

# 49-250: Arboretum Channel Improvements

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 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 channel bank continues to erode, it has the potential to impact adjacent apartment building foundations 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
2021	300,000	300,000	0
	<b>300,000</b>	<b>300,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - Stormwater		300,000			<b>300,000</b>
<b>Total Revenue</b>		<b>300,000</b>			<b>300,000</b>
<b>Expense</b>					
Design & Engineering		30,000			<b>30,000</b>
Construction		240,000			<b>240,000</b>
Land Acquisition		30,000			<b>30,000</b>
<b>Total Expense</b>		<b>300,000</b>			<b>300,000</b>

# 73-120: BMP Restoration Citywide

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2008  
 Start Date: 7/1/2011  
 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 the water quality function 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 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 2020 amendments to the FY 2021 CIB due to COVID-19 included suspending funding of this project for one year with funding to resume in FY 2022.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021			0
2022	100,000	100,000	0
2023	100,000	100,000	0
	<b>200,000</b>	<b>200,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater		2,050,000	200,000		<b>2,250,000</b>
<b>Total Revenue</b>		<b>2,050,000</b>	<b>200,000</b>		<b>2,250,000</b>
<b>Expense</b>					
Construction		2,050,000	200,000		<b>2,250,000</b>
<b>Total Expense</b>		<b>2,050,000</b>	<b>200,000</b>		<b>2,250,000</b>

# 50-250: Chesapeake Ave. Area Drainage Improvements

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 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
2021	2,000,000	2,000,000	0
2022	1,600,000	1,600,000	0
	<b>3,600,000</b>	<b>3,600,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - South Norfolk TIF		2,000,000	1,600,000		<b>3,600,000</b>
<b>Total Revenue</b>		<b>2,000,000</b>	<b>1,600,000</b>		<b>3,600,000</b>
<b>Expense</b>					
Design & Engineering		500,000			<b>500,000</b>
Construction		1,300,000	1,600,000		<b>2,900,000</b>
Land Acquisition		200,000			<b>200,000</b>
<b>Total Expense</b>		<b>2,000,000</b>	<b>1,600,000</b>		<b>3,600,000</b>

# 03-160: Citywide Outfall Re-Grading and Restoration

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2012  
 Start Date: 7/1/2012  
 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.

**Comments:**

FY 2020: 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
2021	400,000	400,000	0
2022	300,000	300,000	0
2023	300,000	300,000	0
2024	200,000	200,000	0
2025	300,000	300,000	0
	<b>1,500,000</b>	<b>1,500,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater	2,534,332	400,000	1,100,000		<b>4,034,332</b>
<b>Total Revenue</b>	<b>2,534,332</b>	<b>400,000</b>	<b>1,100,000</b>		<b>4,034,332</b>
<b>Expense</b>					
Design & Engineering	1,025,000				<b>1,025,000</b>
Construction	1,159,332	400,000	1,100,000		<b>2,659,332</b>
Land Acquisition	350,000				<b>350,000</b>
<b>Total Expense</b>	<b>2,534,332</b>	<b>400,000</b>	<b>1,100,000</b>		<b>4,034,332</b>

# 43-170: Citywide System Rehab

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2013  
 Start Date: 7/1/2012  
 Est. Completion Date: 12/30/2024

**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 reported cave-ins and sinkholes within an area indicates there is a need for a system type improvement.

**Comments:**

Funding for this project has been curtailed in order to meet increasing operating costs. The May 2020 amendments to the FY 2021 budget suspended funding for this project for one year.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021			0
2022	200,000	200,000	0
2023	200,000	200,000	0
2024	300,000	300,000	0
2025	200,000	200,000	0
	<b>900,000</b>	<b>900,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater	3,400,000		900,000		<b>4,300,000</b>
<b>Total Revenue</b>	<b>3,400,000</b>		<b>900,000</b>		<b>4,300,000</b>
<b>Expense</b>					
Design & Engineering	750,000				<b>750,000</b>
Construction	2,650,000		820,000		<b>3,470,000</b>
Land Acquisition			80,000		<b>80,000</b>
<b>Total Expense</b>	<b>3,400,000</b>		<b>900,000</b>		<b>4,300,000</b>

# 07-150: Citywide Undesignated Drainage - Phase III

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2011  
 Start Date: 7/1/2012  
 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 for 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
2021	50,000	50,000	0
2022	50,000	50,000	0
2023	50,000	50,000	0
	<b>150,000</b>	<b>150,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater	926,347	50,000	100,000		<b>1,076,347</b>
<b>Total Revenue</b>	<b>926,347</b>	<b>50,000</b>	<b>100,000</b>		<b>1,076,347</b>
<b>Expense</b>					
Construction	926,347	50,000	100,000		<b>1,076,347</b>
<b>Total Expense</b>	<b>926,347</b>	<b>50,000</b>	<b>100,000</b>		<b>1,076,347</b>

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

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 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 needed 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 and particularly close to roadway crossings.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	1,000,000	1,000,000	0
	<b>1,000,000</b>	<b>1,000,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - Stormwater		1,000,000			<b>1,000,000</b>
<b>Total Revenue</b>		<b>1,000,000</b>			<b>1,000,000</b>
<b>Expense</b>					
Design & Engineering		150,000			<b>150,000</b>
Construction		800,000			<b>800,000</b>
Land Acquisition		50,000			<b>50,000</b>
<b>Total Expense</b>		<b>1,000,000</b>			<b>1,000,000</b>

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

Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2020  
 Start Date: 1/10/2024  
 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 much 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
	<b>1,400,000</b>	<b>1,400,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater			1,400,000		1,400,000
<b>Total Revenue</b>			<b>1,400,000</b>		<b>1,400,000</b>
<b>Expense</b>					
Design & Engineering			175,000		175,000
Construction			1,125,000		1,125,000
Other			100,000		100,000
<b>Total Expense</b>			<b>1,400,000</b>		<b>1,400,000</b>



# 27-230: Hickory Ridge Outfall Improvements

Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2019  
 Start Date: 7/1/2021  
 Est. Completion Date: 7/30/2023

**Description:**

This project will provide for the 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 the 1999 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
	<b>850,000</b>	<b>850,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater			850,000		<b>850,000</b>
<b>Total Revenue</b>			<b>850,000</b>		<b>850,000</b>
<b>Expense</b>					
Design & Engineering			75,000		<b>75,000</b>
Construction			675,000		<b>675,000</b>
Land Acquisition			100,000		<b>100,000</b>
<b>Total Expense</b>			<b>850,000</b>		<b>850,000</b>

# 25-240: John Street Area Outfall Improvements

Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2020  
 Start Date: 10/1/2020  
 Est. Completion Date: 12/30/2021

**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. The 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 the larger storms, the Pughsville 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
2021	800,000	800,000	0
	<b>800,000</b>	<b>800,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - Capital Projects Fund		300,000			300,000
Cash - Stormwater		500,000			500,000
<b>Total Revenue</b>		<b>800,000</b>			<b>800,000</b>
<b>Expense</b>					
Design & Engineering		150,000			150,000
Construction		550,000			550,000
Other		100,000			100,000
<b>Total Expense</b>		<b>800,000</b>			<b>800,000</b>

# 23-220: Loxley Gardens Drainage Improvements - Phase II

Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2018  
 Start Date: 7/1/2021  
 Est. Completion Date: 12/30/2023

**Description:**

This project will provide for Phase II of the Loxley Gardens Drainage Improvements, which will include area drainage improvements with related 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
	<b>1,100,000</b>	<b>1,100,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater			1,100,000		<b>1,100,000</b>
<b>Total Revenue</b>			<b>1,100,000</b>		<b>1,100,000</b>
<b>Expense</b>					
Design & Engineering			100,000		<b>100,000</b>
Construction			950,000		<b>950,000</b>
Land Acquisition			50,000		<b>50,000</b>
<b>Total Expense</b>			<b>1,100,000</b>		<b>1,100,000</b>

# 07-180: Major Equipment Purchases - PW Stormwater Division

Department: **Storm Water Capital Projects**  
 Project Type: Equipment  
 Year Identified: 2014  
 Start Date: 3/1/2014  
 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 have exceeded service life, which results in increased maintenance costs and equipment down time.

**Comments:**

Annual funding of \$200,000 is provided for new major equipment purchases planned for FY 2020 – FY 2023. Note: replacement equipment costs are funded in the operating budget.  
 November 18, 2014 - City Council added \$500,000 to purchase two street sweepers.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	200,000	200,000	0
2022	200,000	200,000	0
2023	200,000	200,000	0
	<b>600,000</b>	<b>600,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater	4,874,000	200,000	400,000		5,474,000
Fund Balance - Stormwater	1,200,000				1,200,000
<b>Total Revenue</b>	<b>6,074,000</b>	<b>200,000</b>	<b>400,000</b>		<b>6,674,000</b>
<b>Expense</b>					
Equipment	6,074,000	200,000	400,000		6,674,000
<b>Total Expense</b>	<b>6,074,000</b>	<b>200,000</b>	<b>400,000</b>		<b>6,674,000</b>

# 08-150: Neighborhood Drainage Improvements - Phase II

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2011  
 Start Date: 7/1/2012  
 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:**

The May 2020 amendments to the Proposed FY 2021 CIB included reducing funding for this project from \$500,000 to \$125,000.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	125,000	125,000	0
2022	200,000	200,000	0
2023	200,000	200,000	0
2024	200,000	200,000	0
2025	200,000	200,000	0
	<b>925,000</b>	<b>925,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater	3,674,600	125,000	800,000		<b>4,599,600</b>
<b>Total Revenue</b>	<b>3,674,600</b>	<b>125,000</b>	<b>800,000</b>		<b>4,599,600</b>
<b>Expense</b>					
Design & Engineering		100,000	160,000		<b>260,000</b>
Construction	3,674,600		580,000		<b>4,254,600</b>
Land Acquisition		25,000	60,000		<b>85,000</b>
<b>Total Expense</b>	<b>3,674,600</b>	<b>125,000</b>	<b>800,000</b>		<b>4,599,600</b>

# 52-250: Norfolk Highlands Drainage Improvements

Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 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 needed to serve the Norfolk Highlands neighborhood and reduce flooding conditions.

**Comments:**

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 poor drainage issues.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2025	1,200,000	1,200,000	0
	<b>1,200,000</b>	<b>1,200,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater			1,200,000		1,200,000
<b>Total Revenue</b>			<b>1,200,000</b>		<b>1,200,000</b>
<b>Expense</b>					
Design & Engineering			150,000		150,000
Construction			1,000,000		1,000,000
Land Acquisition			50,000		50,000
<b>Total Expense</b>			<b>1,200,000</b>		<b>1,200,000</b>

# 28-230: Parkview Area Drainage Improvements

Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2019  
 Start Date: 7/1/2018  
 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 the 1999 storms caused significant flooding in this area.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	250,000	250,000	0
2022	250,000	250,000	0
2023	350,000	350,000	0
	<b>850,000</b>	<b>850,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater	400,000	250,000	600,000		1,250,000
<b>Total Revenue</b>	<b>400,000</b>	<b>250,000</b>	<b>600,000</b>		<b>1,250,000</b>
<b>Expense</b>					
Design & Engineering	200,000				200,000
Land Acquisition	200,000	250,000	600,000		1,050,000
<b>Total Expense</b>	<b>400,000</b>	<b>250,000</b>	<b>600,000</b>		<b>1,250,000</b>

# 10-150: Stormwater Mapping & Master Drainage Plan III

Department: **Storm Water Capital Projects**  
 Project Type: Study  
 Year Identified: 2011  
 Start Date: 7/1/2012  
 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 to Crestwood Watershed Master Drainage Plan (70-230) for local match to grant award.
- Annual funding has been reduced to address increased operating costs.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	100,000	100,000	0
2022			0
2023	100,000	100,000	0
	<b>200,000</b>	<b>200,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater	501,124	100,000	100,000		<b>701,124</b>
<b>Total Revenue</b>	<b>501,124</b>	<b>100,000</b>	<b>100,000</b>		<b>701,124</b>
<b>Expense</b>					
Design & Engineering	501,124	100,000	100,000		<b>701,124</b>
<b>Total Expense</b>	<b>501,124</b>	<b>100,000</b>	<b>100,000</b>		<b>701,124</b>



# 11-150: Stormwater Quality Program - Phase II

Department: **Storm Water Capital Projects**  
 Project Type: Study  
 Year Identified: 2011  
 Start Date: 9/1/2012  
 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 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 meet compliance 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
2021	100,000	100,000	0
2022	100,000	100,000	0
2023	100,000	100,000	0
	<b>300,000</b>	<b>300,000</b>	<b>0</b>

## Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Stormwater	4,040,565	100,000	200,000		<b>4,340,565</b>
<b>Total Revenue</b>	<b>4,040,565</b>	<b>100,000</b>	<b>200,000</b>		<b>4,340,565</b>
<b>Expense</b>					
Design & Engineering	1,390,565	25,000	50,000		<b>1,465,565</b>
Construction	2,650,000	75,000	150,000		<b>2,875,000</b>
<b>Total Expense</b>	<b>4,040,565</b>	<b>100,000</b>	<b>200,000</b>		<b>4,340,565</b>



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