

Project Summary

Project Number: **73-120**
 Project Title: **BMP Restoration Citywide**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Renovation or Rehabilitation Budget Year: 2018
 Year Identified: 2008 Project Status: Funded
 Start Date: 7/1/2011 Region:
 Est. Completion Date: 12/30/2022

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 stormwater Best Practice Management (BMP) restoration project is needed to maintain the hydraulic capacity and the water quality function by limiting runoff to area creeks and streams.

Comments:

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 allow it to 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 areas of vegetation that slow the flow of runoff, channeling it to other BMPs), and filter strips and buffers (areas of vegetation that remove sediment in runoff as the water flows through it).

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	200,000	200,000	0
2019	400,000	400,000	0
2020	300,000	300,000	0
2021	300,000	300,000	0
2022	300,000	300,000	0
	1,500,000	1,500,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,700,000	200,000	1,300,000		3,200,000
Total Revenue		1,700,000	200,000	1,300,000		3,200,000
Expense						
	Construction	1,700,000	200,000	1,300,000		3,200,000
Total Expense		1,700,000	200,000	1,300,000		3,200,000
Obligated to Date:						381,180
						11.91 %

Related Projects

Operating Budget Impact

Project Summary

Project Number: **03-160**
 Project Title: **Citywide Outfall Re-Grading and Restoration**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2012**
 Start Date: **7/1/2012** Project Status: **Funded**
 Est. Completion Date: **12/1/2021** Region:

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.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	100,000	100,000	0
2019	150,000	150,000	0
2020	150,000	150,000	0
2021	100,000	100,000	0
2022	200,000	200,000	0
	700,000	700,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,020,000	100,000	600,000		1,720,000
	Total Revenue	1,020,000	100,000	600,000		1,720,000
Expense						
	Construction	720,000	50,000	400,000		1,170,000
	Land Acquisition	300,000	50,000	200,000		550,000
	Total Expense	1,020,000	100,000	600,000		1,720,000
					Obligated to Date:	653,090
						37.97 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **43-170**
 Project Title: **Citywide System Rehab**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2013**
 Start Date: **7/1/2012** Project Status: **Funded**
 Est. Completion Date: **12/1/2021** Region:

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.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	500,000	500,000	0
2019	500,000	500,000	0
2020	500,000	500,000	0
2021	300,000	300,000	0
	1,800,000	1,800,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,900,000	500,000	1,300,000		3,700,000
	Total Revenue	1,900,000	500,000	1,300,000		3,700,000
Expense						
	Design & Engineering	350,000	150,000	350,000		850,000
	Construction	1,550,000	350,000	950,000		2,850,000
	Total Expense	1,900,000	500,000	1,300,000		3,700,000

Obligated to Date: 142,730
3.86 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **07-150**
 Project Title: **Citywide Undesignated Drainage - Phase III**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2011**
 Start Date: **7/1/2012** Project Status: **Funded**
 Est. Completion Date: **6/30/2022** Region:

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.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	270,000	270,000	0
2019	200,000	200,000	0
2020	300,000	300,000	0
2021	200,000	200,000	0
2022	400,000	400,000	0
	1,370,000	1,370,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	556,347	270,000	1,100,000		1,926,347
Total Revenue		556,347	270,000	1,100,000		1,926,347
Expense						
	Construction	556,347	270,000	1,100,000		1,926,347
Total Expense		556,347	270,000	1,100,000		1,926,347
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **05-141**
 Project Title: **Historical Data Cleanup Grant (DEQ)**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2018
 Year Identified: 2016
 Start Date: 8/28/2015 Project Status: Funded
 Est. Completion Date: 7/30/2017 Region:

Description:

The city's Public Works department has been awarded the Historical Data Cleanup Grant funded by the Department of Environmental Quality (DEQ). This grant funded project will provide for the collection of historical developed/urban Best Management Practices (BMP) data (1985-present) and existing land use/land cover data from local governments within the Chesapeake Bay Watershed.

Justification:

The purpose of the data collection is to provide accurate data use in the next Chesapeake Bay Watershed Model calibration, which is used to determine pollutant loads from various land uses within the Bay Watershed. As a state regulated entity, the city is required to work toward compliance with the Bay Total Maximum Daily Load. This grant will offset city costs to provide the mandated information.

Comments:

On July 28, 2015, City Council approved accepting this grant award and adding this sub-project as an amendment to the FY 2016 CIP Budget. The grant was awarded at the maximum per locality amount of \$25,000. There was no cash match requirement, however, the actual total cost of this project will be \$43,500. This grant funded project was established as a sub-project under related project # 05-140 - Stormwater Quality Program/VPDES Permit Compliance, which has \$18,500 available for this use.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Grant		25,000			25,000
	Cash - Stormwater		18,500			18,500
Total Revenue			43,500			43,500
Expense						
	Other		43,500			43,500
Total Expense			43,500			43,500
Obligated to Date:						43,435
						99.85 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **34-210**
 Project Title: **Liberty St. Drainage System Replacement & Upgrade**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Replacement Budget Year: 2018
 Year Identified: 2017 Project Status: Funded
 Start Date: 7/1/2020 Region:
 Est. Completion Date: 6/30/2021

Description:

This project will provide for drainage improvements including the rehab/replacement of the existing drainage system. Phase I of this project was completed few years ago. This project will complete the replacement of the upstream portion of the drainage system in this area.

Justification:

The drainage pipe system in this location is an old system in poor condition with many cave-ins. The system is also in need of an upgrade to provide the capacity and required level of protection.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2021	1,500,000	1,500,000	0
	1,500,000	1,500,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater			1,500,000		1,500,000
Total Revenue				1,500,000		1,500,000
Expense						
	Design & Engineering			200,000		200,000
	Construction			1,250,000		1,250,000
	Land Acquisition			50,000		50,000
Total Expense				1,500,000		1,500,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **23-220**
 Project Title: **Loxley Gardens Drainage Improvements - Phase II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2018
 Year Identified: 2018
 Start Date: 7/1/2021 Project Status: Funded
 Est. Completion Date: 12/30/2023 Region:

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 include replacement of the downstream culvert crossing of Gilmerton Road and roadway elevation 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 from those completed improvements to further 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 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - 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
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **07-180**
 Project Title: **Major Equipment Purchases - PW Stormwater Division**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Equipment Budget Year: 2018
 Year Identified: 2014 Project Status: Funded
 Start Date: 3/1/2014 Region:
 Est. Completion Date:

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:

Anticipated purchases during FY 2017 include one excavator (\$350,000), one skid steer with timber ax (\$80,000), one street sweeper (\$250,000), and related equipment (\$20,000). Similar equipment purchases are required throughout the planning period.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	700,000	700,000	0
2019	700,000	700,000	0
2020	700,000	700,000	0
2021	700,000	700,000	0
2022	700,000	700,000	0
	3,500,000	3,500,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	3,974,000	700,000	2,800,000		7,474,000
	Fund Balance - Stormwater	700,000				700,000
	Total Revenue	4,674,000	700,000	2,800,000		8,174,000
Expense						
	Equipment	4,674,000	700,000	2,800,000		8,174,000
	Total Expense	4,674,000	700,000	2,800,000		8,174,000
					Obligated to Date:	3,806,572
						46.57 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **40-210**
 Project Title: **Master Drainage Improvements II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2018
 Year Identified: 2017
 Start Date: 7/1/2016 Project Status: Funded
 Est. Completion Date: 6/30/2018 Region:

Description:

This project will provide for the design and construction of Master Drainage Facility improvements in several watersheds including Bells Mill Watershed (Sub-basin 3), Cooper's Ditch Watershed, and Southern Chesapeake Watershed (Sub-Basin 2 and Sub-Basin 3).

Justification:

The City has completed Master Drainage studies and watershed studies that have identified several needed improvements. Funds are available in the Drainage Pro-Rata account to address the Master Drainage improvements identified in the studies. Drainage Pro-Rata funds are requested for the following necessary improvements:

- 1) \$83,000 for the Bells Mill Watershed (Sub-basin 3) at the Horse Run West Watershed,
- 2) \$1,000,000 for the Coopers Ditch Watershed, and
- 3) \$825,000 for the Southern Chesapeake Watershed (Sub-Basin 2) and (Sub-Basin 3).

Comments:

The proposed Master Drainage Facility improvements in the Bells Mill Watershed will include upgrading the Horse Run Ditch West Culvert crossing of Warrick Road and upstream outfall ditch improvements. The proposed improvements for the Cooper's Ditch Watershed are located in the area just south of the Edinburgh Lake which is in need of a new strong outfall to supplement the outfalls within the Cooper's Ditch Watershed. The proposed improvements for the Southern Chesapeake Watershed (Sub-Basin 2 and Sub-Basin 3) will address the St. Brides Outfall Ditch crossing of Benefit Road by replacing and upgrading the crossing with three 6-ft. x 10-ft. box culverts.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Fund Balance - Other Funds	1,908,000				1,908,000
Total Revenue		1,908,000				1,908,000
Expense						
	Design & Engineering	200,000				200,000
	Construction	1,458,000				1,458,000
	Land Acquisition	250,000				250,000
Total Expense		1,908,000				1,908,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **05-142**
 Project Title: **Meads Court BMP (DEQ Grant)**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2018
 Year Identified: 2018
 Start Date: 7/1/2017 Project Status: Funded
 Est. Completion Date: 6/30/2019 Region:

Description:

This project will provide for the construction of a stormwater best management practice (BMP) for Meads Court. The city has been awarded a Virginia Department of Environmental Quality (DEQ) grant to complete this project. The grant requires an equal match from the city.

Comments:

On June 27, 2017, City Council approved an amendment to add this project to the FY 2018 CIP Budget and appropriate a total of \$1,368,456 to this project's budget for FY 2018. Funding will be split equally between the DEQ grant and the city (\$684,228 each). This project will be added as a sub-project of related project # 05-140 - Stormwater Quality Program/VPDES Permit Compliance. The city's portion will be funded by assigning \$684,228 from the budget of project # 05-140 (appropriated in FY 2015) to the budget for this new sub-project # 05-142.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	684,228	684,228	0
	684,228	684,228	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Grant		684,228			684,228
	Cash - Stormwater	684,228				684,228
Total Revenue		684,228	684,228			1,368,456
Expense						
	Design & Engineering	50,000	50,000			100,000
	Construction	634,228	634,228			1,268,456
Total Expense		684,228	684,228			1,368,456

Obligated to Date: 0
0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **08-150**
 Project Title: **Neighborhood Drainage Improvements - Phase II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2011**
 Start Date: **7/1/2012** Project Status: **Funded**
 Est. Completion Date: Region:

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. (See also project # 05-121 Phase I).

Justification:

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

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	400,000	400,000	0
2019	650,000	650,000	0
2020	650,000	650,000	0
2021	500,000	500,000	0
2022	500,000	500,000	0
	2,700,000	2,700,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,324,600	400,000	2,300,000		5,024,600
Total Revenue		2,324,600	400,000	2,300,000		5,024,600
Expense						
	Construction	2,324,600	400,000	2,300,000		5,024,600
Total Expense		2,324,600	400,000	2,300,000		5,024,600
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **05-143**
 Project Title: **New Mill Regional BMP (DEQ Grant)**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2018
 Year Identified: 2017
 Start Date: 7/1/2017 Project Status: Funded
 Est. Completion Date: 6/30/2019 Region:

Description:

This project will construct a regional stormwater best management practice (BMP) for the New Mill area. The city has been awarded a Virginia Department of Environmental Quality (DEQ) grant to complete this project. The grant requires an equal match from the city.

Comments:

On June 27, 2017, City Council approved an amendment to add this project to the FY 2018 CIP Budget and appropriate a total of \$2,045,950 to this project's budget for FY 2018. Funding will be split equally between the DEQ grant and the city (\$1,022,975 each). This project will be added as a sub-project of related project # 05-140 - Stormwater Quality Program/VPDES Permit Compliance. The city's portion will be funded by assigning \$1,022,975 from the budget of project # 05-140 (appropriated in FY 2015) to the budget for this new sub-project # 05-143.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	1,022,975	1,022,975	0
	1,022,975	1,022,975	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Grant		1,022,975			1,022,975
	Cash - Stormwater	1,022,975				1,022,975
Total Revenue		1,022,975	1,022,975			2,045,950
Expense						
	Design & Engineering	50,000	50,000			100,000
	Construction	972,975	972,975			1,945,950
Total Expense		1,022,975	1,022,975			2,045,950

Obligated to Date: 0
 0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **09-150**
 Project Title: **Oakdale Area BMP and Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2018
 Year Identified: 2011
 Start Date: 1/1/2017 Project Status: Funded
 Est. Completion Date: 12/1/2020 Region:

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
2018	1,500,000	1,500,000	0
2019	2,000,000	2,000,000	0
2020	1,000,000	1,000,000	0
	4,500,000	4,500,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	500,000	1,500,000	3,000,000		5,000,000
Total Revenue		500,000	1,500,000	3,000,000		5,000,000
Expense						
	Design & Engineering	200,000				200,000
	Construction		1,500,000	3,000,000		4,500,000
	Land Acquisition	300,000				300,000
Total Expense		500,000	1,500,000	3,000,000		5,000,000

Obligated to Date: 0
 0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **24-220**
 Project Title: **Old Mill Rd. Drainage Improvements (Crossing Replacement)**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Replacement Budget Year: 2018
 Year Identified: 2018 Project Status: Funded
 Start Date: 7/1/2018 Region:
 Est. Completion Date: 12/30/2020

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:

The City has completed many master drainage studies and watershed studies that identified several needed improvements, which includes the work that will be completed with this project. Funds are available in the Drainage Pro-Rata account for the Deep Creek (DC) Watershed.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2019	500,000	500,000	0
	500,000	500,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Fund Balance - Other Funds			500,000		500,000
Total Revenue				500,000		500,000
Expense						
	Design & Engineering			50,000		50,000
	Construction			400,000		400,000
	Land Acquisition			50,000		50,000
Total Expense				500,000		500,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **77-120**
 Project Title: **Shillelagh Rd. Drainage Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2018
 Year Identified: 2008
 Start Date: 9/1/2016 Project Status: Funded
 Est. Completion Date: 12/1/2018 Region:

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 Shillelagh Road/Herring ditch community 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 2018

Account	Description	Prior Years	2018	2019 - 22	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
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **10-150**
 Project Title: **Stormwater Mapping & Master Drainage Plan III**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2018
 Year Identified: 2011 Project Status: Funded
 Start Date: 7/1/2012 Region:
 Est. Completion Date: 12/30/2022

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.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	50,000	50,000	0
2019	100,000	100,000	0
2020	100,000	100,000	0
2021	100,000	100,000	0
2022	200,000	200,000	0
	550,000	550,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	500,000	50,000	500,000		1,050,000
	Total Revenue	500,000	50,000	500,000		1,050,000
Expense						
	Design & Engineering	500,000	50,000	500,000		1,050,000
	Total Expense	500,000	50,000	500,000		1,050,000

Obligated to Date: 0
0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **11-150**
 Project Title: **Stormwater Quality Program - Phase II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2018
 Year Identified: 2011 Project Status: Funded
 Start Date: 9/1/2012 Region:
 Est. Completion Date: 12/30/2022

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 Department of Conservation and Recreation (VDNR) 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.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	1,500,000	1,500,000	0
2019	1,500,000	1,500,000	0
2020	2,000,000	2,000,000	0
2021	2,000,000	2,000,000	0
2022	2,000,000	2,000,000	0
	9,000,000	9,000,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,340,565	1,500,000	7,500,000		11,340,565
Total Revenue		2,340,565	1,500,000	7,500,000		11,340,565
Expense						
	Design & Engineering	840,565	500,000	2,000,000		3,340,565
	Construction	1,500,000	1,000,000	5,500,000		8,000,000
Total Expense		2,340,565	1,500,000	7,500,000		11,340,565
Obligated to Date:						579,207
						5.11 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **19-200**
 Project Title: **Welch Ln. Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2016**
 Start Date: Project Status: **Funded**
 Est. Completion Date: Region:

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. In some cases, the system is not in place to provide a conveyance system 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
2018	480,000	480,000	0
	480,000	480,000	0

Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	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
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **20-200**
 Project Title: **Whittamore Rd. Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2016**
 Start Date: Project Status: **Funded**
 Est. Completion Date: Region:

Description:

This project will provide for outfall improvements along Whittamore Road to include the widening and improving of the outfall cross section to improve the system capacity.

Justification:

The existing stormwater outfall system is inadequate to handle the amount of runoff. This causes flooding of adjacent areas.

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 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	300,000				300,000
Total Revenue		300,000				300,000
Expense						
	Design & Engineering	30,000				30,000
	Construction	250,000				250,000
	Land Acquisition	20,000				20,000
Total Expense		300,000				300,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **06-150**
 Project Title: **Ahoy Acres/Holly Cove System Replacement**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2011**
 Start Date: **11/1/2011** Project Status: **Fully Funded**
 Est. Completion Date: **7/30/2017** Region:

Description:

The project will provide for the replacement and upgrade of aging pipe system and structures within the Ahoy Acres/Holly Cove neighborhood to provide a ten year level of protection.

Justification:

There are numerous reported cave-ins and sinkholes within the area which indicate there is a need for a system type improvement.

Comments:

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,300,000				1,300,000
Total Revenue		1,300,000				1,300,000
Expense						
	Design & Engineering	100,000				100,000
	Construction	1,100,000				1,100,000
	Land Acquisition	100,000				100,000
Total Expense		1,300,000				1,300,000
Obligated to Date:						1,254,684
						96.51 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **06-140**
 Project Title: **Border Rd. Area Drainage Improvements - Phase II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Renovation or Rehabilitation Budget Year: 2018
 Year Identified: 2010
 Start Date: 12/1/2010 Project Status: Fully Funded
 Est. Completion Date: 6/30/2018 Region:

Description:

This project will provide for neighborhood drainage improvements including the rehab/replacement of existing drainage systems along various streets in the Border Road area. Phase I of this project was completed two years ago. Phase II will complete the improvements recommended in the 2002 Border Road Drainage Study report.

Justification:

There are numerous reported cave-ins and sinkholes within the area which indicate there is a need for a system type improvement.

Comments:

Design work along Border Road and Border Court are complete and ready for procurement. The area along Amick Road, Berkley Avenue, Mayon Drive, and Wingfield Avenue are still under design with procurement to take place in FY 2017.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,200,000				1,200,000
Total Revenue		1,200,000				1,200,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	1,100,000				1,100,000
	Land Acquisition	50,000				50,000
Total Expense		1,200,000				1,200,000
Obligated to Date:						426,918
						35.58 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **02-130**
 Project Title: **Chesapeake Dr. Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Replacement Budget Year: 2018
 Year Identified: 2009 Project Status: Fully Funded
 Start Date: 7/1/2012 Region:
 Est. Completion Date: 6/30/2018

Description:

This project will provide for removal and replacement of existing 24" pipe with an adequate sized system and connection to upstream and downstream systems.

Justification:

The existing 24" pipe is severely undersized and is in poor condition resulting in frequent flooding in the area.

Comments:

Project is in design (80% complete). Expect to advertise bid in FY 2016 (fall 2016).

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	880,000				880,000
Total Revenue		880,000				880,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	830,000				830,000
Total Expense		880,000				880,000
Obligated to Date:						36,316
						4.13 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **04-080**
 Project Title: **Citywide Undesignated Drainage - Phase I**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2004**
 Start Date: **7/1/2003** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2022** Region:

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 storm events. Many of these were brought to the City's attention by citizens' concerns raised during and after the 1999 hurricane season.

Comments:

This project is ongoing.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	352,029				352,029
Total Revenue		352,029				352,029
Expense						
	Construction	352,029				352,029
Total Expense		352,029				352,029
Obligated to Date:						352,029
						100.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **72-120**
 Project Title: **Colony Manor Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: New Facility Budget Year: 2018
 Year Identified: 2008 Project Status: Fully Funded
 Start Date: 1/1/2014 Region:
 Est. Completion Date: 6/30/2018

Description:

The project includes the widening and straightening of the existing outfall to improve the system capacity.

Justification:

The existing outfall system is inadequate and causes flooding in the upstream areas, this project will improve this system and provide a higher level of protection to the area residents.

Comments:

Project is under design. Anticipate bid advertisement in winter 2016.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	415,000				415,000
Total Revenue		415,000				415,000
Expense						
	Design & Engineering	65,000				65,000
	Construction	350,000				350,000
Total Expense		415,000				415,000
Obligated to Date:						25,403
						6.12 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **04-100**
 Project Title: **Cooper's Ditch Dredging**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2006**
 Start Date: **11/1/2013** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2018** Region:

Description:

This project will provide for the dredging of several areas within Cooper's Ditch, and will include retrofit work and installation of a BMP (retention pond) to address water quality in this watershed.

Justification:

Cooper's ditch was excavated as a canal facility in the early 1990's. Over the years significant amounts of silt and sediment have accumulated along the ditch and particularly close to roadway crossings. This project is needed to maintain the hydraulic capacity needed to serve the Cooper's Ditch Watershed.

Comments:

The US Army Corps of Engineers approved the necessary permits on June 22, 2015. Project designs are 90% complete. Bid advertisement expected in late 2015. Construction start expected in early 2016.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,000,000				2,000,000
Total Revenue		2,000,000				2,000,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	1,900,000				1,900,000
	Land Acquisition	50,000				50,000
Total Expense		2,000,000				2,000,000
Obligated to Date:						1,462,726
						73.14 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **04-130**
 Project Title: **D Street Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2018
 Year Identified: 2009
 Start Date: 1/1/2014 Project Status: Fully Funded
 Est. Completion Date: 6/30/2018 Region:

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 2018

Account	Description	Prior Years	2018	2019 - 22	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
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **07-130**
 Project Title: **Lamberts Trail Area Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Renovation or Rehabilitation Budget Year: 2018
 Year Identified: 2009
 Start Date: 7/1/2011 Project Status: Fully Funded
 Est. Completion Date: 6/30/2018 Region:

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 the flooding of the Fall 1999 storms. There is a need to improve the area's outfall along Deep Creek Boulevard, re-grade roadside ditches, and re-set driveway pipes.

Comments:

Project under design. Bid advertisement in FY 2016.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	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
Obligated to Date:						31,757
						1.51 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **05-121**
 Project Title: **Neighborhood Drainage Improvements - Phase I**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Renovation or Rehabilitation Budget Year: 2018
 Year Identified: 2011
 Start Date: 7/1/2011 Project Status: Fully Funded
 Est. Completion Date: 12/1/2017 Region:

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. (See also project # 08-150 Phase II).

Justification:

Major expenditures 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, Nina Drive, Jarvis Road, Buskey Road outfall, Bainbridge Boulevard drainage improvement, 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 2018

Account	Description	Prior Years	2018	2019 - 22	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
Obligated to Date:						1,895,000
						85.28 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **75-120**
 Project Title: **Partridge/Cloverdale Area Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2018
 Year Identified: 2008
 Start Date: 1/1/2011 Project Status: Fully Funded
 Est. Completion Date: 6/30/2018 Region:

Description:

The project will provide for the installation of concrete valley gutter/edging and a pipe system to carry the stormwater runoff and reduce the frequent flooding occurring in this area.

Justification:

Several streets in this community have no drainage system and other have an inadequate system. This project will provide a system which will improve drainage and reduce the frequent flooding in this area.

Comments:

Public Works will coordinate with Public Utilities, which also has a capital project planned for area.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	600,000				600,000
Total Revenue		600,000				600,000
Expense						
	Other	600,000				600,000
Total Expense		600,000				600,000
Obligated to Date:						309,456
						51.58 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **09-130**
 Project Title: **Prince Edward Dr. Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2009**
 Start Date: **11/1/2013** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2018** Region:

Description:

This project will upgrade culverts along Prince Edward Drive and the crossing of St. Brides Road. This project will also improve the downstream ditch cross section in order to reduce flooding along Prince Edward Drive.

Justification:

The existing culvert and ditch are severely undersized and result in frequent flooding in this area.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	600,000				600,000
Total Revenue		600,000				600,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	500,000				500,000
	Land Acquisition	50,000				50,000
Total Expense		600,000				600,000
Obligated to Date:						238,470
						39.75 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **10-130**
 Project Title: **Royce Dr. Drainage Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2009**
 Start Date: **1/1/2014** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2018** Region:

Description:

This project will improve the outfall along East and West Royce Drives using adequate sized ditch cross sections. This project will also re-grade roadside ditches and re-set driveway pipes as needed within this area to improve drainage.

Justification:

This project was identified after receiving many citizen complaints. There is a need to improve the outfall in this area, re-grade the roadside ditches, and re-set the driveway pipes because of long-term drainage problems and flooding.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	550,000				550,000
Total Revenue		550,000				550,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	450,000				450,000
	Land Acquisition	50,000				50,000
Total Expense		550,000				550,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **76-120**
 Project Title: **Scenic Blvd. Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2008**
 Start Date: **7/1/2010** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2018** Region:

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 to be a functional system.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	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
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **11-130**
 Project Title: **Shorewood Area Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2009**
 Start Date: **7/1/2011** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2018** Region:

Description:

This project will improve the Sherwood area outfall using adequate sized ditch cross sections. It will also re-grade roadside ditches and re-set driveway pipes as needed within this area to improve drainage.

Justification:

This project was identified after receiving many citizen complaints. Due to long term drainage problems and flooding in the Sherwood area, there is a need to improve the outfall, re-grade roadside ditches, and re-set driveway pipes.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	540,000				540,000
Total Revenue		540,000				540,000
Expense						
	Design & Engineering	35,000				35,000
	Construction	500,000				500,000
	Land Acquisition	5,000				5,000
Total Expense		540,000				540,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **06-120**
 Project Title: **Stormwater Mapping & Master Drainage Plan II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2018
 Year Identified: 2008 Project Status: Fully Funded
 Start Date: 7/1/2011 Region:
 Est. Completion Date:

Description:

This project will continue updating 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. The mapping will provide inventory mapping to support emergency responses and GASB 34 accounting.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,000,000				1,000,000
Total Revenue		1,000,000				1,000,000
Expense						
	Design & Engineering	1,000,000				1,000,000
Total Expense		1,000,000				1,000,000
Obligated to Date:						772,162
						77.22 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **05-140**
 Project Title: **Stormwater Quality Program/VPDES Permit Compliance**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2018
 Year Identified: 2010
 Start Date: 7/1/2011 Project Status: Fully Funded
 Est. Completion Date: Region:

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 Virginia Department of Conservation and 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 and this project is needed to meet permit compliance. 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:

The city has received grant awards from the Virginia Department of Environmental Quality (DEQ) for two new stormwater projects, which will be established as sub-projects of this project. The new grant-supported sub-projects are # 05-142 - Meads Court BMP and # 05-143 - New Mill Regional BMP. On June 27, 2017, City Council approved an amendment to add these two stormwater projects to the FY 2018 CIP Budget. The DEQ grant award covered 50% of the cost of each project and required a 50% match from the city. City Council approved assigning \$1,707,203 from the appropriated budget of this project # 05-140 in order to fund the city's local match required for the new sub-projects (# 05-142: \$684,228, # 05-143: \$1,022,975).

This project includes extensive data collection and inspection of all stormwater management facilities in accordance with the new permit requirements and establishing a monitoring and sampling program to comply with the new Total Maximum Daily Load (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. (See also sub-project #05-141 - Historical Data Cleanup Grant (DEQ) added in FY 2016).

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	5,039,765				5,039,765
Total Revenue		5,039,765				5,039,765
Expense						
	Design & Engineering	3,539,765				3,539,765
	Construction	1,500,000				1,500,000
Total Expense		5,039,765				5,039,765
Obligated to Date:						858,579
						17.04 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **13-130**
 Project Title: **Sunray Area Outfall Re-Grading**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2009**
 Start Date: **3/1/2016** Project Status: **Fully Funded**
 Est. Completion Date: **12/1/2017** Region:

Description:

The project will provide for excavation and re-grading along the Sunray area outfall due to the significant accumulation of sediment and silt which needs to be removed in order to maintain the hydraulic capacity needed for this major stormwater drainage facility in this watershed.

Justification:

Over the years, significant amounts of silt and sediment have accumulated along the ditch and particularly close to roadway crossings. This project is needed to maintain the hydraulic capacity needed to serve the Sunray Ditch Watershed.

Comments:

Project design is underway. Bid advertisement expected in summer 2016.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,200,000				1,200,000
Total Revenue		1,200,000				1,200,000
Expense						
	Design & Engineering	100,000				100,000
	Construction	1,000,000				1,000,000
	Land Acquisition	100,000				100,000
Total Expense		1,200,000				1,200,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **80-120**
 Project Title: **Washington Manor Drainage Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2018
 Year Identified: 2008
 Start Date: 3/1/2015 Project Status: Fully Funded
 Est. Completion Date: 9/1/2017 Region:

Description:

This project will provide for improvements to the Washington Manor outfall and BMP, which will include widening the main outfall and upgrading the downstream culvert crossing in order to prevent frequent flooding in this area. The improvements will attenuate the stormwater flow to provide an improved system in this Deep Creek community and remove run-off pollutants as required in the City's new MS4 permit.

Justification:

The Washington Manor community experienced flooding during 1999 storms. A study completed in 2000 recommended widening the outfall ditch and upgrading the downstream culverts.

Comments:

On March 8, 2016, City Council approved an Amendment to the FY 2016 CIP Budget to accept \$1,055,814 in matching grant funds from the Virginia Dept. of Environmental Quality (VDEQ) Stormwater Local Assistance Fund program. This project was funded in FY 2014 with the City's 50 % match. This DEQ grant funding will allow the project to be fully funded and proceed with construction.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Grant	1,055,814				1,055,814
	Cash - Stormwater	1,250,000				1,250,000
Total Revenue		2,305,814				2,305,814
Expense						
	Design & Engineering	100,000				100,000
	Construction	2,105,814				2,105,814
	Land Acquisition	100,000				100,000
Total Expense		2,305,814				2,305,814
Obligated to Date:						2,304,876
						99.96 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **12-150**
 Project Title: **Yadkin Rd. BMP Drainage Improvement - Phase III**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2018**
 Year Identified: **2011**
 Start Date: **9/1/2010** Project Status: **Fully Funded**
 Est. Completion Date: **12/30/2017** Region:

Description:

The project will continue improvements completed in Phase I and Phase II to improve drainage along Yadkin Road, and will include upgrading the culverts and a proposed best management practice (BMP) along the outfall. The improvements to the outfall ditch will include the creation of a wetlands bench to attenuate the stormwater flow, provide an improved system in this community, and remove run-off pollutants as required in the City's new MS4 permit.

Justification:

The existing pipe crossing in this area is a choke point that causes frequent flooding. This project will improve the capacity at this crossing and provide a higher level of flood protection for the area.

Comments:

On March 8, 2016, City Council approved an Amendment to the FY 2016 CIP Budget to accept \$57,545 in matching grant funds from the Virginia Dept. of Environmental Quality (VDEQ) Stormwater Local Assistance Fund program. This project was funded with the City's 50 % match. This DEQ grant funding will allow the project to be fully funded and proceed with construction.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2018

Account	Description	Prior Years	2018	2019 - 22	Future Years	Total Amount
Revenue						
	Grant	57,545				57,545
	Cash - Stormwater	805,000				805,000
Total Revenue		862,545				862,545
Expense						
	Construction	862,545				862,545
Total Expense		862,545				862,545
Obligated to Date:						675,532
						78.32 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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