



THE AUDITOR OF PUBLIC ACCOUNTS LOCALITY STORMWATER UTILITY REPORTING FORM

The purpose of this form is to implement the following locality stormwater utility reporting requirement established by Paragraph D.1. of Item 2 of the Fiscal Year 2017-2018 State Budget ([Chapter 836](#) of the 2017 Acts of Assembly): *Each locality establishing a utility or enacting a system of service charges to support a local stormwater management program pursuant to §[15.2-2114](#), Code of Virginia, shall provide to the Auditor of Public Accounts by October 1 of each year, in a format specified by the Auditor, a report as to each program funded by these fees and the expected nutrient and sediment reductions for each of these programs. For any specific stormwater outfall generating more than \$200,000 in annual fees, such report shall include identification of specific actions to remediate nutrient and sediment reduction from the specific outfall.*

Each locality subject to the reporting requirement set forth above shall complete and submit this report form each year to the Auditor of Public Accounts by October 1, in an electronic format emailed to LocalGovernment@apa.virginia.gov. **The first report for Fiscal Year 2017 is due by October 1, 2017.**

SECTION 1 – LOCALITY INFORMATION

Locality Name: City of Chesapeake

Contact Name/Title: Barbara Brumbaugh/ Environmental Program Manager

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Contact Phone: (757) 382-6919

Report Completion Date: 09/29/17

SECTION 2 - STORMWATER UTILITY FEES

For your stormwater utility fees provide the following information from your most recent audited annual financial report.

Financial Statement Fund Name: Click or tap here to enter text.

Fiscal year: Click or tap here to enter text.

Revenues	Expenditures	Ending Fund Balance/Net Position
\$16,371,250	\$11,578,839	\$72,115,616

SECTION 3 – FUNDED PROGRAMS AND OTHER MAJOR ACTIVITIES

Provide a brief description of each major program funded by the utility fee system and, where applicable, the expected nutrient and sediment reductions for each of these programs.

A. Operations & Maintenance Program

There are currently approximately 130 funded full time positions funded by the Stormwater Utility, with various vacancies at any given time. Inmate crews Sheriff's Deputies are also funded. For the fiscal year 2017 the following programs were funded:

Storm Sewer System Maintenance and Operations: Responsible for maintenance of the City's storm sewer system including ditches, pipes, catch basins, and stormwater management facilities in order to maintain drainage, improve water quality, and prevent flooding. For the FY17 the following maintenance activities were completed (including preventive and reactive): 119 structures (namely catch basins) were cleaned/serviced; 251.4 miles of blocked ditch were cleaned and cleared with 17.2 miles regraded; 222.6 miles of roadside ditch were cleaned, cleared, and regraded; and 89.8 miles of lead ditch was maintained. Additionally, inmate crews conducted "hard surface mowing" removing built up sediment and vegetation from City gutter pans and roads. 310.3 miles of hard surface were cleaned. These activities resulted in 379,300 gallons and 21,416 tons of sediment and debris removed. Additionally 832 cave-in repairs were made between the Stormwater and Drainage Divisions and 3 post-construction stormwater management facilities (Best Management Practices) were maintained removing 1 ton of debris. 31,344 linear feet of stormwater pipe were also Closed Circuit Television (CCTV) inspected for condition assessment. While the staff for the Drainage Division is paid out of Stormwater Utility funds, some VDOT funding is received for maintenance of roadside ditches.

Contractual Services: \$1.46 million was allocated for contractor cave-in repairs with 77 locations repaired.

Street Sweeping Program: Streets with curb and gutter are swept. For FY17 9017 lane miles were swept with 3278 tons of debris removed.

Environmental Quality Services Program (EQS): This program has responsibility for the MS4 Permit compliance and conducting Erosion and Sediment Control (ESC) and Stormwater Management Program inspections in compliance with the Virginia Stormwater Management Program. Staff conduct stormwater management facility inspections; investigate customer service requests and complaints; conduct dry weather screening; conduct drainage final inspections for acceptance of facilities to the City's MS4; inspect high priority City facilities for housekeeping measures; conduct inspections of land disturbing activities; conduct public

education and outreach; and manage TMDL compliance efforts. Program highlights include: 2507 Routine ESC Inspections conducted; 67 SWPPP Inspections conducted; 366 Final Inspections conducted; and 40 Pre-Construction Inspections conducted. Additionally, 154 Notices to Comply and 6 Stop Work Orders were issued. 149 complaints of illicit discharges or illegal dumping were investigated; 50 dry weather screening sites inspected; and 582 post-construction stormwater management facilities inspected. The City's MS4 VPDES Permit was reissued effective July 1, 2016. During FY17 several contractual tasks were funded or partially funded in support of new permit requirements including: MS4 Service Area Mapping; MS4 Outfall Mapping; TMDL Action Planning (both Chesapeake Bay and Southern Watersheds); preparation of the MS4 Program Plan; preparation of SWPPPs for high priority municipal facilities; a regional water quality monitoring program; and a Homeowner Engagement Program contract for stormwater environmental conservation services. Additionally, the City participated in two Regional Committees organized by the Hampton Roads Planning District Commission. This includes the Regional Environmental Committee (and associated Stormwater Working Group) and the AskHRGreen Stormwater Education Committee at a cost of \$52,200. The EQS budget also covers the cost of spill cleanups within the MS4 where no responsible party has been identified. This cost varies from year to year. Cost recovery is conducted where it is possible.

Planning and Scheduling: This division is responsible for estimating, planning, and scheduling in-house stormwater work orders and projects, assessing drainage and outfall conditions, completing in-house design work for stormwater projects, oversight of the lead ditch ranking and preventive maintenance program, and oversight of "snag and drag" projects.

Engineering: Responsible for environmental engineering and watershed planning, selection and oversight of stormwater-related capital projects, and Design/Construction Services which has inspection and oversight responsibilities for City projects. Information on the status of active and completed projects can be found here: <http://www.cityofchesapeake.net/government/City-Departments/Departments/Public-Works-Department/Active-Public-Works-Projects/active-stormwater-drainage-projects.htm>

Major Equipment Purchases: During FY17 the following equipment was purchased: 1 Trapezoid Bucket for \$6210.

Emergency Response: Stormwater staff are called upon to respond to flooding and other stormwater-related incidents before, during, and after storm events. This requires training, planning, equipment and supplies, and significant preparation.

While volume of sediment and debris removed from the system is being tracked, it has not been possible to accurately estimate and quantify nutrient reductions achieved through Maintenance, Operations, and Inspection activities.

Post Construction Stormwater Management Plan Review and Approval: Development plan review and approval, including post construction stormwater management facilities to address water quality and quantity, is conducted by the Development and Permits Department, and is not funded through the Stormwater Utility, but through General Funds and user fees. Once the post construction systems (stormwater management facilities and conveyance systems) are constructed and accepted into the City's MS4, the public facilities are turned over to Public Works for maintenance, operations, inspections, and rehabilitation, which are funded with Stormwater Utility funds.

B. Capital Improvement Program

Please see the attached Stormwater Capital Improvement Plan and associated budget. The budget is developed for a 5 year cycle.

CAPITAL IMPROVEMENT PLAN FOR THE FIVE YEAR PERIOD ENDING JUNE 30, 2021
ALLOCATION OF RESOURCES

Exhibit C

Project Name	Project #	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year Total	Previous Funding	Future Requirements	Project Total
Cash - South Norfolk TIF										
22nd Street Bridge Replacement	21-120	2,316,247	-	-	-	-	2,316,247	6,049,300	-	8,365,547
22nd Street Commercial Site Preparation (South TIF)	45-200	-	-	-	-	-	-	50,000	-	50,000
Cash - South Norfolk TIF Total		2,316,247	-	-	-	-	2,316,247	6,099,300	-	8,415,547
Cash - Stormwater										
BMP Restoration Citywide	73-120	300,000	200,000	400,000	300,000	300,000	1,500,000	1,400,000	-	2,900,000
Citywide Outfall Re-Grading and Restoration	03-160	200,000	100,000	150,000	150,000	100,000	700,000	820,000	-	1,520,000
Citywide System Rehab	43-170	400,000	500,000	500,000	500,000	300,000	2,200,000	1,500,000	-	3,700,000
Citywide Undesignated Drainage - Phase III	07-150	50,000	50,000	100,000	100,000	100,000	400,000	506,347	-	906,347
Historical Data Cleanup Grant (DEQ)	05-141	-	-	-	-	-	-	18,500	-	18,500
Liberty St. Drainage System Replacement & Upgrade	34-210	-	-	-	-	1,500,000	1,500,000	-	-	1,500,000
Major Equipment Purchases - PW Stormwater Division	07-180	-	-	-	-	-	-	3,974,000	-	3,974,000
Neighborhood Drainage Improvements - Phase II	08-150	500,000	570,000	650,000	750,000	500,000	2,970,000	1,824,600	-	4,794,600
Oakdale Area BMP and Drainage Improvements	09-150	500,000	1,500,000	2,000,000	1,000,000	-	5,000,000	-	-	5,000,000
Shilleagh Rd. Drainage Outfall Improvements	77-120	1,100,000	-	-	-	-	1,100,000	2,000,000	-	3,100,000
Stormwater Mapping and Master Drainage Plan Phase III	10-150	200,000	100,000	200,000	200,000	200,000	900,000	300,000	-	1,200,000
Stormwater Quality Program - Phase II	11-150	2,000,000	2,000,000	1,500,000	2,500,000	2,500,000	10,500,000	340,565	-	10,840,565
Welch Ln. Drainage Improvements	19-200	-	480,000	-	-	-	480,000	-	-	480,000
Whittemore Rd. Outfall Improvements	20-200	300,000	-	-	-	-	300,000	-	-	300,000
Cash - Stormwater Total		5,550,000	5,500,000	5,500,000	5,500,000	5,500,000	27,550,000	12,684,012	-	40,234,012

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:	2017
Year Identified:	2008	Project Status:	Funded
Start Date:	7/1/2011	Region:	
Est. Completion Date:	12/2/2021		

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.

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.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2017	300,000	300,000	0
2018	200,000	200,000	0
2019	400,000	400,000	0
2020	300,000	300,000	0
2021	300,000	300,000	0
	1,500,000	1,500,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,400,000	300,000	1,200,000		2,900,000
Total Revenue		1,400,000	300,000	1,200,000		2,900,000
Expense						
	Construction	1,400,000	300,000	1,200,000		2,900,000
Total Expense		1,400,000	300,000	1,200,000		2,900,000
Obligated to Date:						372,290
						12.84 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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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:	2017
Year Identified:	2012	Project Status:	Funded
Start Date:	7/1/2012	Region:	
Est. Completion Date:	12/1/2021		

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
2017	200,000	200,000	0
2018	100,000	100,000	0
2019	150,000	150,000	0
2020	150,000	150,000	0
2021	100,000	100,000	0
	700,000	700,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	820,000	200,000	500,000		1,520,000
Total Revenue		820,000	200,000	500,000		1,520,000
Expense						
	Construction	570,000	150,000	300,000		1,020,000
	Land Acquisition	250,000	50,000	200,000		500,000
Total Expense		820,000	200,000	500,000		1,520,000
Obligated to Date:						463,680
						30.51 %

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:	2017
Year Identified:	2013	Project Status:	Funded
Start Date:	7/1/2012	Region:	
Est. Completion Date:	12/1/2021		

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
2017	400,000	400,000	0
2018	500,000	500,000	0
2019	500,000	500,000	0
2020	500,000	500,000	0
2021	300,000	300,000	0
	2,200,000	2,200,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,500,000	400,000	1,800,000		3,700,000
	Total Revenue	1,500,000	400,000	1,800,000		3,700,000
Expense						
	Design & Engineering	250,000	100,000	500,000		850,000
	Construction	1,250,000	300,000	1,300,000		2,850,000
	Total Expense	1,500,000	400,000	1,800,000		3,700,000
Obligated to Date:						148,280
						4.01 %

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:	2017
Year Identified:	2011	Project Status:	Funded
Start Date:	7/1/2012	Region:	
Est. Completion Date:	6/30/2022		

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
2017	50,000	50,000	0
2018	50,000	50,000	0
2019	100,000	100,000	0
2020	100,000	100,000	0
2021	100,000	100,000	0
	400,000	400,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	506,347	50,000	350,000		906,347
Total Revenue		506,347	50,000	350,000		906,347
Expense						
	Construction	506,347	50,000	350,000		906,347
Total Expense		506,347	50,000	350,000		906,347
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:	2017
Year Identified:	2016	Project Status:	Funded
Start Date:	8/28/2015	Region:	
Est. Completion Date:			

Description:

The City's Department of Public Works 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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
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 2017

Account	Description	Prior Years	2017	2018 - 21	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: **07-180**
 Project Title: **Major Equipment Purchases - PW Stormwater Division**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Equipment** Budget Year: **2017**
 Year Identified: **2014**
 Start Date: **3/1/2014** Project Status: **Funded**
 Est. Completion Date: Region:

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
2017	700,000	700,000	0
2018	700,000	700,000	0
2019	710,000	710,000	0
2020	755,000	755,000	0
2021	770,000	770,000	0
	3,635,000	3,635,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	3,974,000				3,974,000
	Fund Balance - Stormwater		700,000	2,935,000		3,635,000
Total Revenue		3,974,000	700,000	2,935,000		7,609,000
Expense						
	Equipment	3,974,000	700,000	2,935,000		7,609,000
Total Expense		3,974,000	700,000	2,935,000		7,609,000
Obligated to Date:						3,807,572
						50.04 %

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:	2017
Year Identified:	2017	Project Status:	Funded
Start Date:	7/1/2016	Region:	
Est. Completion Date:	6/30/2018		

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
2017	1,908,000	1,908,000	0
	1,908,000	1,908,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	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: **08-150**
 Project Title: **Neighborhood Drainage Improvements - Phase II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2017**
 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
2017	500,000	500,000	0
2018	570,000	570,000	0
2019	650,000	650,000	0
2020	750,000	750,000	0
2021	500,000	500,000	0
	2,970,000	2,970,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,824,600	500,000	2,470,000		4,794,600
Total Revenue		1,824,600	500,000	2,470,000		4,794,600
Expense						
	Construction	1,824,600	500,000	2,470,000		4,794,600
Total Expense		1,824,600	500,000	2,470,000		4,794,600

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

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
2017	500,000	500,000	0
2018	1,500,000	1,500,000	0
2019	2,000,000	2,000,000	0
2020	1,000,000	1,000,000	0
	5,000,000	5,000,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater		500,000	4,500,000		5,000,000
Total Revenue			500,000	4,500,000		5,000,000
Expense						
	Design & Engineering		200,000			200,000
	Construction			4,500,000		4,500,000
	Land Acquisition		300,000			300,000
Total Expense			500,000	4,500,000		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:	77-120		
Project Title:	Shillelagh Rd. Drainage Outfall Improvements		
Asset Type:			
Division:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Budget Year:	2017
Year Identified:	2008	Project Status:	Funded
Start Date:	9/1/2016	Region:	
Est. Completion Date:	12/1/2018		

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
2017	1,100,000	1,100,000	0
	1,100,000	1,100,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,000,000	1,100,000			3,100,000
Total Revenue		2,000,000	1,100,000			3,100,000
Expense						
	Design & Engineering	500,000				500,000
	Construction	1,500,000	1,100,000			2,600,000
Total Expense		2,000,000	1,100,000			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:	2017
Year Identified:	2011	Project Status:	Funded
Start Date:	7/1/2012	Region:	
Est. Completion Date:			

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
2017	200,000	200,000	0
2018	100,000	100,000	0
2019	200,000	200,000	0
2020	200,000	200,000	0
2021	200,000	200,000	0
	900,000	900,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	300,000	200,000	700,000		1,200,000
Total Revenue		300,000	200,000	700,000		1,200,000
Expense						
	Design & Engineering	300,000	200,000	700,000		1,200,000
Total Expense		300,000	200,000	700,000		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:	11-150		
Project Title:	Stormwater Quality Program - Phase II		
Asset Type:			
Division:	Storm Water Capital Projects		
Project Type:	Study	Budget Year:	2017
Year Identified:	2011		
Start Date:	9/1/2012	Project Status:	Funded
Est. Completion Date:		Region:	

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

Project Forecast

Year	Total Expense	Total Revenue	Difference
2017	2,000,000	2,000,000	0
2018	2,000,000	2,000,000	0
2019	1,500,000	1,500,000	0
2020	2,500,000	2,500,000	0
2021	2,500,000	2,500,000	0
	10,500,000	10,500,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	340,565	2,000,000	8,500,000		10,840,565
Total Revenue		340,565	2,000,000	8,500,000		10,840,565
Expense						
	Design & Engineering	340,565	500,000	2,000,000		2,840,565
	Construction		1,500,000	6,500,000		8,000,000
Total Expense		340,565	2,000,000	8,500,000		10,840,565
Obligated to Date:						308,530
						2.85 %

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:	2017
Year Identified:	2016	Project Status:	Funded
Start Date:		Region:	
Est. Completion Date:			

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
Year Identified:	2016	Project Status:	Funded
Start Date:		Region:	
Est. Completion Date:			

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
2017	300,000	300,000	0
	300,000	300,000	0

Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
Year Identified:	2011	Project Status:	Fully Funded
Start Date:	11/1/2011	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	1,254,034
						96.46 %

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:	2017
Year Identified:	2010	Project Status:	Fully Funded
Start Date:	12/1/2010	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:						417,374
						34.78 %

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:	2017
Year Identified:	2009	Project Status:	Fully Funded
Start Date:	7/1/2012	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:						1,445
						0.16 %

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:	2017
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 2017

Account	Description	Prior Years	2017	2018 - 21	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:						711,325
						202.06 %

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:	2017
Year Identified:	2008	Project Status:	Fully Funded
Start Date:	1/1/2014	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:						0
						0.00 %

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:	2017
Year Identified:	2006	Project Status:	Fully Funded
Start Date:	11/1/2013	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:						219,432
						10.97 %

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:	2017
Year Identified:	2009	Project Status:	Fully Funded
Start Date:	1/1/2014	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
Year Identified:	2009	Project Status:	Fully Funded
Start Date:	7/1/2011	Region:	
Est. Completion Date:	8/1/2016		

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. Anticipate bid advertisement in FY 2016.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	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:						144
						0.01 %

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:	2017
Year Identified:	2011	Project Status:	Fully Funded
Start Date:	7/1/2011	Region:	
Est. Completion Date:	12/1/2017		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	1,584,136
						71.29 %

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:	2017
Year Identified:	2008	Project Status:	Fully Funded
Start Date:	1/1/2011	Region:	
Est. Completion Date:	12/1/2016		

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. The stormwater design portion is 30% complete. Anticipate advertising bid in FY 2016 (spring 2016).

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
Year Identified:	2009		
Start Date:	11/1/2013	Project Status:	Fully Funded
Est. Completion Date:	11/1/2016	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 2017

Account	Description	Prior Years	2017	2018 - 21	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:						850
						0.14 %

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:	2017
Year Identified:	2009	Project Status:	Fully Funded
Start Date:	1/1/2014	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
Year Identified:	2008	Project Status:	Fully Funded
Start Date:	7/1/2010	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
Year Identified:	2009	Project Status:	Fully Funded
Start Date:	7/1/2011	Region:	
Est. Completion Date:	12/1/2016		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
Year Identified:	2008		
Start Date:	7/1/2011	Project Status:	Fully Funded
Est. Completion Date:		Region:	

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:						589,298
						58.93 %

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:	2017
Year Identified:	2010	Project Status:	Fully Funded
Start Date:	7/1/2011	Region:	
Est. Completion Date:			

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:

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 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
Revenue						
	Cash - Stormwater	6,746,968				6,746,968
Total Revenue		6,746,968				6,746,968
Expense						
	Design & Engineering	5,246,968				5,246,968
	Construction	1,500,000				1,500,000
Total Expense		6,746,968				6,746,968
Obligated to Date:						433,824
						6.43 %

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:	2017
Year Identified:	2009	Project Status:	Fully Funded
Start Date:	3/1/2016	Region:	
Est. Completion Date:	12/1/2017		

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 2017

Account	Description	Prior Years	2017	2018 - 21	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:	2017
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 2016-20 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 2017

Account	Description	Prior Years	2017	2018 - 21	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:						2,055,571
						89.15 %

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:	2017
Year Identified:	2011		
Start Date:	9/1/2010	Project Status:	Fully Funded
Est. Completion Date:	6/30/2017	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 2016-20 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 2017

Account	Description	Prior Years	2017	2018 - 21	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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