

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 2019 Status Planning and Design

Project Funding by Year

| | | |
|--------|----------------|-----------|
| 73-120 | FY 2015 | 200,000 |
| | FY 2016 | 100,000 |
| | FY 2017 | 400,000 |
| | FY 2018 | 200,000 |
| | FY 2019 | 400,000 |
| | 5 Year Total | 1,300,000 |
| | Prior Years | 1,100,000 |
| | Future Require | 0 |
| | Project Total | 2,400,000 |

Project Funding Sources

| | | |
|--------|------------------------|-----------|
| 73-120 | Cash - Stormwater Fund | 2,400,000 |
| | Total Project Funding | 2,400,000 |

Estimated Project Costs by Expense Category

| 73-120 | FY 2015 | 5 Year Total | Project Total |
|----------------------|----------------|------------------|------------------|
| Construction | 200,000 | 1,300,000 | 2,400,000 |
| Project Total | 200,000 | 1,300,000 | 2,400,000 |

Appropriations-to-Date \$1,100,000 **Obligated-to-Date** \$34,467 3.13% **Obligated**

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 2019 Status Construction- Implementation

Project Funding by Year

| | | |
|--------|----------------|-----------|
| 03-160 | FY 2015 | 200,000 |
| | FY 2016 | 100,000 |
| | FY 2017 | 200,000 |
| | FY 2018 | 100,000 |
| | FY 2019 | 150,000 |
| | 5 Year Total | 750,000 |
| | Prior Years | 520,000 |
| | Future Require | 0 |
| | Project Total | 1,270,000 |

Project Funding Sources

| | | |
|--------|------------------------|-----------|
| 03-160 | Cash - Stormwater Fund | 1,270,000 |
| | Total Project Funding | 1,270,000 |

Estimated Project Costs by Expense Category

| 03-160 | FY 2015 | 5 Year Total | Project Total |
|----------------------|----------------|----------------|------------------|
| Construction | 150,000 | 500,000 | 870,000 |
| Land Acquisition | 50,000 | 250,000 | 400,000 |
| Project Total | 200,000 | 750,000 | 1,270,000 |

Appropriations-to-Date \$520,000 **Obligated-to-Date** \$0 0.00% **Obligated**

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 2019 Status Planning and Design

Project Funding by Year

| | | |
|--------|----------------------|------------------|
| 43-170 | FY 2015 | 300,000 |
| | FY 2016 | 200,000 |
| | FY 2017 | 300,000 |
| | FY 2018 | 500,000 |
| | FY 2019 | 500,000 |
| | 5 Year Total | 1,800,000 |
| | Prior Years | 900,000 |
| | Future Require | 0 |
| | Project Total | 2,700,000 |

Project Funding Sources

| | | |
|--------|------------------------------|------------------|
| 43-170 | Cash - Stormwater Fund | 2,700,000 |
| | Total Project Funding | 2,700,000 |

Estimated Project Costs by Expense Category

| 43-170 | FY 2015 | 5 Year Total | Project Total |
|----------------------|----------------|------------------|------------------|
| Construction | 250,000 | 1,550,000 | 2,350,000 |
| Design and Engineer | 50,000 | 250,000 | 350,000 |
| Project Total | 300,000 | 1,800,000 | 2,700,000 |

Appropriations-to-Date \$900,000 **Obligated-to-Date** \$0 0.00% **Obligated**

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 2019 Status Planning and Design

Project Funding by Year

| | | |
|--------|----------------|---------|
| 07-150 | FY 2015 | 50,000 |
| | FY 2016 | 50,000 |
| | FY 2017 | 50,000 |
| | FY 2018 | 50,000 |
| | FY 2019 | 100,000 |
| | 5 Year Total | 300,000 |
| | Prior Years | 456,347 |
| | Future Require | 0 |
| | Project Total | 756,347 |

Project Funding Sources

| | | |
|--------|------------------------|---------|
| 07-150 | Cash - Stormwater Fund | 756,347 |
| | Total Project Funding | 756,347 |

Estimated Project Costs by Expense Category

| 07-150 | FY 2015 | 5 Year Total | Project Total |
|----------------------|---------------|----------------|----------------|
| Construction | 50,000 | 300,000 | 756,347 |
| Project Total | 50,000 | 300,000 | 756,347 |

Appropriations-to-Date \$456,347 **Obligated-to-Date** \$0 0.00% **Obligated**

Operating Impacts

Major Equipment Purchases-PW Stormwater Div.

07-180

| | | |
|--------------------|---|---------------------|
| Project Type | Equipment | Stormwater Projects |
| Description | To purchase replacement vehicles and major equipment in the Public Works' Stormwater Division. | |
| Purpose and Need | Over 50% of the current fleet have exceeded their service life, resulting in increasing maintenance costs and more equipment down time. | |
| History and Status | | |

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

Project Funding by Year

| | | |
|--------|----------------|-----------|
| 07-180 | FY 2015 | 2,171,000 |
| | FY 2016 | 636,000 |
| | FY 2017 | 0 |
| | FY 2018 | 0 |
| | FY 2019 | 0 |
| | 5 Year Total | 2,807,000 |
| | Prior Years | 1,137,000 |
| | Future Require | 0 |
| | Project Total | 3,944,000 |

Project Funding Sources

| | | |
|--------|------------------------------|------------------|
| 07-180 | Cash - Stormwater Fund | 3,944,000 |
| | Total Project Funding | 3,944,000 |

Estimated Project Costs by Expense Category

| | | | |
|--------|----------------------|------------------|------------------|
| 07-180 | FY 2015 | 5 Year Total | Project Total |
| | Equipment | 2,171,000 | 2,807,000 |
| | Project Total | 2,171,000 | 2,807,000 |

Appropriations-to-Date \$1,137,000 **Obligated-to-Date** \$1,103,322 97.04% **Obligated**

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 | Ongoing | Status | Planning and Design |
|------------|-----------|-----------------|---------|--------|---------------------|

Project Funding by Year

| | | |
|--------|----------------|-----------|
| 08-150 | FY 2015 | 224,600 |
| | FY 2016 | 295,600 |
| | FY 2017 | 295,600 |
| | FY 2018 | 595,600 |
| | FY 2019 | 388,600 |
| | 5 Year Total | 1,800,000 |
| | Prior Years | 1,000,000 |
| | Future Require | 0 |
| | Project Total | 2,800,000 |

Project Funding Sources

| | | |
|--------|------------------------|-----------|
| 08-150 | Cash - Stormwater Fund | 2,800,000 |
| | Total Project Funding | 2,800,000 |

Estimated Project Costs by Expense Category

| 08-150 | FY 2015 | 5 Year Total | Project Total |
|----------------------|----------------|------------------|------------------|
| Construction | 224,600 | 1,800,000 | 2,800,000 |
| Project Total | 224,600 | 1,800,000 | 2,800,000 |

Appropriations-to-Date \$1,000,000 **Obligated-to-Date** \$0 0.00% **Obligated**

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 2015 | 0 |
| | FY 2016 | 0 |
| | FY 2017 | 500,000 |
| | FY 2018 | 1,500,000 |
| | FY 2019 | 2,000,000 |
| | 5 Year Total | 4,000,000 |
| | Prior Years | 0 |
| | Future Require | 1,000,000 |
| | Project Total | 5,000,000 |

Project Funding Sources

| | | |
|--------|------------------------|-----------|
| 09-150 | Cash - Stormwater Fund | 5,000,000 |
| | Total Project Funding | 5,000,000 |

Estimated Project Costs by Expense Category

| 09-150 | FY 2015 | 5 Year Total | Project Total |
|----------------------|----------|------------------|------------------|
| Construction | 0 | 3,500,000 | 4,500,000 |
| Design and Engineer | 0 | 200,000 | 200,000 |
| Land Acquisition | 0 | 300,000 | 300,000 |
| Project Total | 0 | 4,000,000 | 5,000,000 |

Appropriations-to-Date \$0 Obligated-to-Date \$0 0.00% Obligated

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 2015 | 0 |
| | FY 2016 | 2,000,000 |
| | FY 2017 | 1,100,000 |
| | FY 2018 | 0 |
| | FY 2019 | 0 |
| | 5 Year Total | 3,100,000 |
| | Prior Years | 0 |
| | Future Require | 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 2015 | 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 |

Appropriations-to-Date \$0 **Obligated-to-Date** \$0 0.00% **Obligated**

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 Ongoing Status Feasibility Study

Project Funding by Year

| | | |
|--------|----------------|---------|
| 10-150 | FY 2015 | 200,000 |
| | FY 2016 | 100,000 |
| | FY 2017 | 200,000 |
| | FY 2018 | 100,000 |
| | FY 2019 | 200,000 |
| | 5 Year Total | 800,000 |
| | Prior Years | 0 |
| | Future Require | 0 |
| | Project Total | 800,000 |

Project Funding Sources

| | | |
|--------|------------------------|---------|
| 10-150 | Cash - Stormwater Fund | 800,000 |
| | Total Project Funding | 800,000 |

Estimated Project Costs by Expense Category

| 10-150 | FY 2015 | 5 Year Total | Project Total |
|----------------------|----------------|----------------|----------------|
| Design and Engineer | 200,000 | 800,000 | 800,000 |
| Project Total | 200,000 | 800,000 | 800,000 |

Appropriations-to-Date \$0 **Obligated-to-Date** \$0 0.00% **Obligated**

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 of 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 Ongoing Status Feasibility Study

Project Funding by Year

| | | |
|--------|----------------|-----------|
| 11-150 | FY 2015 | 340,565 |
| | FY 2016 | 364,000 |
| | FY 2017 | 2,000,000 |
| | FY 2018 | 2,000,000 |
| | FY 2019 | 1,307,000 |
| | 5 Year Total | 6,011,565 |
| | Prior Years | 0 |
| | Future Require | 1,488,435 |
| | 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 2015 | 5 Year Total | Project Total |
|----------------------|----------------|------------------|------------------|
| Construction | 0 | 4,511,565 | 6,000,000 |
| Design and Engineer | 340,565 | 1,500,000 | 1,500,000 |
| Project Total | 340,565 | 6,011,565 | 7,500,000 |

Appropriations-to-Date \$0 **Obligated-to-Date** \$0 0.00% **Obligated**

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 2015 | 0 |
| | FY 2016 | 1,200,000 |
| | FY 2017 | 0 |
| | FY 2018 | 0 |
| | FY 2019 | 0 |
| | 5 Year Total | 1,200,000 |
| | Prior Years | 0 |
| | Future Require | 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 2015 | 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 |

Appropriations-to-Date \$0 **Obligated-to-Date** \$0 0.00% **Obligated**

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

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

Project Funding by Year

| | | |
|--------|----------------|-----------|
| 80-120 | FY 2015 | 1,250,000 |
| | FY 2016 | 0 |
| | FY 2017 | 0 |
| | FY 2018 | 0 |
| | FY 2019 | 0 |
| | 5 Year Total | 1,250,000 |
| | Prior Years | 0 |
| | Future Require | 0 |
| | Project Total | 1,250,000 |

Project Funding Sources

| | | |
|--------|------------------------|-----------|
| 80-120 | Cash - Stormwater Fund | 1,250,000 |
| | Total Project Funding | 1,250,000 |

Estimated Project Costs by Expense Category

| 80-120 | FY 2015 | 5 Year Total | Project Total |
|----------------------|------------------|------------------|------------------|
| Construction | 1,050,000 | 1,050,000 | 1,050,000 |
| Design and Engineer | 100,000 | 100,000 | 100,000 |
| Land Acquisition | 100,000 | 100,000 | 100,000 |
| Project Total | 1,250,000 | 1,250,000 | 1,250,000 |

Appropriations-to-Date \$0 Obligated-to-Date \$0 0.00% Obligated

Operating Impacts