

BMP Restoration Citywide

73-120

Project Type **Renovation or Rehabilitation** Stormwater Projects

Description The project includes the removal of significant accumulated amounts of sediment and silt in order to restore storage capacity and improve control of storm water.

Purpose and Need 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 maintain the water quality function by limiting runoff to area creeks and streams.

History and Status State and Federal requirements to meet and enhance stormwater runoff quality into the bay.

Start Date July 2011

Completion Date December 2017

Status Planning and Design

Project Funding by Year

73-120	FY 2014	400,000
	FY 2015	400,000
	FY 2016	400,000
	FY 2017	400,000
	FY 2018	200,000
	5 Year Total	1,800,000
	Prior Years	700,000
	Beyond 5 Years	0
	Project Total	2,500,000

Project Funding Sources

73-120	Cash - Stormwater Fund	2,500,000
	Total Project Funding	2,500,000

Estimated Project Costs by Expense Category

73-120	FY 2014	5 Year Total	Project Total
Construction	400,000	1,800,000	2,500,000
Project Total	400,000	1,800,000	2,500,000

Operating Impacts

Citywide Outfall Re-grading and Restoration

03-160

Project Type	Renovation or Rehabilitation	Stormwater Projects
Description	This project will remove accumulated sediment and silt from ditches and outfalls.	
Purpose and Need	Accumulated sediment and silt removal is required on a regular basis in order to maintain ditch capacity and improve stormwater runoff quality .	
History and Status	City wide outfall ditches were identified and ranked to provide a maintenance schedule for those lead ditches based on actual conditions. Major outfall maintenance activities will be contracted to maintain system capacity started in 2010.	
Start Date	July 2012	Completion Date December 2017 Status Planning and Design

Project Funding by Year

03-160	FY 2014	200,000
	FY 2015	200,000
	FY 2016	200,000
	FY 2017	200,000
	FY 2018	100,000
	5 Year Total	900,000
	Prior Years	320,000
	Beyond 5 Years	0
	Project Total	1,220,000

Project Funding Sources

03-160	Cash - Stormwater Fund	1,220,000
	Total Project Funding	1,220,000

Estimated Project Costs by Expense Category

03-160	FY 2014	5 Year Total	Project Total
Construction	150,000	680,000	900,000
Land Acquisition	50,000	220,000	320,000
Project Total	200,000	900,000	1,220,000

Operating Impacts

Citywide System Rehab

43-170

Project Type	Renovation or Rehabilitation	Stormwater Projects
Description	The project includes the replacement and upgrade of aging pipe systems and structures within selected neighborhoods in order to provide a ten year level of protection.	
Purpose and Need	The presence of numerous reported cave-ins and sinkholes within an area indicates there is a need for a system type improvement.	
History and Status	A large number of cave-ins have been identified across the City, particularly in neighborhoods developed during the 1970s.	

Start Date	July 2012	Completion Date	December 2017	Status	Planning and Design
------------	-----------	-----------------	---------------	--------	---------------------

Project Funding by Year

43-170	FY 2014	450,000
	FY 2015	300,000
	FY 2016	300,000
	FY 2017	300,000
	FY 2018	500,000
	5 Year Total	1,850,000
	Prior Years	450,000
	Beyond 5 Years	0
	Project Total	2,300,000

Project Funding Sources

43-170	Cash - Stormwater Fund	2,300,000
	Total Project Funding	2,300,000

Estimated Project Costs by Expense Category

43-170	FY 2014	5 Year Total	Project Total
Construction	400,000	1,600,000	2,000,000
Design and Engineer	50,000	250,000	300,000
Project Total	450,000	1,850,000	2,300,000

Operating Impacts

Citywide Undesignated Drainage Phase III

07-150

Project Type	Renovation or Rehabilitation	Stormwater Projects
Description	Citywide drainage improvements including acquisition of easements, replacement of pipes, regrading ditches and associated activities.	
Purpose and Need	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.	
History and Status		
Start Date	July 2012	Completion Date December 2017 Status Planning and Design

Project Funding by Year

07-150	FY 2014	165,000
	FY 2015	50,000
	FY 2016	50,000
	FY 2017	50,000
	FY 2018	50,000
	5 Year Total	365,000
	Prior Years	500,000
	Beyond 5 Years	0
	Project Total	865,000

Project Funding Sources

07-150	Cash - Stormwater Fund	865,000
	Total Project Funding	865,000

Estimated Project Costs by Expense Category

07-150	FY 2014	5 Year Total	Project Total
	Construction	165,000	365,000
	Project Total	165,000	365,000

Operating Impacts

Colony Manor Outfall Improvements

72-120

Project Type	New Facility	Stormwater Projects
Description	The project includes the widening and straightening of the existing outfall to improve the system capacity.	
Purpose and Need	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.	
History and Status	Drainage study completed in 2003, as a result of continued flooding in the neighborhood, identified needs and recommended improvements to resolve flooding problems.	

Start Date January 2014

Completion Date December 2014

Status New

Project Funding by Year

72-120	FY 2014	415,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
	FY 2018	0
	5 Year Total	415,000
	Prior Years	0
	Beyond 5 Years	0
	Project Total	415,000

Project Funding Sources

72-120	Cash - Stormwater Fund	415,000
	Total Project Funding	415,000

Estimated Project Costs by Expense Category

72-120	FY 2014	5 Year Total	Project Total
Construction	350,000	350,000	350,000
Design and Engineer	65,000	65,000	65,000
Project Total	415,000	415,000	415,000

Operating Impacts

D Street Drainage Improvements

04-130

Project Type	Addition or Expansion	Stormwater Projects
Description	Install a new drainage system along the street including structures and basins.	
Purpose and Need	This segment of D Street lacks a drainage system to carry Stormwater runoff resulting in flooding along the street.	
History and Status	Drainage study complete in 2005, as a result of continued flooding in the neighborhood, identified needs and recommended improvements to resolve flooding problems.	
Start Date	January 2014	Completion Date December 2014 Status New

Project Funding by Year

04-130	FY 2014	370,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
	FY 2018	0
5 Year Total		370,000
Prior Years		0
Beyond 5 Years		0
Project Total		370,000

Project Funding Sources

04-130	Cash - Stormwater Fund	370,000
Total Project Funding		370,000

Estimated Project Costs by Expense Category

04-130	FY 2014	5 Year Total	Project Total
Construction	300,000	300,000	300,000
Design and Engineer	35,000	35,000	35,000
Land Acquisition	35,000	35,000	35,000
Project Total	370,000	370,000	370,000

Operating Impacts

Neighborhood Drainage Improvements II

08-150

Project Type	Renovation or Rehabilitation	Stormwater Projects
Description	Citywide drainage improvements including acquisition of easements, replacement of pipes, regrading ditches and associated activities to address existing neighborhood drainage deficiencies .	
Purpose and Need	Major expenditures are necessary to increase drainage capacity and upgrade deficient drainage systems in existing neighborhoods citywide.	
History and Status		
Start Date	July 2012	Completion Date December 2017 Status Planning and Design

Project Funding by Year

08-150	FY 2014	500,000
	FY 2015	500,000
	FY 2016	500,000
	FY 2017	500,000
	FY 2018	500,000
	5 Year Total	2,500,000
	Prior Years	500,000
	Beyond 5 Years	0
	Project Total	3,000,000

Project Funding Sources

08-150	Cash - Stormwater Fund	3,000,000
	Total Project Funding	3,000,000

Estimated Project Costs by Expense Category

08-150	FY 2014	5 Year Total	Project Total
Construction	500,000	2,500,000	3,000,000
Project Total	500,000	2,500,000	3,000,000

Operating Impacts

Oakdale Area BMP and Drainage Improvements

09-150

Project Type	Addition or Expansion	Stormwater Projects
Description	The project will include an updated study, construction of stormwater pipes, ditches and lakes/BMPs to provide flood and water quality improvements.	
Purpose and Need	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.	
History and Status	Drainage study completed in 1999 identified solutions to prevent flooding.	
Start Date	January 2017	Completion Date December 2020 Status New

Project Funding by Year

09-150	FY 2014	0
	FY 2015	0
	FY 2016	500,000
	FY 2017	500,000
	FY 2018	2,000,000
	5 Year Total	3,000,000
	Prior Years	0
	Beyond 5 Years	3,000,000
	Project Total	6,000,000

Project Funding Sources

09-150	Cash - Stormwater Fund	6,000,000
	Total Project Funding	6,000,000

Estimated Project Costs by Expense Category

09-150	FY 2014	5 Year Total	Project Total
Construction	0	2,500,000	5,500,000
Design and Engineer	0	200,000	200,000
Land Acquisition	0	300,000	300,000
Project Total	0	3,000,000	6,000,000

Operating Impacts

Prince Edwards Drive Outfall Improvements

09-130

Project Type	Renovation or Rehabilitation	Stormwater Projects
Description	Upgrade culverts along Prince Edwards , the crossing of St. Brides Road and improve the downstream ditch cross section to reduce flooding along Prince Edwards Drive.	
Purpose and Need	The existing culvert and ditch are severely undersized and results in frequent flooding in the area.	
History and Status	Drainage study completed in 1999, as a result of continued flooding in the neighborhood, identified needs and recommended improvements to resolve flooding problems.	

Start Date	March 2014	Completion Date	November 2014	Status	New
------------	------------	-----------------	---------------	--------	-----

Project Funding by Year

09-130	FY 2014	600,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
	FY 2018	0
5 Year Total		600,000
Prior Years		0
Beyond 5 Years		0
Project Total		600,000

Project Funding Sources

09-130	Cash - Stormwater Fund	600,000
Total Project Funding		600,000

Estimated Project Costs by Expense Category

09-130	FY 2014	5 Year Total	Project Total
Construction	500,000	500,000	500,000
Design and Engineer	50,000	50,000	50,000
Land Acquisition	50,000	50,000	50,000
Project Total	600,000	600,000	600,000

Operating Impacts

Royce Drive Drainage Improvements

10-130

Project Type	Renovation or Rehabilitation	Stormwater Projects
Description	Improve the outfall using adequate sized ditch cross sections. Re-grade roadside ditches and re-set driveway pipes as needed within this area.	
Purpose and Need	This project was identified after receiving many citizen complaints. There is a need to improve the area's outfall, to re-grade roadside ditches, and re-set driveway pipes because of long term drainage problems and flooding.	
History and Status	Drainage study completed in 2003, as a result of continued flooding in the neighborhood, identified needs and recommended improvements to resolve flooding problems.	

Start Date	January 2014	Completion Date	July 2015	Status	New
------------	--------------	-----------------	-----------	--------	-----

Project Funding by Year

10-130	FY 2014	550,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
	FY 2018	0
	5 Year Total	550,000
	Prior Years	0
	Beyond 5 Years	0
	Project Total	550,000

Project Funding Sources

10-130	Cash - Stormwater Fund	550,000
	Total Project Funding	550,000

Estimated Project Costs by Expense Category

10-130	FY 2014	5 Year Total	Project Total
Construction	450,000	450,000	450,000
Design and Engineer	50,000	50,000	50,000
Land Acquisition	50,000	50,000	50,000
Project Total	550,000	550,000	550,000

Operating Impacts

Shillelagh Road Drainage Outfall Improvement

77-120

Project Type	Addition or Expansion	Stormwater Projects
Description	Improve and widen the main outfall for Shillelagh Road and upgrade the downstream culvert crossing to prevent frequent flooding in the area.	
Purpose and Need	The Shillelagh Road / Herring ditch community was identified after the storms of 1999 as one of the drainage areas to study. The study, completed in 1999, recommended widening the outfall ditch and upgrading the downstream culverts.	
History and Status	Project improvements are slated to begin in FY 2016.	
Start Date	September 2016	Completion Date December 2018
Status	Planning and Design	

Project Funding by Year

77-120	FY 2014	0
	FY 2015	0
	FY 2016	500,000
	FY 2017	1,700,000
	FY 2018	900,000
	5 Year Total	3,100,000
	Prior Years	0
	Beyond 5 Years	0
	Project Total	3,100,000

Project Funding Sources

77-120	Cash - Stormwater Fund	3,100,000
	Total Project Funding	3,100,000

Estimated Project Costs by Expense Category

77-120	FY 2014	5 Year Total	Project Total
Construction	0	2,600,000	2,600,000
Design and Engineer	0	500,000	500,000
Project Total	0	3,100,000	3,100,000

Operating Impacts

Stormwater Mapping & Master Drainage Plan II

06-120

Project Type	Study	Stormwater Projects
Description	This project continues updating of the Stormwater Inventory Mapping and Master Drainage Plan.	
Purpose and Need	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.	
History and Status	The City's master drainage plan was completed in 1986. Many changes have occurred in the stormwater system and land/environment it supports since then. Because of changes in the drainage system and surrounding environment, an updated master drainage plan and maps are necessary. This is the second phase of a project started in 2006.	

Start Date	July 2011	Completion Date	Ongoing	Status	Construction- Implementation
------------	-----------	-----------------	---------	--------	------------------------------

Project Funding by Year

06-120	FY 2014	200,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
	FY 2018	0
	5 Year Total	200,000
	Prior Years	800,000
	Beyond 5 Years	0
	Project Total	1,000,000

Project Funding Sources

06-120	Cash - Stormwater Fund	1,000,000
	Total Project Funding	1,000,000

Estimated Project Costs by Expense Category

06-120	FY 2014	5 Year Total	Project Total
Design and Engineer	200,000	200,000	1,000,000
Project Total	200,000	200,000	1,000,000

Operating Impacts

Stormwater Mapping & Master Drainage Plan III

10-150

Project Type	Study	Stormwater Projects
Description	This project continues updating of the Stormwater Inventory Mapping and Master Drainage Plan.	
Purpose and Need	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.	
History and Status	The City's master drainage plan was completed in 1986. Many changes have occurred in the stormwater system and land/environment it supports since then. Because of changes in the drainage system and surrounding environment, an updated master drainage plan and maps are necessary. This is the third phase of a project started in 2006.	

Start Date July 2012 Completion Date December 2017 Status New

Project Funding by Year

10-150	FY 2014	0
	FY 2015	200,000
	FY 2016	200,000
	FY 2017	200,000
	FY 2018	100,000
	5 Year Total	700,000
	Prior Years	0
	Beyond 5 Years	0
	Project Total	700,000

Project Funding Sources

10-150	Cash - Stormwater Fund	700,000
	Total Project Funding	700,000

Estimated Project Costs by Expense Category

10-150	FY 2014	5 Year Total	Project Total
	Design and Engineer	0	700,000
	Project Total	0	700,000

Operating Impacts

Stormwater Quality Program Phase II

11-150

Project Type	Study	Stormwater Projects
Description	<p>This program is to ensure compliance with the Virginia Pollution Discharge Elimination System Permit and to update the City's MS4 (Municipal separate stormwater sewer system) program plan. This project will include 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 and establishing a monitoring and sampling program to comply with the new TMDL requirements. Also, as part on the permit requirements the City will be completing stormwater retrofit projects to address stormwater runoff discharge into waterways and creeks.</p>	
Purpose and Need	<p>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 then the City is required to comply with the new permit and this project is needed to meet permit compliance. Also, Chesapeake and all localities within the Chesapeake Bay watershed are required to comply with an EPA Watershed Implementation Plan (WIP) to address pollutant TMDL (also know as the pollution diet) for the Chesapeake Bay.</p>	
History and Status	<p>Total Maximum Daily Load (TMDL) are being required by the EPA as part of the Watershed Implementation Plan (WIP) to clean up the Chesapeake Bay. Phase I of this project started in 2010.</p>	

Start Date September 2012

Completion Date December 2017

Status New

Project Funding by Year

11-150	FY 2014	0
	FY 2015	2,000,000
	FY 2016	2,000,000
	FY 2017	2,000,000
	FY 2018	1,500,000
	5 Year Total	7,500,000
	Prior Years	0
	Beyond 5 Years	0
	Project Total	7,500,000

Project Funding Sources

11-150	Cash - Stormwater Fund	7,500,000
	Total Project Funding	7,500,000

Estimated Project Costs by Expense Category

11-150	FY 2014	5 Year Total	Project Total
Construction	0	6,000,000	6,000,000
Design and Engineer	0	1,500,000	1,500,000
Project Total	0	7,500,000	7,500,000

Operating Impacts

Stormwater Quality Program/VPDES Permit Compliance

05-140

Project Type	Study	Stormwater Projects
--------------	-------	---------------------

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. 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.

Purpose and Need 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. Also, Chesapeake and all localities within the Chesapeake Bay watershed are required to comply with an EPA Watershed Implementation Plan (WIP) to address pollutant TMDL (also known as the pollution diet) for the Chesapeake Bay.

History and Status Total Maximum Daily Load (TMDL) is required by the EPA as part of the Watershed Implementation Plan (WIP) to clean up the Chesapeake Bay. Project started in 2010.

Depending on VDCR permitting requirements, some study funds may be available to address actual improvements in stormwater discharge (run off) into waterways and creeks.

Start Date	July 2011	Completion Date	Ongoing	Status	Construction- Implementation
------------	-----------	-----------------	---------	--------	------------------------------

Project Funding by Year

05-140	FY 2014	2,000,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
	FY 2018	0
5 Year Total		2,000,000
Prior Years		4,765,468
Beyond 5 Years		0
Project Total		6,765,468

Project Funding Sources

05-140	Cash - Stormwater Fund	6,765,468
Total Project Funding		6,765,468

Estimated Project Costs by Expense Category

05-140	FY 2014	5 Year Total	Project Total
Construction	1,500,000	1,500,000	1,500,000
Design and Engineer	500,000	500,000	5,265,468
Project Total	2,000,000	2,000,000	6,765,468

Operating Impacts

Sunray Area Outfall Re-Grading

13-130

Project Type	Renovation or Rehabilitation	Stormwater Projects
Description	The project includes the excavation and re-grading along the outfall due to the significant accumulation of sediment and silt which needs to be removed to maintain the hydraulic capacity needed for this major stormwater drainage facility in this watershed.	
Purpose and Need	Over the years, significant amounts of silt and sediment have accumulated along the ditch and particularly close to roadway crossings. The project is needed to maintain the hydraulic capacity needed to serve the Sunray Ditch Watershed.	
History and Status	Drainage study completed in 2001, as a result of continued flooding in the neighborhood, identified needs and recommended improvements to resolve flooding programs.	

Start Date March 2016

Completion Date December 2017

Status Planning and Design

Project Funding by Year

13-130	FY 2014	0
	FY 2015	0
	FY 2016	1,200,000
	FY 2017	0
	FY 2018	0
	5 Year Total	1,200,000
	Prior Years	0
	Beyond 5 Years	0
	Project Total	1,200,000

Project Funding Sources

13-130	Cash - Stormwater Fund	1,200,000
	Total Project Funding	1,200,000

Estimated Project Costs by Expense Category

13-130	FY 2014	5 Year Total	Project Total
Construction	0	1,000,000	1,000,000
Design and Engineer	0	100,000	100,000
Land Acquisition	0	100,000	100,000
Project Total	0	1,200,000	1,200,000

Operating Impacts

Washington Manor Drainage Outfall Improvements

80-120

Project Type	Addition or Expansion	Stormwater Projects
Description	Improve and widen the main outfall and upgrade the downstream culvert crossing to prevent frequent flooding in the area.	
Purpose and Need	The Washington Manor community experienced flooding during 1999 storms. A study completed in 2000 recommended widening the outfall ditch and upgrading the downstream culverts.	
History and Status	Drainage study completed in 2000 recommended improvements to resolve flooding problems.	

Start Date	March 2015	Completion Date	September 2017	Status	Planning and Design
------------	------------	-----------------	----------------	--------	---------------------

Project Funding by Year

80-120	FY 2014	0
	FY 2015	2,200,000
	FY 2016	0
	FY 2017	0
	FY 2018	0
5 Year Total		2,200,000
Prior Years		0
Beyond 5 Years		0
Project Total		2,200,000

Project Funding Sources

80-120	Cash - Stormwater Fund	2,200,000
Total Project Funding		2,200,000

Estimated Project Costs by Expense Category

80-120	FY 2014	5 Year Total	Project Total
Construction	0	2,000,000	2,000,000
Design and Engineer	0	100,000	100,000
Land Acquisition	0	100,000	100,000
Project Total	0	2,200,000	2,200,000

Operating Impacts

