

# Project Summary

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Project Number: **05-144**  
 Project Title: **22nd St. Regional BMP**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Study Budget Year: 2020  
 Year Identified: 2019 Project Status: Funded  
 Start Date: 10/23/2018 Region:  
 Est. Completion Date: 7/30/2022

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## Description:

This project will provide for the design and construction of a 22nd Street Regional BMP (pond) to improve drainage in the area and enhance water quality in the South Norfolk area of the City.

## Justification:

During FY 2019, the City was awarded a grant from the Virginia Dept. of Environmental Quality's (DEQ) Stormwater Local Assistance Fund (SLAF) program. The SLAF program provides matching grants for the planning, design, and implementation of stormwater best management practices (BMP) that address efficiency and commitment to reducing water quality pollutants.

## Comments:

On October 23, 2018, City Council approved an FY 2019 Capital Budget amendment that added this as a new sub-project under the main project # 05-140 because the City was awarded a SLAF grant from the DEQ. The total estimated project cost is \$627,500. The grant provided 50% of the cost and required a 50% local match. City Council appropriated the \$313,750 grant and reassigned \$313,750 from the main project # 05-140 to this new sub-project # 05-144 for the local match requirements.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Grant		313,750			313,750
	Cash - Stormwater		313,750			313,750
<b>Total Revenue</b>			<b>627,500</b>			<b>627,500</b>
<b>Expense</b>						
	Design & Engineering		29,962			29,962
	Construction		393,792			393,792
	Other		203,746			203,746
<b>Total Expense</b>			<b>627,500</b>			<b>627,500</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: **73-120**  
 Project Title: **BMP Restoration Citywide**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation** Budget Year: **2020**  
 Year Identified: **2008**  
 Start Date: **7/1/2011** Project Status: **Funded**  
 Est. Completion Date: **7/30/2023** Region:

## Description:

The project will provide for the removal of significant accumulated amounts of sediment and silt in order to restore storage capacity and improve control of stormwater. This project will be completed at various locations citywide, including the following stormwater facilities: Bahama Way BMP, Southern Pines BMP, Fentress Road BMP, and Major Hillard Library BMP.

## Justification:

Over the years significant amounts of silt and sediment have accumulated within City retention ponds limiting their capacity. This project is needed to maintain the hydraulic capacity and the water quality function by limiting runoff to area creeks and streams.

## Comments:

Due to the substantial amount of stormwater quality requirements met through the SWIFT program, the project plan was revised for FY 2019 and the annual investment in BMP restorations was revised to \$100,000 for FY 2020 - FY 2023.

Best Management Practices (BMPs) are devices used to reduce pollution in stormwater runoff, thereby protecting area waterways. These practices are often permanent facilities designed to handle stormwater runoff in a specific area. BMPs reduce the flow that allows for filtration of pollutants before the stormwater enters our streams, rivers, lakes and bays. BMPs must be maintained to ensure they perform properly.

Types of BMPs include: infiltration trenches/basins (stone-filled excavations that temporarily store stormwater runoff and soak into the soil beneath it), detention basins or dry ponds (man-made basins that detain water for specific periods of time after a storm), retention ponds (permanent pools of water that are very effective at improving water quality because they allow more time for sediment settling and removal), grassed swales (gently sloped vegetation areas that slow runoff), and filter strips/buffers (vegetation that removes sediment in runoff).

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	100,000	100,000	0
2021	100,000	100,000	0
2022	100,000	100,000	0
2023	100,000	100,000	0
	<b>400,000</b>	<b>400,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	1,950,000	100,000	300,000		<b>2,350,000</b>
	<b>Total Revenue</b>	<b>1,950,000</b>	<b>100,000</b>	<b>300,000</b>		<b>2,350,000</b>
<b>Expense</b>						
	Construction	1,950,000	100,000	300,000		<b>2,350,000</b>
	<b>Total Expense</b>	<b>1,950,000</b>	<b>100,000</b>	<b>300,000</b>		<b>2,350,000</b>
					<b>Obligated to Date:</b>	<b>499,892</b>
						<b>21.27 %</b>

## 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:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation** Budget Year: **2020**  
 Year Identified: **2012**  
 Start Date: **7/1/2012** Project Status: **Funded**  
 Est. Completion Date: **12/30/2024** Region:

## Description:

This project will provide for removal of accumulated sediment and silt from ditches and outfalls.

## Justification:

Accumulated sediment and silt removal is required on a regular basis in order to maintain ditch capacity and improve stormwater runoff quality.

## Comments:

For the FY 2020-24 CIP, the project plan was updated to add FY 2024 requirements. Once major capital work to clear ditches and outfalls is completed, cleared areas will be maintained through the ongoing ditch access/ bank mowing program funded in the Stormwater Operating Budget.

On June 12, 2018, City Council approved an amendment to the FY 2019-23 CIP that reduced funding for this project in the Capital Budget to offset increased funding planned in the Operating Budget. The project's budget was reduced by \$25,000 in FY 2019, \$50,000 in FY 2020, and \$75,000 in FY 2021. See also City Council Agenda Item CM-8(G-2).

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	750,000	750,000	0
2021	925,000	925,000	0
2022	1,000,000	1,000,000	0
2023	1,000,000	1,000,000	0
2024	800,000	800,000	0
	<b>4,475,000</b>	<b>4,475,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	1,695,000	750,000	3,725,000		<b>6,170,000</b>
<b>Total Revenue</b>		<b>1,695,000</b>	<b>750,000</b>	<b>3,725,000</b>		<b>6,170,000</b>
<b>Expense</b>						
	Design & Engineering	375,000	650,000	3,275,000		<b>4,300,000</b>
	Construction	970,000	100,000	450,000		<b>1,520,000</b>
	Land Acquisition	350,000				<b>350,000</b>
<b>Total Expense</b>		<b>1,695,000</b>	<b>750,000</b>	<b>3,725,000</b>		<b>6,170,000</b>
<b>Obligated to Date:</b>						<b>1,287,694</b>
						<b>20.87 %</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:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2013**  
 Start Date: **7/1/2012**      Project Status: **Funded**  
 Est. Completion Date: **12/30/2024**      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.

## Comments:

For the FY 2020-24 CIP, the project plan was updated and \$700,000 was added for FY 2024 requirements.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	500,000	500,000	0
2021	300,000	300,000	0
2024	700,000	700,000	0
	<b>1,500,000</b>	<b>1,500,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	2,900,000	500,000	1,000,000		<b>4,400,000</b>
<b>Total Revenue</b>		<b>2,900,000</b>	<b>500,000</b>	<b>1,000,000</b>		<b>4,400,000</b>
<b>Expense</b>						
	Design & Engineering	650,000	100,000	200,000		<b>950,000</b>
	Construction	2,250,000	400,000	800,000		<b>3,450,000</b>
<b>Total Expense</b>		<b>2,900,000</b>	<b>500,000</b>	<b>1,000,000</b>		<b>4,400,000</b>
<b>Obligated to Date:</b>						<b>2,310,910</b>
						<b>52.52 %</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:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2011**  
 Start Date: **7/1/2012**      Project Status: **Funded**  
 Est. Completion Date: **6/30/2023**      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.

## Comments:

Due to the substantial amount of stormwater quality requirements met through the SWIFT program, the project plan was revised for FY 2019 and the annual investment to complete citywide drainage projects was revised to \$50,000 for FY 2020 - FY 2023.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	50,000	50,000	0
2021	50,000	50,000	0
2022	50,000	50,000	0
2023	50,000	50,000	0
	<b>200,000</b>	<b>200,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	876,347	50,000	150,000		<b>1,076,347</b>
	<b>Total Revenue</b>	<b>876,347</b>	<b>50,000</b>	<b>150,000</b>		<b>1,076,347</b>
<b>Expense</b>						
	Construction	876,347	50,000	150,000		<b>1,076,347</b>
	<b>Total Expense</b>	<b>876,347</b>	<b>50,000</b>	<b>150,000</b>		<b>1,076,347</b>
					<b>Obligated to Date:</b>	<b>866,201</b>
						<b>80.48 %</b>

## Related Projects

## Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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Project Number: **70-230**  
 Project Title: **Crestwood Master Drainage Plan Update - Phase I**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Study Budget Year: 2020  
 Year Identified: 2019 Project Status: Funded  
 Start Date: 5/28/2019 Region:  
 Est. Completion Date: 7/30/2022

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## Description:

This project will provide for a watershed study for the assessment of flood prevention in the Crestwood Watershed.

## Justification:

The City was recently awarded a Dam Safety, Flood Prevention and Protection Assistance Fund (DSFPPAF) Grant from the Virginia Dept. of Conservation & Recreation (VDCR). The grant funding will be used for the execution of a watershed study for the assessment of flood prevention in the Crestwood Watershed.

During the 1980s, drainage studies were completed for the entire City and these studies have been updated one at a time to better depict the areas of opportunity to improve drainage systems. These updates re-define boundary conditions, identify improvements required by developers, and guide capital project selection throughout the City. This project will update the Crestwood Watershed Master Drainage Plan.

## Comments:

On May 28, 2019, City Council approved an FY 2019 Capital Budget amendment that added this as a new project and appropriated \$97,752 to this project from funding from a state grant plus an equal, local match. The grant (\$48,876) was awarded by the Virginia Dept. of Conservation & Recreation (VDCR), and the local match (\$48,876) was transferred from the "Stormwater Mapping & Master Drainage Plan III" project # 10-150. See also City Council Agenda Item CM-4 (motion 3).

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Grant		48,876			48,876
	Cash - Stormwater		48,876			48,876
<b>Total Revenue</b>			<b>97,752</b>			<b>97,752</b>
<b>Expense</b>						
	Other		97,752			97,752
<b>Total Expense</b>			<b>97,752</b>			<b>97,752</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: **24-240**  
 Project Title: **Drum Creek Farms Drainage Improvements - Phase II**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2020  
 Start Date: 1/10/2024      Project Status: Funded  
 Est. Completion Date: 6/30/2025      Region:

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## Description:

This project will complete drainage improvements that are necessary to provide relief to an overtaxed outfall ditch on Drum Creek Road in the Drum Creek Farms area. A new conveyance system will be designed and constructed.

## Justification:

The purpose of this project is to curb flooding in the neighborhood and provide relief for the residents along Drum Creek Road. The ditch is experiencing much erosion due to the high velocities within the system. The capacity of the ditch is compromised by displaced sediment.

## Comments:

For years, the ditch along the rear of the 2400 block of Drum Creek Road has needed improvements and additional capacity. A secondary outfall is planned in this phase of Drum Creek Farms Drainage Improvements.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2024	1,400,000	1,400,000	0
	<b>1,400,000</b>	<b>1,400,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater			1,400,000		1,400,000
<b>Total Revenue</b>				<b>1,400,000</b>		<b>1,400,000</b>
<b>Expense</b>						
	Design & Engineering			175,000		175,000
	Construction			1,125,000		1,125,000
	Other			100,000		100,000
<b>Total Expense</b>				<b>1,400,000</b>		<b>1,400,000</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: **25-230**  
 Project Title: **Elmwood Landing Area Drainage Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2019  
 Start Date: 7/1/2018      Project Status: Funded  
 Est. Completion Date: 7/30/2020      Region:

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## Description:

This project will provide for drainage improvements in the Elmwood Landing area. It will include related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. It will also include the replacement of three downstream culvert crossings.

## Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

## Comments:

For the FY 2020-24 CIP, the project funding source for FY 2020 was changed from Grant to Stormwater Cash because the grant was not awarded. This change will enable this project to proceed as scheduled.

This area was identified in the 1999 drainage studies after the 1999 storms caused significant flooding in this area. During major storm events, the adjacent Dismal Swamp area contributes to this flooding.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	1,400,000	1,400,000	0
	<b>1,400,000</b>	<b>1,400,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Grant	150,000				150,000
	Cash - Stormwater		1,400,000			1,400,000
	<b>Total Revenue</b>	<b>150,000</b>	<b>1,400,000</b>			<b>1,550,000</b>
<b>Expense</b>						
	Design & Engineering	150,000				150,000
	Construction		1,200,000			1,200,000
	Other		200,000			200,000
	<b>Total Expense</b>	<b>150,000</b>	<b>1,400,000</b>			<b>1,550,000</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: **26-230**  
 Project Title: **Forest Lakes Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2019  
 Start Date: 7/1/2018      Project Status: Funded  
 Est. Completion Date: 7/30/2020      Region:

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## Description:

This project will provide for drainage and outfall improvements in the Forest Lakes area. It will include related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. This project will also include the replacement of downstream culverts.

## Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

## Comments:

This area was identified in the 1999 drainage studies after the 1999 storms caused significant flooding in this area.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	800,000	800,000	0
	<b>800,000</b>	<b>800,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	100,000	800,000			<b>900,000</b>
<b>Total Revenue</b>		<b>100,000</b>	<b>800,000</b>			<b>900,000</b>
<b>Expense</b>						
	Design & Engineering	100,000				<b>100,000</b>
	Construction		725,000			<b>725,000</b>
	Land Acquisition		75,000			<b>75,000</b>
<b>Total Expense</b>		<b>100,000</b>	<b>800,000</b>			<b>900,000</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: **26-240**  
 Project Title: **Greenbrier Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2020**  
 Start Date: **7/1/2019**      Project Status: **Funded**  
 Est. Completion Date: **12/30/2020**      Region:

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## Description:

This project will provide for drainage improvements with related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to provide a higher level of protection and improved stormwater system in this watershed with inter-connected lake systems that are dependent on a single outlet control structure. This project will look at providing an improved outlet control structure, and the capacity to reduce flooding during major storm events.

## Justification:

The frequency and intensity of storms impacting the City of Chesapeake and the region as a whole has been observed to be much higher than in the past. These project improvements will provide critical systems with added levels of protection that will help reduce the impact of flooding during major storm events.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	1,100,000	1,100,000	0
	<b>1,100,000</b>	<b>1,100,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Greenbrier TIF		1,100,000			1,100,000
<b>Total Revenue</b>			<b>1,100,000</b>			<b>1,100,000</b>
<b>Expense</b>						
	Design & Engineering		100,000			100,000
	Construction		950,000			950,000
	Other		50,000			50,000
<b>Total Expense</b>			<b>1,100,000</b>			<b>1,100,000</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: **27-230**  
 Project Title: **Hickory Ridge Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2019  
 Start Date: 7/1/2021      Project Status: Funded  
 Est. Completion Date: 7/30/2023      Region:

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## Description:

This project will provide for the drainage improvements in the Hickory Ridge area. It will include related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. This project will also include the replacement of downstream culverts.

## Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

## Comments:

This area was identified in the 1999 drainage studies after the 1999 storms caused significant flooding in this area.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2022	200,000	200,000	0
2023	650,000	650,000	0
	<b>850,000</b>	<b>850,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater			850,000		<b>850,000</b>
<b>Total Revenue</b>				<b>850,000</b>		<b>850,000</b>
<b>Expense</b>						
	Design & Engineering			75,000		<b>75,000</b>
	Construction			675,000		<b>675,000</b>
	Land Acquisition			100,000		<b>100,000</b>
<b>Total Expense</b>				<b>850,000</b>		<b>850,000</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: **25-240**  
 Project Title: **John Street Area Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2020  
 Start Date: 10/1/2020      Project Status: Funded  
 Est. Completion Date: 12/30/2021      Region:

## Description:

This project will complete drainage improvements in the John Street Area Outfall that are necessary to provide relief to undersized outfall pipes that receive outfall from hundreds of acres in Suffolk's Pughsville area. Several pipes will be upgraded with this project. The improved conveyance system will also be designed and constructed. Easements and wetland mitigation may also be required.

## Justification:

The purpose of this project is to ensure the stormwater system accommodates the upstream system to curb flooding in the neighborhood and provide relief for the residents.

## Comments:

A recent Watershed Study performed on the Drum Point Creek watershed revealed a deficiency within the John Street Area Outfall. For years, during the larger storms, the Pughesville neighborhood has been dealing with undersized outfalls and associated flooding. During Hurricane Matthew in 2016, several feet of water backed up to the homes. This project will be funded by cash from the Stormwater Fund (\$500,000) and Drainage Pro Rata funds (\$300,000).

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2021	800,000	800,000	0
	<b>800,000</b>	<b>800,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Fund Balance - Capital Projects Fund			300,000		300,000
	Cash - Stormwater			500,000		500,000
<b>Total Revenue</b>				<b>800,000</b>		<b>800,000</b>
<b>Expense</b>						
	Design & Engineering			150,000		150,000
	Construction			550,000		550,000
	Other			100,000		100,000
<b>Total Expense</b>				<b>800,000</b>		<b>800,000</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: **34-210**  
 Project Title: **Liberty St. Drainage System Replacement & Upgrade**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Replacement Budget Year: 2020  
 Year Identified: 2017 Project Status: Funded  
 Start Date: 7/1/2020 Region:  
 Est. Completion Date: 7/30/2021

## Description:

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

## Justification:

This project will promote redevelopment and economic development in South Norfolk area of Chesapeake and to facilitate the implementation of the South Norfolk Strategic Development Plan by increasing the capacity of the stormwater drainage system in this area. 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. This project will improve the current system to address those issues.

## Comments:

For the FY 2020-24 CIP, this project was accelerated to coordinate with the 22nd Street capital project work in South Norfolk and the budget was revised to \$850,000 in FY 2020. This project is funded by the South Norfolk TIF because it will create infrastructure improvements in a key area of South Norfolk that has been prioritized for redevelopment.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	850,000	850,000	0
2021			0
	<b>850,000</b>	<b>850,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - South Norfolk TIF		850,000			<b>850,000</b>
<b>Total Revenue</b>			<b>850,000</b>			<b>850,000</b>
<b>Expense</b>						
	Construction		850,000			<b>850,000</b>
<b>Total Expense</b>			<b>850,000</b>			<b>850,000</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: **23-220**  
 Project Title: **Loxley Gardens Drainage Improvements - Phase II**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2018  
 Start Date: 7/1/2021      Project Status: Funded  
 Est. Completion Date: 12/30/2023      Region:

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## Description:

This project will provide for Phase II of the Loxley Gardens Drainage Improvements, which will include area drainage improvements with related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. Phase II will also replace the downstream culvert crossing of Gilmerton Road and elevate the roadway at this crossing.

## Justification:

Major expenditures are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

## Comments:

This area experiences frequent flooding during rainfall events due to tidal impacts and an undersized stormwater system. Phase I improvements were completed in 2008. Phase II will continue improvements in the area to increase drainage capacity and performance.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2022	1,100,000	1,100,000	0
	<b>1,100,000</b>	<b>1,100,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater			1,100,000		1,100,000
<b>Total Revenue</b>				<b>1,100,000</b>		<b>1,100,000</b>
<b>Expense</b>						
	Design & Engineering			100,000		100,000
	Construction			950,000		950,000
	Land Acquisition			50,000		50,000
<b>Total Expense</b>				<b>1,100,000</b>		<b>1,100,000</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

Project Number: **07-180**  
 Project Title: **Major Equipment Purchases - PW Stormwater Division**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Equipment** Budget Year: **2020**  
 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:

Annual funding of \$200,000 is provided for new major equipment purchases planned for FY 2020 – FY 2023. Note: replacement equipment cost are funded in the operating budget.

On November 18, 2014, City Council approved an FY 2015 Capital Budget amendment that appropriated \$500,000 to this project from the Stormwater Fund Balance in order to purchase two street sweepers. See also City Council Agenda Item CM-8.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	200,000	200,000	0
2021	200,000	200,000	0
2022	200,000	200,000	0
2023	200,000	200,000	0
	<b>800,000</b>	<b>800,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	4,674,000	200,000	600,000		<b>5,474,000</b>
	Fund Balance - Stormwater	1,200,000				<b>1,200,000</b>
	<b>Total Revenue</b>	<b>5,874,000</b>	<b>200,000</b>	<b>600,000</b>		<b>6,674,000</b>
<b>Expense</b>						
	Equipment	5,874,000	200,000	600,000		<b>6,674,000</b>
	<b>Total Expense</b>	<b>5,874,000</b>	<b>200,000</b>	<b>600,000</b>		<b>6,674,000</b>
					<b>Obligated to Date:</b>	<b>5,637,806</b>
						<b>84.47 %</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:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2011**  
 Start Date: **7/1/2012**      Project Status: **Funded**  
 Est. Completion Date: **6/30/2024**      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 improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in existing neighborhoods citywide.

**Comments:**

For the FY 2020-24 CIP, the project plan was updated and \$500,000 was added for FY 2024 requirements.

**Project Forecast**

Year	Total Expense	Total Revenue	Difference
2020	500,000	500,000	0
2021	500,000	500,000	0
2022	400,000	400,000	0
2024	500,000	500,000	0
	<b>1,900,000</b>	<b>1,900,000</b>	<b>0</b>

**Project Details 2020**

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	3,174,600	500,000	1,400,000		<b>5,074,600</b>
<b>Total Revenue</b>		<b>3,174,600</b>	<b>500,000</b>	<b>1,400,000</b>		<b>5,074,600</b>
<b>Expense</b>						
	Construction	3,174,600	500,000	1,400,000		<b>5,074,600</b>
<b>Total Expense</b>		<b>3,174,600</b>	<b>500,000</b>	<b>1,400,000</b>		<b>5,074,600</b>
					<b>Obligated to Date:</b>	<b>748,767</b>
						<b>14.76 %</b>

**Related Projects**

**Operating Budget Impact**

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

Project Number: **27-240**  
 Project Title: **Nina Drive Area Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2020  
 Start Date: 7/1/2019      Project Status: Funded  
 Est. Completion Date: 12/30/2022      Region:

## Description:

This project will complete drainage improvements to the Lisa Cove Outfall portion of the Nina Drive Area Outfall. The project will include drainage improvements to system from the Lisa Cove Outfall to Salvadore Drive and to Colombo Avenue. It will also include improvements along Colombo Avenue across Coffman Boulevard and Pinta Drive to the Nina Drive intersection. Several pipes will be upgraded with this project. The improved conveyance system will also be designed and constructed. Easements and wetland mitigation may also be required.

## Justification:

The purpose of this project is to ensure the stormwater system accommodates the upstream system to curb flooding in the neighborhood and provide relief for the residents.

## Comments:

A recent study performed for this area revealed a system deficiency. For years, during the larger storms, the neighborhood has been dealing with undersized outfalls and associated flooding.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	1,500,000	1,500,000	0
	<b>1,500,000</b>	<b>1,500,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	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		240,000			240,000
	Construction		1,160,000			1,160,000
	Other		100,000			100,000
<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

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Project Number: **09-150**  
 Project Title: **Oakdale Area BMP and Drainage Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2011  
 Start Date: 1/1/2017      Project Status: Funded  
 Est. Completion Date: 7/30/2020      Region:

---

## Description:

This project will provide for an updated study and construction of stormwater pipes, ditches, and lakes/BMPs to provide flood and water quality improvements.

## Justification:

This area experiences frequent flooding due to the old and undersized drainage system. A study completed in 1999 recommended several large size drainage facilities to improve the conditions and prevent flooding.

## Comments:

Best Management Practices (BMPs) are devices used to reduce pollution in stormwater runoff, thereby protecting area waterways.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	1,000,000	1,000,000	0
	<b>1,000,000</b>	<b>1,000,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	4,000,000	1,000,000			<b>5,000,000</b>
<b>Total Revenue</b>		<b>4,000,000</b>	<b>1,000,000</b>			<b>5,000,000</b>
<b>Expense</b>						
	Design & Engineering	200,000				<b>200,000</b>
	Construction	3,500,000	1,000,000			<b>4,500,000</b>
	Land Acquisition	300,000				<b>300,000</b>
<b>Total Expense</b>		<b>4,000,000</b>	<b>1,000,000</b>			<b>5,000,000</b>
<b>Obligated to Date:</b>						<b>379,184</b>
						<b>7.58 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

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Project Number: **28-230**  
 Project Title: **Parkview Area Drainage Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2019  
 Start Date: 7/1/2018      Project Status: Funded  
 Est. Completion Date: 12/30/2024      Region:

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## Description:

This project will provide for the drainage improvements in the Parkview area. It will include related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to address the existing neighborhood drainage deficiencies. This project will also include the replacement of downstream culverts.

## Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in this neighborhood.

## Comments:

This area was identified in the 1999 drainage studies after the 1999 storms caused significant flooding in this area.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	200,000	200,000	0
2021	250,000	250,000	0
2022	250,000	250,000	0
2023	350,000	350,000	0
	<b>1,050,000</b>	<b>1,050,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	200,000	200,000	850,000		<b>1,250,000</b>
<b>Total Revenue</b>		<b>200,000</b>	<b>200,000</b>	<b>850,000</b>		<b>1,250,000</b>
<b>Expense</b>						
	Design & Engineering	200,000				<b>200,000</b>
	Land Acquisition		200,000	850,000		<b>1,050,000</b>
<b>Total Expense</b>		<b>200,000</b>	<b>200,000</b>	<b>850,000</b>		<b>1,250,000</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: **29-230**  
 Project Title: **Resiliency & Reliability Program**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2019  
 Start Date: 7/1/2018      Project Status: Funded  
 Est. Completion Date: 12/30/2024      Region:

## Description:

This project will provide for drainage improvements with related acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to provide a higher level of protection and improved stormwater systems in city areas with inter-connected lake systems that are dependent on a single outlet control structure. This program will look at providing an improved outlet control structure in areas such as the Greenbrier lakes system, Etheridge lakes system, Stonegate lakes system, and other lake systems with drainage deficiencies. This project will also include the replacement of downstream culverts.

## Justification:

Major investments in improvements are necessary to increase drainage capacity and upgrade deficient drainage systems in these areas.

## Comments:

For the FY 2020-24 CIP, the project plan was updated and funding was added for FY 2024 requirements. The frequency and intensity of storms impacting the City of Chesapeake and the region as a whole has been observed to be much higher than in the past. These project improvements will provide critical systems with added levels of protection that will help reduce the impact of flooding during major storm events.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	1,000,000	1,000,000	0
2021	1,000,000	1,000,000	0
2022	1,000,000	1,000,000	0
2023	1,500,000	1,500,000	0
2024	600,000	600,000	0
	<b>5,100,000</b>	<b>5,100,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	600,000	1,000,000	4,100,000		<b>5,700,000</b>
	<b>Total Revenue</b>	<b>600,000</b>	<b>1,000,000</b>	<b>4,100,000</b>		<b>5,700,000</b>
<b>Expense</b>						
	Design & Engineering	500,000				<b>500,000</b>
	Construction		900,000	4,100,000		<b>5,000,000</b>
	Land Acquisition	100,000	100,000			<b>200,000</b>
	<b>Total Expense</b>	<b>600,000</b>	<b>1,000,000</b>	<b>4,100,000</b>		<b>5,700,000</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: **10-150**  
 Project Title: **Stormwater Mapping & Master Drainage Plan III**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Study Budget Year: 2020  
 Year Identified: 2011 Project Status: Funded  
 Start Date: 7/1/2012 Region:  
 Est. Completion Date: 7/30/2023

## 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.

## Comments:

On May 28, 2019, City Council approved an FY 2019 Capital Budget amendment that transferred \$48,876 from this project's previously appropriated funding to provide the local funding match needed for the new "Crestwood Watershed Master Drainage Plan" project # 70-230. See also City Council Agenda Item CM-4 (motion 3).

On June 12, 2018, City Council approved an amendment to the FY 2019-23 CIP that reduced funding for this project in the Capital Budget to offset increased funding planned in the Operating Budget. Thus, \$50,000 planned for FY 2019 was removed from this project's budget because the prior year funding of \$550,000 was enough to address project requirements through FY 2021. See also City Council Agenda Item CM-8(G-1).

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020			0
2021	100,000	100,000	0
2022			0
2023	100,000	100,000	0
	<b>200,000</b>	<b>200,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	501,124		200,000		<b>701,124</b>
<b>Total Revenue</b>		<b>501,124</b>		<b>200,000</b>		<b>701,124</b>
<b>Expense</b>						
	Design & Engineering	501,124		200,000		<b>701,124</b>
<b>Total Expense</b>		<b>501,124</b>		<b>200,000</b>		<b>701,124</b>
<b>Obligated to Date:</b>						<b>305,562</b>
						<b>43.58 %</b>

## 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:  
 Department: **Storm Water Capital Projects**  
 Project Type: Study Budget Year: 2020  
 Year Identified: 2011 Project Status: Funded  
 Start Date: 9/1/2012 Region:  
 Est. Completion Date: 7/30/2023

## 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 Dept. of Conservation & 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.

## Comments:

Due to the substantial amount of stormwater quality requirements met through the SWIFT program, the project plan was revised for FY 2019 and the annual investment in phase II of the stormwater quality program was revised to \$100,000 for FY 2020 - FY 2023.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
2020	100,000	100,000	0
2021	100,000	100,000	0
2022	100,000	100,000	0
2023	100,000	100,000	0
	<b>400,000</b>	<b>400,000</b>	<b>0</b>

## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	3,940,565	100,000	300,000		4,340,565
<b>Total Revenue</b>		<b>3,940,565</b>	<b>100,000</b>	<b>300,000</b>		<b>4,340,565</b>
<b>Expense</b>						
	Design & Engineering	1,365,565	25,000	75,000		1,465,565
	Construction	2,575,000	75,000	225,000		2,875,000
<b>Total Expense</b>		<b>3,940,565</b>	<b>100,000</b>	<b>300,000</b>		<b>4,340,565</b>
<b>Obligated to Date:</b>						<b>697,007</b>
						<b>16.06 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **06-140**  
 Project Title: **Border Rd. Area Drainage Improvements - Phase II**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Renovation or Rehabilitation      Budget Year: 2020  
 Year Identified: 2010  
 Start Date: 12/1/2010      Project Status: Fully Funded  
 Est. Completion Date: 6/30/2021      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 has been completed. Construction is underway.

### Project Forecast

Year	Total Expense	Total Revenue	Difference
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	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		50,000			50,000
	Construction		1,100,000			1,100,000
	Land Acquisition		50,000			50,000
<b>Total Expense</b>			<b>1,200,000</b>			<b>1,200,000</b>
<b>Obligated to Date:</b>						<b>456,002</b>
						<b>38.00 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **72-120**  
 Project Title: **Colony Manor Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **New Facility**      Budget Year: **2020**  
 Year Identified: **2008**  
 Start Date: **1/1/2014**      Project Status: **Fully Funded**  
 Est. Completion Date: **12/30/2019**      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.

### Project Forecast

Year	Total Expense	Total Revenue	Difference
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater		415,000			415,000
<b>Total Revenue</b>			<b>415,000</b>			<b>415,000</b>
<b>Expense</b>						
	Design & Engineering		65,000			65,000
	Construction		350,000			350,000
<b>Total Expense</b>			<b>415,000</b>			<b>415,000</b>
<b>Obligated to Date:</b>						<b>368,891</b>
						<b>88.89 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **04-130**  
 Project Title: **D Street Drainage Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2009  
 Start Date: 1/1/2014      Project Status: Fully Funded  
 Est. Completion Date: 6/30/2021      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 2020

Account	Description	Prior Years	2020	2021 - 24	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

# Fully Funded

Project Number: **07-130**  
 Project Title: **Lamberts Trail Area Drainage Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2009**  
 Start Date: **7/1/2011**      Project Status: **Fully Funded**  
 Est. Completion Date: **6/30/2021**      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:

Design has been completed. Construction is underway.

### Project Forecast

Year	Total Expense	Total Revenue	Difference
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	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>
<b>Obligated to Date:</b>						<b>842,978</b>
						<b>40.14 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **40-210**  
 Project Title: **Master Drainage Improvements II**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2017  
 Start Date: 7/1/2016      Project Status: Fully Funded  
 Est. Completion Date: 6/30/2020      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 completed master drainage and watershed studies that identified several needed improvements, and Drainage Pro-Rata funding was available to address the master drainage improvements identified in the studies. Thus, \$1,908,000 in Drainage Pro-Rata funding was added to this project in FY 2018 to complete 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-basins 2 and 3).

## Comments:

The master drainage improvements in the Bells Mill Watershed will include upgrade the Horse Run Ditch West Culvert crossing of Warrick Road and improve the upstream outfall ditch. The Cooper's Ditch Watershed improvements will focus on 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 improvements for the Southern Chesapeake Watershed (sub-basins 2 and 3) will address the St. Brides Outfall Ditch crossing of Benefit Road by replacing and upgrading the crossing with three 6 ft. x 10 ft. box culverts.

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Fund Balance - Capital Projects Fund	1,908,000				<b>1,908,000</b>
<b>Total Revenue</b>		<b>1,908,000</b>				<b>1,908,000</b>
<b>Expense</b>						
	Design & Engineering	200,000				<b>200,000</b>
	Construction	1,458,000				<b>1,458,000</b>
	Land Acquisition	250,000				<b>250,000</b>
<b>Total Expense</b>		<b>1,908,000</b>				<b>1,908,000</b>
<b>Obligated to Date:</b>						<b>1,907,877</b>
						<b>99.99 %</b>

## Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **05-142**  
 Project Title: **Meads Court BMP**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Study Budget Year: 2020  
 Year Identified: 2018 Project Status: Fully Funded  
 Start Date: 7/1/2017 Region:  
 Est. Completion Date: 6/30/2020

### Description:

This project will provide for the construction of a stormwater best management practice (BMP) for Meads Court.

### Justification:

The City was awarded a Virginia Dept. of Environmental Quality (DEQ) grant to complete this project. The grant requires an equal local match from the City.

### Comments:

On June 27, 2017, City Council approved an FY 2018 Capital Budget amendment that added this as a new project and appropriated \$1,368,456 from the DEQ state grant with the local match (\$684,228 each). This project was established as a sub-project of the main project # 05-140 "Stormwater Quality Program/VPDES Permit Compliance" and the local match was funded by reassigning \$684,228 from the main project to this new sub-project # 05-142.

### Project Forecast

Year	Total Expense	Total Revenue	Difference
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Grant	684,228				684,228
	Cash - Stormwater	684,228				684,228
<b>Total Revenue</b>		<b>1,368,456</b>				<b>1,368,456</b>
<b>Expense</b>						
	Design & Engineering	100,000				100,000
	Construction	1,268,456				1,268,456
<b>Total Expense</b>		<b>1,368,456</b>				<b>1,368,456</b>
<b>Obligated to Date:</b>						<b>85,044</b>
						<b>6.21 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **05-121**  
 Project Title: **Neighborhood Drainage Improvements - Phase I**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2011**  
 Start Date: **7/1/2011**      Project Status: **Fully Funded**  
 Est. Completion Date: **6/30/2020**      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 improvements 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, 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 2020

Account	Description	Prior Years	2020	2021 - 24	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>2,137,518</b>
						<b>96.20 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **05-143**  
 Project Title: **New Mill Regional BMP**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2017  
 Start Date: 7/1/2017      Project Status: Fully Funded  
 Est. Completion Date: 6/30/2020      Region:

### Description:

This project will construct a regional stormwater best management practice (BMP) for the New Mill area.

### Justification:

The City was awarded a Virginia Dept. of Environmental Quality (DEQ) grant to complete this project. The grant requires an equal local match from the City.

### Comments:

On June 27, 2017, City Council approved an FY 2018 Capital Budget amendment that added this as a new project and appropriated \$2,045,950 from the DEQ state grant and the local match (\$1,022,975 each). This project was established as a sub-project of the main project # 05-140 "Stormwater Quality Program/VPDES Permit Compliance" and the local match was funded by reassigning \$1,022,975 from the main project to this new sub-project # 05-143.

### Project Forecast

Year	Total Expense	Total Revenue	Difference
------	---------------	---------------	------------

### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Grant	1,022,975				1,022,975
	Cash - Stormwater	1,022,975				1,022,975
<b>Total Revenue</b>		<b>2,045,950</b>				<b>2,045,950</b>
<b>Expense</b>						
	Design & Engineering	100,000				100,000
	Construction	1,945,950				1,945,950
<b>Total Expense</b>		<b>2,045,950</b>				<b>2,045,950</b>
					<b>Obligated to Date:</b>	<b>102,365</b>
						<b>5.00 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **75-120**  
 Project Title: **Partridge/Cloverdale Area Drainage Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2008  
 Start Date: 1/1/2011      Project Status: Fully Funded  
 Est. Completion Date: 12/30/2019      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 this area.

### Project Forecast

Year	Total Expense	Total Revenue	Difference
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater		600,000			600,000
<b>Total Revenue</b>			<b>600,000</b>			<b>600,000</b>
<b>Expense</b>						
	Other		600,000			600,000
<b>Total Expense</b>			<b>600,000</b>			<b>600,000</b>
<b>Obligated to Date:</b>						<b>533,452</b>
						<b>88.91 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **10-130**  
 Project Title: **Royce Dr. Drainage Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2009**  
 Start Date: **1/1/2014**      Project Status: **Fully Funded**  
 Est. Completion Date: **6/30/2020**      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 2020

Account	Description	Prior Years	2020	2021 - 24	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>2,166</b>
						<b>0.39 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **76-120**  
 Project Title: **Scenic Blvd. Drainage Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2008**  
 Start Date: **7/1/2010**      Project Status: **Fully Funded**  
 Est. Completion Date: **6/30/2020**      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 2020

Account	Description	Prior Years	2020	2021 - 24	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

# Fully Funded

Project Number: **77-120**  
 Project Title: **Shillelagh Rd. Drainage Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Addition or Expansion      Budget Year: 2020  
 Year Identified: 2008  
 Start Date: 9/1/2016      Project Status: Fully Funded  
 Est. Completion Date: 6/30/2020      Region:

### Description:

This project will provide for improvements to the main outfall for Shillelagh Road, which will include widening the outfall and upgrading the downstream culvert crossing in order to improve drainage and prevent frequent flooding in this area.

### Justification:

After the storms of 1999, the Shillelagh Road/Herring ditch community was identified as one of the drainage areas to study. The study, completed in 1999, recommended widening the outfall ditch and upgrading the downstream culverts.

### Project Forecast

Year	Total Expense	Total Revenue	Difference
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	3,100,000				<b>3,100,000</b>
<b>Total Revenue</b>		<b>3,100,000</b>				<b>3,100,000</b>
<b>Expense</b>						
	Design & Engineering	500,000				<b>500,000</b>
	Construction	2,600,000				<b>2,600,000</b>
<b>Total Expense</b>		<b>3,100,000</b>				<b>3,100,000</b>
<b>Obligated to Date:</b>						<b>1,073,745</b>
						<b>34.64 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **06-120**  
 Project Title: **Stormwater Mapping & Master Drainage Plan II**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Study Budget Year: 2020  
 Year Identified: 2008 Project Status: Fully Funded  
 Start Date: 7/1/2011 Region:  
 Est. Completion Date:

### Description:

This project will continue updating the Stormwater Inventory Mapping and Master Drainage Plan.

### Justification:

The updating of the Stormwater Inventory Mapping and Master Drainage Plan is essential in providing quick, accurate information to City staff, consultants, and the general public. The mapping will provide inventory mapping to support emergency responses and GASB 34 accounting.

### Project Forecast

Year	Total Expense	Total Revenue	Difference
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	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>1,000,000</b>
						<b>100.00 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **05-140**  
 Project Title: **Stormwater Quality Program/VPDES Permit Compliance**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: Study Budget Year: 2020  
 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 Dept. of Conservation and Recreation (VDCR) and Environmental Protection Agency (EPA) to finalize the new MS4 permit requirements. When a permit is issued, the City is required to comply with the new permit and this project is needed to meet permit compliance. All localities within the Chesapeake Bay watershed are required to comply with an EPA Watershed Implementation Plan to address the pollutant Total Maximum Daily Load (TMDL) for the Chesapeake Bay.

The Stormwater Quality Program project includes extensive data collection and inspection of all stormwater facilities to comply with the new permit requirements and to establish a monitoring and sampling program to comply with the new 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" added in FY 2016).

## Comments:

On December 11, 2018, City Council approved an FY 2019 Capital Budget amendment that added project # 65-230 "Philmont Ave Septic System Disconnection" and transferred \$1,325,000 to fund it from two city-wide capital projects. Public Utilities provided 49% of the funding (\$650,000) from project # 33-120 "Sewer Renewal: SSES Implementation-Phase II". Stormwater provided 51% of the funding (\$675,000) from project # 05-140 "Stormwater Quality Program/VPDES Permit Compliance".

On October 23, 2018, City Council approved an FY 2019 Capital Budget amendment that established a new sub-project # 05-144 "22nd St. Regional BMP" under the main project # 05-140 because the City was awarded a new SLAF grant from the Virginia Dept. of Environmental Quality (DEQ). The sub-project's total estimated cost is \$627,500. The grant award covered 50% of the cost with a required 50% local match. City Council approved appropriated the \$313,750 grant and reassigned \$313,750 from the main project # 05-140 to the new sub-project # 05-144 to fund the City's local match requirements

On June 27, 2017, City Council approved an FY 2018 Capital Budget amendment that added two projects because the City was awarded grants from DEQ. The new stormwater projects # 05-142 "Meads Court BMP" and # 05-143 "New Mill Regional BMP" were established as sub-projects of the main project # 05-140. The DEQ grant award covered 50% of the cost of each new sub-project and required a 50% local match. City Council approved reassigning \$1,707,203 from the appropriated budget of the main project # 05-140 to fund the City's local match requirements for the sub-projects (\$684,228 was reassigned to project # 05-142, and \$1,022,975 to project # 05-143).

## Project Forecast

Year	Total Expense	Total Revenue	Difference
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## Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater	4,051,080				4,051,080
<b>Total Revenue</b>		<b>4,051,080</b>				<b>4,051,080</b>
<b>Expense</b>						
	Design & Engineering	2,551,080				2,551,080

# Project Summary

# Fully Funded

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Construction	1,500,000	1,500,000
<b>Total Expense</b>	<b>4,051,080</b>	<b>4,051,080</b>

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**Obligated to Date:** 1,827,908  
45.12 %

## Related Projects

### Operating Budget Impact

<u>Budget Year</u>	<u>Exp (Rev)</u>	<u>FTE Impact</u>
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# Project Summary

# Fully Funded

Project Number: **13-130**  
 Project Title: **Sunray Area Outfall Re-Grading**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2009**  
 Start Date: **3/1/2016**      Project Status: **Fully Funded**  
 Est. Completion Date: **6/30/2021**      Region:

**Description:**

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

**Justification:**

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

**Comments:**

Project design is underway.

**Project Forecast**

Year	Total Expense	Total Revenue	Difference
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**Project Details 2020**

Account	Description	Prior Years	2020	2021 - 24	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>
<b>Obligated to Date:</b>						<b>687,749</b>
						<b>57.31 %</b>

**Related Projects**

**Operating Budget Impact**

Budget Year	Exp (Rev)	FTE Impact
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# Project Summary

# Fully Funded

Project Number: **19-200**  
 Project Title: **Welch Lane Drainage Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2016**  
 Start Date: **6/30/2015**      Project Status: **Fully Funded**  
 Est. Completion Date: **12/30/2019**      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
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	Future Years	Total Amount
<b>Revenue</b>						
	Cash - Stormwater		480,000			480,000
<b>Total Revenue</b>			<b>480,000</b>			<b>480,000</b>
<b>Expense</b>						
	Design & Engineering		50,000			50,000
	Construction		400,000			400,000
	Land Acquisition		30,000			30,000
<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

# Fully Funded

Project Number: **20-200**  
 Project Title: **Whittamore Rd. Outfall Improvements**  
 Asset Type:  
 Department: **Storm Water Capital Projects**  
 Project Type: **Renovation or Rehabilitation**      Budget Year: **2020**  
 Year Identified: **2016**  
 Start Date: **6/30/2015**      Project Status: **Fully Funded**  
 Est. Completion Date: **6/30/2020**      Region:

### Description:

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

### Justification:

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

### Comments:

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

### Project Forecast

Year	Total Expense	Total Revenue	Difference
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### Project Details 2020

Account	Description	Prior Years	2020	2021 - 24	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>77,002</b>
						<b>25.67 %</b>

### Related Projects

### Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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