

# Project Summary

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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**  
 Start Date: **7/1/2011** Project Status: **Funded**  
 Est. Completion Date: **12/2/2021** Region:

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## 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
	<b>1,500,000</b>	<b>1,500,000</b>	<b>0</b>

## Project Details 2017

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

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date: **7/1/2012**      Project Status: **Funded**  
 Est. Completion Date: **12/1/2021**      Region:

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## 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
	<b>700,000</b>	<b>700,000</b>	<b>0</b>

## Project Details 2017

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

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date: **7/1/2012**      Project Status: **Funded**  
 Est. Completion Date: **12/1/2021**      Region:

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## 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
	<b>2,200,000</b>	<b>2,200,000</b>	<b>0</b>

## Project Details 2017

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

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date: **7/1/2012**      Project Status: **Funded**  
 Est. Completion Date: **6/30/2022**      Region:

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## 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
	<b>400,000</b>	<b>400,000</b>	<b>0</b>

## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	506,347	50,000	350,000		<b>906,347</b>
<b>Total Revenue</b>		<b>506,347</b>	<b>50,000</b>	<b>350,000</b>		<b>906,347</b>
<b>Expense</b>						
	Construction	506,347	50,000	350,000		<b>906,347</b>
<b>Total Expense</b>		<b>506,347</b>	<b>50,000</b>	<b>350,000</b>		<b>906,347</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## 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
<b>Revenue</b>						
	Grant	25,000				25,000
	Cash - Stormwater	18,500				18,500
<b>Total Revenue</b>		<b>43,500</b>				<b>43,500</b>
<b>Expense</b>						
	Other	43,500				43,500
<b>Total Expense</b>		<b>43,500</b>				<b>43,500</b>
<b>Obligated to Date:</b>						<b>43,435</b>
						<b>99.85 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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

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## 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
	<b>1,500,000</b>	<b>1,500,000</b>	<b>0</b>

## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater			1,500,000		1,500,000
<b>Total Revenue</b>				<b>1,500,000</b>		<b>1,500,000</b>
<b>Expense</b>						
	Design & Engineering			200,000		200,000
	Construction			1,250,000		1,250,000
	Land Acquisition			50,000		50,000
<b>Total Expense</b>				<b>1,500,000</b>		<b>1,500,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## 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 Project Status: Funded  
 Start Date: 3/1/2014 Region:  
 Est. Completion Date:

## Description:

This project will provide for the purchase of replacement vehicles and major equipment for the Public Works Stormwater Division.

## Justification:

Over 50% of the current fleet have exceeded service life, which results in increased maintenance costs and equipment down time.

## Comments:

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

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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
	<b>3,635,000</b>	<b>3,635,000</b>	<b>0</b>

## Project Details 2017

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

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

## Description:

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

## Justification:

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

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

## Comments:

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

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2017	1,908,000	1,908,000	0
	<b>1,908,000</b>	<b>1,908,000</b>	<b>0</b>

## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Fund Balance - Other Funds		1,908,000			1,908,000
<b>Total Revenue</b>			<b>1,908,000</b>			<b>1,908,000</b>
<b>Expense</b>						
	Design & Engineering		200,000			200,000
	Construction		1,458,000			1,458,000
	Land Acquisition		250,000			250,000
<b>Total Expense</b>			<b>1,908,000</b>			<b>1,908,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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:

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## 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
	<b>2,970,000</b>	<b>2,970,000</b>	<b>0</b>

## Project Details 2017

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

**Obligated to Date: 0**  
**0.00 %**

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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  
 Start Date: 1/1/2017      Project Status: Funded  
 Est. Completion Date: 12/1/2020      Region:

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**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
	<b>5,000,000</b>	<b>5,000,000</b>	<b>0</b>

**Project Details 2017**

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater		500,000	4,500,000		<b>5,000,000</b>
<b>Total Revenue</b>			<b>500,000</b>	<b>4,500,000</b>		<b>5,000,000</b>
<b>Expense</b>						
	Design & Engineering		200,000			<b>200,000</b>
	Construction			4,500,000		<b>4,500,000</b>
	Land Acquisition		300,000			<b>300,000</b>
<b>Total Expense</b>			<b>500,000</b>	<b>4,500,000</b>		<b>5,000,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

**Related Projects**

**Operating Budget Impact**

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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  
 Start Date: 9/1/2016      Project Status: Funded  
 Est. Completion Date: 12/1/2018      Region:

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## 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
	<b>1,100,000</b>	<b>1,100,000</b>	<b>0</b>

## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	2,000,000	1,100,000			<b>3,100,000</b>
	<b>Total Revenue</b>	<b>2,000,000</b>	<b>1,100,000</b>			<b>3,100,000</b>
<b>Expense</b>						
	Design & Engineering	500,000				<b>500,000</b>
	Construction	1,500,000	1,100,000			<b>2,600,000</b>
	<b>Total Expense</b>	<b>2,000,000</b>	<b>1,100,000</b>			<b>3,100,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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  
 Start Date: 7/1/2012 Project Status: Funded  
 Est. Completion Date: Region:

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## 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
	<b>900,000</b>	<b>900,000</b>	<b>0</b>

## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	300,000	200,000	700,000		<b>1,200,000</b>
	<b>Total Revenue</b>	<b>300,000</b>	<b>200,000</b>	<b>700,000</b>		<b>1,200,000</b>
<b>Expense</b>						
	Design & Engineering	300,000	200,000	700,000		<b>1,200,000</b>
	<b>Total Expense</b>	<b>300,000</b>	<b>200,000</b>	<b>700,000</b>		<b>1,200,000</b>

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 Project Status: Funded  
 Start Date: 9/1/2012 Region:  
 Est. Completion Date:

## Description:

The Stormwater Quality program will ensure compliance with the Virginia Pollution Discharge Elimination System Permit and will update the City's MS4 (Municipal separate stormwater sewer system) program plan. This project will provide for the development of PARS system (regional stormwater tracking and reporting system), extensive data collection, and inspection of all stormwater management facilities in accordance with the new permit requirements. It will also establish a monitoring and sampling program to comply with the new TMDL requirements. As part of the permit requirements, the City will be completing stormwater retrofit projects to address stormwater runoff discharge into waterways and creeks.

## Justification:

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

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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
	<b>10,500,000</b>	<b>10,500,000</b>	<b>0</b>

## Project Details 2017

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

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date:      Project Status: **Funded**  
 Est. Completion Date:      Region:

---

## Description:

This project will provide for neighborhood drainage improvements that will include replacement and additions to the existing inadequate stormwater system to improve the level of protection to meet current stormwater design requirements.

## Justification:

The existing stormwater system along Welch Lane is inadequate to handle the amount of runoff. In some cases, the system is not in place to provide a conveyance system to carry runoff to the outfall.

## Comments:

Many complaints about poor drainage and flooding have been received from this area for a number of years.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2018	480,000	480,000	0
	<b>480,000</b>	<b>480,000</b>	<b>0</b>

## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater			480,000		<b>480,000</b>
<b>Total Revenue</b>				<b>480,000</b>		<b>480,000</b>
<b>Expense</b>						
	Design & Engineering			50,000		<b>50,000</b>
	Construction			400,000		<b>400,000</b>
	Land Acquisition			30,000		<b>30,000</b>
<b>Total Expense</b>				<b>480,000</b>		<b>480,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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  
 Start Date:      Project Status: Funded  
 Est. Completion Date:      Region:

---

## Description:

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

## Justification:

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

## Comments:

Many complaints about poor drainage and flooding have been received from this area for a number of years.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2017	300,000	300,000	0
	<b>300,000</b>	<b>300,000</b>	<b>0</b>

## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater		300,000			<b>300,000</b>
<b>Total Revenue</b>			<b>300,000</b>			<b>300,000</b>
<b>Expense</b>						
	Design & Engineering		30,000			<b>30,000</b>
	Construction		250,000			<b>250,000</b>
	Land Acquisition		20,000			<b>20,000</b>
<b>Total Expense</b>			<b>300,000</b>			<b>300,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date: **11/1/2011**      Project Status: **Fully Funded**  
 Est. Completion Date: **12/1/2016**      Region:

---

**Description:**

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

**Justification:**

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

**Comments:**

**Project Forecast**

Year	Total Expense	Total Revenue	Difference
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**Project Details 2017**

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	1,300,000				<b>1,300,000</b>
<b>Total Revenue</b>		<b>1,300,000</b>				<b>1,300,000</b>
<b>Expense</b>						
	Design & Engineering	100,000				<b>100,000</b>
	Construction	1,100,000				<b>1,100,000</b>
	Land Acquisition	100,000				<b>100,000</b>
<b>Total Expense</b>		<b>1,300,000</b>				<b>1,300,000</b>
<b>Obligated to Date:</b>						<b>1,254,034</b>
						<b>96.46 %</b>

**Related Projects**

**Operating Budget Impact**

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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

---

## Description:

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

## Justification:

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

## Comments:

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

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	1,200,000				<b>1,200,000</b>
<b>Total Revenue</b>		<b>1,200,000</b>				<b>1,200,000</b>
<b>Expense</b>						
	Design & Engineering	50,000				<b>50,000</b>
	Construction	1,100,000				<b>1,100,000</b>
	Land Acquisition	50,000				<b>50,000</b>
<b>Total Expense</b>		<b>1,200,000</b>				<b>1,200,000</b>
<b>Obligated to Date:</b>						<b>417,374</b>
						<b>34.78 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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
<b>Revenue</b>						
	Cash - Stormwater	880,000				<b>880,000</b>
<b>Total Revenue</b>		<b>880,000</b>				<b>880,000</b>
<b>Expense</b>						
	Design & Engineering	50,000				<b>50,000</b>
	Construction	830,000				<b>830,000</b>
<b>Total Expense</b>		<b>880,000</b>				<b>880,000</b>
<b>Obligated to Date:</b>						<b>1,445</b>
						<b>0.16 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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
<b>Revenue</b>						
	Cash - Stormwater	352,029				352,029
<b>Total Revenue</b>		<b>352,029</b>				<b>352,029</b>
<b>Expense</b>						
	Construction	352,029				352,029
<b>Total Expense</b>		<b>352,029</b>				<b>352,029</b>
<b>Obligated to Date:</b>						<b>711,325</b>
						<b>202.06 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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

---

## 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
<b>Revenue</b>						
	Cash - Stormwater	415,000				<b>415,000</b>
<b>Total Revenue</b>		<b>415,000</b>				<b>415,000</b>
<b>Expense</b>						
	Design & Engineering	65,000				<b>65,000</b>
	Construction	350,000				<b>350,000</b>
<b>Total Expense</b>		<b>415,000</b>				<b>415,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date: **11/1/2013**      Project Status: **Fully Funded**  
 Est. Completion Date: **12/1/2016**      Region:

---

## Description:

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

## Justification:

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

## Comments:

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

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	2,000,000				<b>2,000,000</b>
<b>Total Revenue</b>		<b>2,000,000</b>				<b>2,000,000</b>
<b>Expense</b>						
	Design & Engineering	50,000				<b>50,000</b>
	Construction	1,900,000				<b>1,900,000</b>
	Land Acquisition	50,000				<b>50,000</b>
<b>Total Expense</b>		<b>2,000,000</b>				<b>2,000,000</b>
<b>Obligated to Date:</b>						<b>219,432</b>
						<b>10.97 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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

---

## Description:

This project will provide for the installation of a new drainage system along D Street including structures and basins.

## Justification:

This segment of D Street lacks a drainage system to carry stormwater runoff resulting in flooding along the street.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	370,000				<b>370,000</b>
<b>Total Revenue</b>		<b>370,000</b>				<b>370,000</b>
<b>Expense</b>						
	Design & Engineering	35,000				<b>35,000</b>
	Construction	300,000				<b>300,000</b>
	Land Acquisition	35,000				<b>35,000</b>
<b>Total Expense</b>		<b>370,000</b>				<b>370,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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  
 Start Date: 7/1/2011      Project Status: Fully Funded  
 Est. Completion Date: 8/1/2016      Region:

---

## Description:

This project will improve the outfall using adequate sized pipe systems along Deep Creek Boulevard, re-grade roadside ditches, and re-set driveway pipes as needed within the Lamberts Trail area.

## Justification:

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

## Comments:

Project under design. 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
<b>Revenue</b>						
	Cash - Stormwater	2,100,000				2,100,000
<b>Total Revenue</b>		<b>2,100,000</b>				<b>2,100,000</b>
<b>Expense</b>						
	Design & Engineering	100,000				100,000
	Construction	1,950,000				1,950,000
	Land Acquisition	50,000				50,000
<b>Total Expense</b>		<b>2,100,000</b>				<b>2,100,000</b>

**Obligated to Date:**      144  
 0.01 %

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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

---

## Description:

This project will provide for Citywide drainage improvements including acquisition of easements, replacement of pipes, re-grading ditches, and associated activities to address existing neighborhood drainage deficiencies. (See also project # 08-150 Phase II).

## Justification:

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

## Comments:

This project will include the neighborhoods of Phyllis Drive, Nina Drive, Jarvis Road, Buskey Road outfall, Bainbridge Boulevard drainage improvement, Ohio Street, Jefferson Street, Chesapeake Drive, Inland Colony area, Fernwood Farm outfalls, Cedarville/Sanderson Road area, Shell Road outfall and Oleander Avenue outfall improvement, and Greenbrier outfall improvements.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	2,221,983				2,221,983
<b>Total Revenue</b>		<b>2,221,983</b>				<b>2,221,983</b>
<b>Expense</b>						
	Design & Engineering	175,927				175,927
	Construction	2,046,056				2,046,056
<b>Total Expense</b>		<b>2,221,983</b>				<b>2,221,983</b>
<b>Obligated to Date:</b>						<b>1,584,136</b>
						<b>71.29 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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

---

## Description:

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

## Justification:

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

## Comments:

Public Works will coordinate with Public Utilities, which also has a capital project planned for area. 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
<b>Revenue</b>						
	Cash - Stormwater	600,000				<b>600,000</b>
<b>Total Revenue</b>		<b>600,000</b>				<b>600,000</b>
<b>Expense</b>						
	Other	600,000				<b>600,000</b>
<b>Total Expense</b>		<b>600,000</b>				<b>600,000</b>
<b>Obligated to Date:</b>						<b>309,456</b>
						<b>51.58 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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
<b>Revenue</b>						
	Cash - Stormwater	600,000				<b>600,000</b>
<b>Total Revenue</b>		<b>600,000</b>				<b>600,000</b>
<b>Expense</b>						
	Design & Engineering	50,000				<b>50,000</b>
	Construction	500,000				<b>500,000</b>
	Land Acquisition	50,000				<b>50,000</b>
<b>Total Expense</b>		<b>600,000</b>				<b>600,000</b>
<b>Obligated to Date:</b>						<b>850</b>
						<b>0.14 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date: **1/1/2014**      Project Status: **Fully Funded**  
 Est. Completion Date: **12/1/2016**      Region:

---

## Description:

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

## Justification:

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

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	550,000				<b>550,000</b>
<b>Total Revenue</b>		<b>550,000</b>				<b>550,000</b>
<b>Expense</b>						
	Design & Engineering	50,000				<b>50,000</b>
	Construction	450,000				<b>450,000</b>
	Land Acquisition	50,000				<b>50,000</b>
<b>Total Expense</b>		<b>550,000</b>				<b>550,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date: **7/1/2010**      Project Status: **Fully Funded**  
 Est. Completion Date: **12/1/2016**      Region:

---

## Description:

The project will provide for the re-grading of roadside ditches and re-setting of driveway pipes along Scenic Boulevard.

## Justification:

The driveway pipes have settled over time and the ditch silted to a point that it has created drainage problems. This project will restore the system to be a functional system.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2017

Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	260,000				260,000
<b>Total Revenue</b>		<b>260,000</b>				<b>260,000</b>
<b>Expense</b>						
	Design & Engineering	30,000				30,000
	Land Acquisition	230,000				230,000
<b>Total Expense</b>		<b>260,000</b>				<b>260,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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**  
 Start Date: **7/1/2011**      Project Status: **Fully Funded**  
 Est. Completion Date: **12/1/2016**      Region:

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## 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
<b>Revenue</b>						
	Cash - Stormwater	540,000				<b>540,000</b>
<b>Total Revenue</b>		<b>540,000</b>				<b>540,000</b>
<b>Expense</b>						
	Design & Engineering	35,000				<b>35,000</b>
	Construction	500,000				<b>500,000</b>
	Land Acquisition	5,000				<b>5,000</b>
<b>Total Expense</b>		<b>540,000</b>				<b>540,000</b>
<b>Obligated to Date:</b>						<b>0</b>
						<b>0.00 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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 Project Status: Fully Funded  
 Start Date: 7/1/2011 Region:  
 Est. Completion Date:

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## 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
<b>Revenue</b>						
	Cash - Stormwater	1,000,000				1,000,000
<b>Total Revenue</b>		<b>1,000,000</b>				<b>1,000,000</b>
<b>Expense</b>						
	Design & Engineering	1,000,000				1,000,000
<b>Total Expense</b>		<b>1,000,000</b>				<b>1,000,000</b>
<b>Obligated to Date:</b>						<b>589,298</b>
						<b>58.93 %</b>

## 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
<b>Revenue</b>						
	Cash - Stormwater	6,746,968				<b>6,746,968</b>
<b>Total Revenue</b>		<b>6,746,968</b>				<b>6,746,968</b>
<b>Expense</b>						
	Design & Engineering	5,246,968				<b>5,246,968</b>
	Construction	1,500,000				<b>1,500,000</b>
<b>Total Expense</b>		<b>6,746,968</b>				<b>6,746,968</b>
<b>Obligated to Date:</b>						<b>433,824</b>
						<b>6.43 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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

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**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
<b>Revenue</b>						
	Cash - Stormwater	1,200,000				1,200,000
<b>Total Revenue</b>		<b>1,200,000</b>				<b>1,200,000</b>
<b>Expense</b>						
	Design & Engineering	100,000				100,000
	Construction	1,000,000				1,000,000
	Land Acquisition	100,000				100,000
<b>Total Expense</b>		<b>1,200,000</b>				<b>1,200,000</b>

**Obligated to Date:**      **0**  
 0.00 %

**Related Projects**

**Operating Budget Impact**

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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:

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## 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
<b>Revenue</b>						
	Grant	1,055,814				1,055,814
	Cash - Stormwater	1,250,000				1,250,000
<b>Total Revenue</b>		<b>2,305,814</b>				<b>2,305,814</b>
<b>Expense</b>						
	Design & Engineering	100,000				100,000
	Construction	2,105,814				2,105,814
	Land Acquisition	100,000				100,000
<b>Total Expense</b>		<b>2,305,814</b>				<b>2,305,814</b>
<b>Obligated to Date:</b>						<b>2,055,571</b>
						<b>89.15 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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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:

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## 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

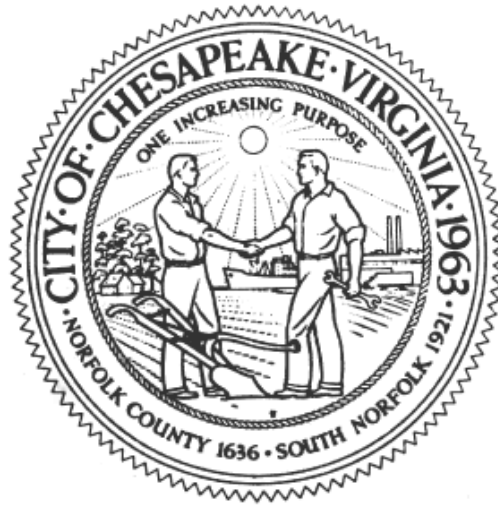
Account	Description	Prior Years	2017	2018 - 21	Future Years	Total Amount
<b>Revenue</b>						
	Grant	57,545				57,545
	Cash - Stormwater	805,000				805,000
<b>Total Revenue</b>		<b>862,545</b>				<b>862,545</b>
<b>Expense</b>						
	Construction	862,545				862,545
<b>Total Expense</b>		<b>862,545</b>				<b>862,545</b>
<b>Obligated to Date:</b>						<b>675,532</b>
						<b>78.32 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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