkview Area Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2019	Planning Area:	Deep Creek/Camelot
Start Date:	7/1/2018	Project Status:	Proposed
Est. Completion Date:	12/30/2024		

Description:

This project will provide for the drainage improvements in the Parkview area. It will include related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. This project will also include the replacement of downstream culverts.

Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

Comments:

This area was identified in the 1999 drainage studies after storms caused significant flooding in this area.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	250,000	250,000	0
2023	350,000	350,000	0
	600,000	600,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	650,000	250,000	350,000		1,250,000
Total Revenue	650,000	250,000	350,000		1,250,000
Expense					
Design & Engineering	200,000				200,000
Land Acquisition	450,000	250,000	350,000		1,050,000
Total Expense	650,000	250,000	350,000		1,250,000

29-230: Resiliency & Reliability Program

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2019	Planning Area:	Greenbrier
Start Date:	7/1/2018	Project Status:	Proposed
Est. Completion Date:	12/30/2024		

Description:

This project will provide for drainage improvements with related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to provide a higher level of protection and improved stormwater systems in city areas with inter-connected lake systems that are dependent on a single outlet control structure. This program will look at providing an improved outlet control structure in areas such as the Greenbrier lakes system, Etheridge lakes system, Stonegate lakes system, and other lake systems with drainage deficiencies. This project will also include the replacement of downstream culverts.

Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in these areas.

Comments:

The frequency and intensity of storms impacting the City of Chesapeake and the region as a whole have been observed to be much greater than in the past. These project improvements will provide critical systems with added levels of protection that will help reduce the impact of flooding during major storm events.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022			0
2023			0
2024			0
	0	0	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater		1,600,000			1,600,000
Total Revenue		1,600,000			1,600,000
Expense					
Design & Engineering		500,000			500,000
Construction		900,000			900,000
Land Acquisition		200,000			200,000
Total Expense		1,600,000			1,600,000

76-120: Scenic Blvd. Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2008	Planning Area:	Great Bridge
Start Date:	7/1/2010	Project Status:	Proposed
Est. Completion Date:	12/31/2021		

Description:

The project will provide for the re-grading of roadside ditches and re-setting of driveway pipes along Scenic Boulevard.

Justification:

The driveway pipes have settled over time and the ditch silted to a point that it has created drainage problems. This project will restore the system's functionality.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	260,000				260,000
Total Revenue	260,000				260,000
Expense					
Design & Engineering	30,000				30,000
Land Acquisition	230,000				230,000
Total Expense	260,000				260,000

77-120: Shillelagh Rd. Drainage Outfall Improvements

Department:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2008	Planning Area:	South Chesapeake
Start Date:	9/1/2016	Project Status:	Proposed
Est. Completion Date:	12/31/2021		

Description:

This project will provide for improvements to the main outfall for Shillelagh Road, which will include widening the outfall and upgrading the downstream culvert crossing in order to improve drainage and prevent frequent flooding in this area.

Justification:

After the storms of 1999, the community around the Shillelagh Road/Herring ditch was identified as one of the drainage areas to study. The study, completed in 1999, recommended widening the outfall ditch and upgrading the downstream culverts.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	3,100,000				3,100,000
Total Revenue	3,100,000				3,100,000
Expense					
Design & Engineering	500,000				500,000
Construction	2,600,000				2,600,000
Total Expense	3,100,000				3,100,000

10-150: Stormwater Mapping & Master Drainage Plan III

Department:	Storm Water Capital Projects		
Project Type:	Study	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2011	Planning Area:	Citywide
Start Date:	7/1/2012	Project Status:	Proposed
Est. Completion Date:	7/30/2023		

Description:

This project will continue the updating of the Stormwater Inventory Mapping and Master Drainage Plan.

Justification:

The updating of the Stormwater Inventory Mapping and Master Drainage Plan is essential in providing quick, accurate information to City staff, consultants, and the general public. This will provide inventory mapping to support emergency responses and GASB 34 accounting.

Comments:

On May 28, 2019, City Council transferred \$48,876 from this project to CIP 70-230 "Crestwood Watershed Master Drainage Plan" to provide the local match for a grant award.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022			0
2023	100,000	100,000	0
	100,000	100,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	601,124		100,000		701,124
Total Revenue	601,124		100,000		701,124
Expense					
Design & Engineering	601,124		100,000		701,124
Total Expense	601,124		100,000		701,124

11-150: Stormwater Quality Program - Phase II

Department:	Storm Water Capital Projects		
Project Type:	Study	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2011	Planning Area:	Citywide
Start Date:	9/1/2012	Project Status:	Proposed
Est. Completion Date:	7/30/2023		

Description:

The Stormwater Quality program will ensure compliance with the Virginia Pollution Discharge Elimination System Permit and will update the City's MS4 (Municipal Separate Stormwater Sewer System) Program plan. This project will provide for the development of PARS system (regional stormwater tracking and reporting system), extensive data collection, and inspection of all stormwater management facilities in accordance with the new permit requirements. It will also establish a monitoring and sampling program to comply with the new TMDL requirements. As part of the permit requirements, the City will be completing stormwater retrofit projects to address stormwater runoff discharge into waterways and creeks.

Justification:

The City and neighboring localities are currently working with the Virginia Dept. of Conservation & Recreation (VDCR) and Environmental Protection Agency (EPA) to finalize the new MS4 permit requirements. Once a permit is issued, the City is required to comply with the new permit. This project is needed to comply with the new permit. Chesapeake and all localities within the Chesapeake Bay watershed are also required to comply with an EPA Watershed Implementation Plan (WIP) to address pollutant TMDL (also known as the pollution diet) for the Chesapeake Bay.

Comments:

Due to the substantial amount of stormwater quality requirements met through the SWIFT program, project funding was reduced starting in FY 2019.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	100,000	100,000	0
2023	100,000	100,000	0
	200,000	200,000	0

Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	4,140,565	100,000	100,000		4,340,565
Total Revenue	4,140,565	100,000	100,000		4,340,565
Expense					
Design & Engineering	1,415,565	25,000	25,000		1,465,565
Construction	2,725,000	75,000	75,000		2,875,000
Total Expense	4,140,565	100,000	100,000		4,340,565

05-140: Stormwater Quality Program/VPDES Permit Compliance

Department:	Storm Water Capital Projects		
Project Type:	Study	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2010	Planning Area:	Citywide
Start Date:	7/1/2011	Project Status:	Proposed
Est. Completion Date:	6/30/2024		

Description:

This program will ensure compliance with the Virginia Pollution Discharge Elimination System Permit and update the City's MS4 (Municipal Separate Stormwater Sewer System) Program plan.

Justification:

The City and neighboring localities are currently working with the Virginia Dept. of Conservation and Recreation (VDCR) and Environmental Protection Agency (EPA) to finalize the new MS4 permit requirements. When a permit is issued, the City is required to comply with the new permit and this project is needed to meet permit compliance. All localities within the Chesapeake Bay watershed are required to comply with an EPA Watershed Implementation Plan to address the pollutant Total Maximum Daily Load (TMDL) for the Chesapeake Bay.

The Stormwater Quality Program project includes extensive data collection and inspection of all stormwater facilities to comply with the new permit requirements and to establish a monitoring and sampling program to comply with the new TMDL requirements. This study is part of a regional effort led by the Hampton Roads Planning District for improvements to the Chesapeake Bay watershed as required by new EPA regulations.

Comments:

On December 11, 2018, City Council approved an FY 2019 Capital Budget amendment and transferred \$675,000 from this project to the newly established project 65-230 "Philmont Ave Septic System Disconnection".

On October 23, 2018, City Council approved an FY 2019 Capital Budget amendment that established a new sub-project 05-144 "22nd St. Regional BMP" under the main project 05-140 because the City was awarded a new SLAF grant from the Virginia Dept. of Environmental Quality (DEQ). The sub-projects total estimated cost is \$627,500. The grant award covered 50% of the cost with a required 50% local match. City Council approved appropriated the \$313,750 grant and reassigned \$313,750 from the main project 05-140 to the new sub-project 05-144 to fund the City's local match requirements

On June 27, 2017, City Council approved an FY 2018 Capital Budget amendment that added two projects because the City was awarded grants from DEQ. The new stormwater projects 05-142 "Meads Court BMP" and # 05-143 "New Mill Regional BMP" were established as sub-projects of the main project 05-140. The DEQ grant award covered 50% of the cost of each new sub-project and required a 50% local match. City Council approved reassigning \$1,707,203 from the appropriated budget of the main project 05-140 to fund the City's local match requirements for the sub-projects (\$684,228 was reassigned to project 05-142 and \$1,022,975 to project 05-143).

Since the City was unable to acquire land needed for the New Mill Regional BMP grant, the local portion of that funding was returned to the main project.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater		5,043,336			5,043,336
Total Revenue		5,043,336			5,043,336
Expense					
Design & Engineering		2,551,080			2,551,080
Construction		2,492,256			2,492,256
Total Expense		5,043,336			5,043,336

19-200: Welch Lane Drainage Improvements

Department:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Comprehensive Plan Goal Area:	Stormwater Management
Year identified:	2016	Planning Area:	Great Bridge
Start Date:	6/30/2015	Project Status:	Proposed
Est. Completion Date:	12/30/2021		

Description:

This project will provide for neighborhood drainage improvements that will include replacement and additions to the existing inadequate stormwater system to improve the level of protection to meet current stormwater design requirements.

Justification:

The existing stormwater system along Welch Lane is inadequate to handle the amount of runoff generated in the area. In some cases, a conveyance system is not in place to carry runoff to the outfall.

Comments:

Many complaints about poor drainage and flooding have been received from this area for a number of years.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2022:

	Prior Years	2022	2023 - 26	Future Years	Total Amount
Revenue					
Cash - Stormwater	480,000				480,000
Total Revenue	480,000				480,000
Expense					
Design & Engineering	50,000				50,000
Construction	400,000				400,000
Land Acquisition	30,000				30,000
Total Expense	480,000				480,000