

Project Summary

Project Number: **73-120**
 Project Title: **BMP Restoration Citywide**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 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:

For the FY 2019-23 CIP, the annual investment in BMP restorations has been reduced to \$50,000 for FY 2019 and then \$100,000 annually through FY 2023 due to the substantial amount of stormwater quality requirements being met through the SWIFT program.

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
2019	50,000	50,000	0
2020	100,000	100,000	0
2021	100,000	100,000	0
2022	100,000	100,000	0
2023	100,000	100,000	0
	450,000	450,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,900,000	50,000	400,000		2,350,000
Total Revenue		1,900,000	50,000	400,000		2,350,000
Expense						
	Construction	1,900,000	50,000	400,000		2,350,000
Total Expense		1,900,000	50,000	400,000		2,350,000

Obligated to Date: 381,180

Related Projects

16.22 %

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **03-160**
 Project Title: **Citywide Outfall Re-Grading and Restoration**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 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:

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. Accordingly, the amendment reduced this project's funding by \$25,000 in FY 2019, \$50,000 in FY 2020, and \$75,000 in FY 2021. See also the City Manager Agenda Item 8-G-2 (Docket Item CM-8).

Once the major capital work to clear the ditches and outfalls is complete, cleared areas will be maintained through the ongoing ditch access and bank mowing program funded through the Stormwater Operating Budget.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2019	575,000	575,000	0
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
	4,250,000	4,250,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,120,000	575,000	3,675,000		5,370,000
Total Revenue		1,120,000	575,000	3,675,000		5,370,000
Expense						
	Design & Engineering		375,000	3,225,000		3,600,000
	Construction	770,000	200,000	450,000		1,420,000
	Land Acquisition	350,000				350,000
Total Expense		1,120,000	575,000	3,675,000		5,370,000
Obligated to Date:						726,269
						13.52 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **43-170**
 Project Title: **Citywide System Rehab**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 Year Identified: **2013**
 Start Date: **7/1/2012** Project Status: **Funded**
 Est. Completion Date: **12/30/2021** Region:

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
2019	500,000	500,000	0
2020	500,000	500,000	0
2021	300,000	300,000	0
	1,300,000	1,300,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,400,000	500,000	800,000		3,700,000
	Total Revenue	2,400,000	500,000	800,000		3,700,000
Expense						
	Design & Engineering	500,000	150,000	200,000		850,000
	Construction	1,900,000	350,000	600,000		2,850,000
	Total Expense	2,400,000	500,000	800,000		3,700,000
					Obligated to Date:	1,284,852
						34.73 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **07-150**
 Project Title: **Citywide Undesignated Drainage - Phase III**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 Year Identified: **2011**
 Start Date: **7/1/2012** Project Status: **Funded**
 Est. Completion Date: **6/30/2023** 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 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:

For the FY 2019-23 CIP, the annual investment to complete Citywide drainage projects was reduced to \$50,000 per year due to the substantial amount of stormwater quality requirements being met through the SWIFT program.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2019	50,000	50,000	0
2020	50,000	50,000	0
2021	50,000	50,000	0
2022	50,000	50,000	0
2023	50,000	50,000	0
	250,000	250,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	826,347	50,000	200,000		1,076,347
Total Revenue		826,347	50,000	200,000		1,076,347
Expense						
	Construction	826,347	50,000	200,000		1,076,347
Total Expense		826,347	50,000	200,000		1,076,347
Obligated to Date:						726,335
						67.48 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **25-230**
 Project Title: **Elmwood Landing Area Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 Year Identified: 2019
 Start Date: 7/1/2018 Project Status: Funded
 Est. Completion Date: 7/30/2020 Region:

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:

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
2019	150,000	150,000	0
2020	1,400,000	1,400,000	0
	1,550,000	1,550,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Grant		150,000	1,400,000		1,550,000
Total Revenue			150,000	1,400,000		1,550,000
Expense						
	Design & Engineering		150,000			150,000
	Construction			1,200,000		1,200,000
	Land Acquisition			200,000		200,000
Total Expense			150,000	1,400,000		1,550,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **26-230**
 Project Title: **Forest Lakes Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 Year Identified: 2019
 Start Date: 7/1/2018 Project Status: Funded
 Est. Completion Date: 7/30/2020 Region:

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
2019	100,000	100,000	0
2020	800,000	800,000	0
	900,000	900,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater		100,000	800,000		900,000
Total Revenue			100,000	800,000		900,000
Expense						
	Design & Engineering		100,000			100,000
	Construction			725,000		725,000
	Land Acquisition			75,000		75,000
Total Expense			100,000	800,000		900,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **27-230**
 Project Title: **Hickory Ridge Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 Year Identified: 2019
 Start Date: 7/1/2021 Project Status: Funded
 Est. Completion Date: 7/30/2023 Region:

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
	850,000	850,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater			850,000		850,000
Total Revenue				850,000		850,000
Expense						
	Design & Engineering			75,000		75,000
	Construction			675,000		675,000
	Land Acquisition			100,000		100,000
Total Expense				850,000		850,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **34-210**
 Project Title: **Liberty St. Drainage System Replacement & Upgrade**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Replacement Budget Year: 2019
 Year Identified: 2017
 Start Date: 7/1/2020 Project Status: Funded
 Est. Completion Date: 7/30/2021 Region:

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.

Comments:

For the FY 2019-23 CIP, the total project cost has been revised to \$800,000 for FY 2021.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2021	800,000	800,000	0
	800,000	800,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater			800,000		800,000
Total Revenue				800,000		800,000
Expense						
	Design & Engineering			200,000		200,000
	Construction			550,000		550,000
	Land Acquisition			50,000		50,000
Total Expense				800,000		800,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **23-220**
 Project Title: **Loxley Gardens Drainage Improvements - Phase II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 Year Identified: 2018
 Start Date: 7/1/2021 Project Status: Funded
 Est. Completion Date: 12/30/2023 Region:

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
	1,100,000	1,100,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater			1,100,000		1,100,000
Total Revenue				1,100,000		1,100,000
Expense						
	Design & Engineering			100,000		100,000
	Construction			950,000		950,000
	Land Acquisition			50,000		50,000
Total Expense				1,100,000		1,100,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **07-180**
 Project Title: **Major Equipment Purchases - PW Stormwater Division**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Equipment Budget Year: 2019
 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:

For the FY 2019-23 CIP, no new major equipment purchases are anticipated for FY 2019. However, \$200,000 per year is planned for new major equipment purchases for FY 2020 – FY 2023. Note: the costs of replacement equipment are funded in the operating budget.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2019			0
2020	200,000	200,000	0
2021	200,000	200,000	0
2022	200,000	200,000	0
2023	200,000	200,000	0
	800,000	800,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	4,674,000		800,000		5,474,000
	Fund Balance - Stormwater	700,000				700,000
	Total Revenue	5,374,000		800,000		6,174,000
Expense						
	Equipment	5,374,000		800,000		6,174,000
	Total Expense	5,374,000		800,000		6,174,000
				Obligated to Date:		5,216,305
						84.49 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **08-150**
 Project Title: **Neighborhood Drainage Improvements - Phase II**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 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.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2019	450,000	450,000	0
2020	500,000	500,000	0
2021	500,000	500,000	0
2022	400,000	400,000	0
	1,850,000	1,850,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,724,600	450,000	1,400,000		4,574,600
Total Revenue		2,724,600	450,000	1,400,000		4,574,600
Expense						
	Construction	2,724,600	450,000	1,400,000		4,574,600
Total Expense		2,724,600	450,000	1,400,000		4,574,600
Obligated to Date:						190,180
						4.16 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **09-150**
 Project Title: **Oakdale Area BMP and Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 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
2019	2,000,000	2,000,000	0
2020	1,000,000	1,000,000	0
	3,000,000	3,000,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,000,000	2,000,000	1,000,000		5,000,000
Total Revenue		2,000,000	2,000,000	1,000,000		5,000,000
Expense						
	Design & Engineering	200,000				200,000
	Construction	1,500,000	2,000,000	1,000,000		4,500,000
	Land Acquisition	300,000				300,000
Total Expense		2,000,000	2,000,000	1,000,000		5,000,000
Obligated to Date:						320,370
						6.41 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **24-220**
 Project Title: **Old Mill Rd. Drainage Improvements (Crossing Replacement)**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Replacement Budget Year: 2019
 Year Identified: 2018 Project Status: Funded
 Start Date: 7/1/2018 Region:
 Est. Completion Date: 12/30/2020

Description:

The project will provide for design and construction of Master Drainage Facility Improvements in the Deep Creek Watershed, which will include a crossing replacement at Old Mill Road.

Justification:

This project is needed to complete the improvements identified in master drainage studies and watershed studies.

Comments:

For the FY 2019-23 CIP, the total project cost was increased due to most recent estimates. The City has completed many master drainage and watershed studies that have identified necessary improvements. This project will address some of the needs. Funding in the amount of \$100,000 is available in the Drainage Pro-Rata account for the Deep Creek (DC) Watershed toward the cost of this project.

Project Forecast

Year	Total Expense	Total Revenue	Difference
2019	750,000	750,000	0
	750,000	750,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Fund Balance - Capital Projects Fund		100,000			100,000
	Cash - Stormwater		650,000			650,000
Total Revenue			750,000			750,000
Expense						
	Design & Engineering		75,000			75,000
	Construction		600,000			600,000
	Other		75,000			75,000
Total Expense			750,000			750,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

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

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
2019	200,000	200,000	0
2020	200,000	200,000	0
2021	250,000	250,000	0
2022	250,000	250,000	0
2023	350,000	350,000	0
	1,250,000	1,250,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater		200,000	1,050,000		1,250,000
Total Revenue			200,000	1,050,000		1,250,000
Expense						
	Design & Engineering		200,000			200,000
	Land Acquisition			1,050,000		1,050,000
Total Expense			200,000	1,050,000		1,250,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **29-230**
 Project Title: **Resiliency & Reliability Program**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 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:

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
2019	600,000	600,000	0
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
	5,100,000	5,100,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater		600,000	4,500,000		5,100,000
Total Revenue			600,000	4,500,000		5,100,000
Expense						
	Design & Engineering		500,000			500,000
	Construction			4,400,000		4,400,000
	Land Acquisition		100,000	100,000		200,000
Total Expense			600,000	4,500,000		5,100,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Project Number: **10-150**
 Project Title: **Stormwater Mapping & Master Drainage Plan III**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2019
 Year Identified: 2011
 Start Date: 7/1/2012 Project Status: Funded
 Est. Completion Date: 7/30/2023 Region:

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 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. Accordingly, the amendment reduced this project's funding by removing the \$50,000 that was planned for FY 2019. This project has prior year funding of \$550,000, which is enough to address requirements through FY 2021. The additional investment of \$200,000 planned for this project in FY 2021 (\$100,000) and FY 2023 (\$100,000) will remain in the FY 2019-23 CIP. See also the City Manager Agenda Item 8-G-1 (Docket Item CM-8).

Project Forecast

Year	Total Expense	Total Revenue	Difference
2019			0
2020			0
2021	100,000	100,000	0
2022			0
2023	100,000	100,000	0
	200,000	200,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	550,000		200,000		750,000
	Total Revenue	550,000		200,000		750,000
Expense						
	Design & Engineering	550,000		200,000		750,000
	Total Expense	550,000		200,000		750,000
					Obligated to Date:	825
						0.11 %

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:	2019
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 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.

Comments:

For the FY 2019-23 CIP, the annual investment in phase II of the stormwater quality program has been reduced to \$100,000 per year due to the substantial stormwater quality requirements being met through the SWIFT program

Project Forecast

Year	Total Expense	Total Revenue	Difference
2019	100,000	100,000	0
2020	100,000	100,000	0
2021	100,000	100,000	0
2022	100,000	100,000	0
2023	100,000	100,000	0
	500,000	500,000	0

Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	3,840,565	100,000	400,000		4,340,565
Total Revenue		3,840,565	100,000	400,000		4,340,565
Expense						
	Design & Engineering	1,340,565	25,000	100,000		1,465,565
	Construction	2,500,000	75,000	300,000		2,875,000
Total Expense		3,840,565	100,000	400,000		4,340,565
					Obligated to Date:	580,372
						13.37 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

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: **2019**
 Year Identified: **2011**
 Start Date: **11/1/2011** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2021** 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 indicates the need for a system improvement.

Comments:

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,300,000				1,300,000
Total Revenue		1,300,000				1,300,000
Expense						
	Design & Engineering	100,000				100,000
	Construction	1,100,000				1,100,000
	Land Acquisition	100,000				100,000
Total Expense		1,300,000				1,300,000
Obligated to Date:						1,187,930
						91.38 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: Renovation or Rehabilitation Budget Year: 2019
 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 is complete and construction is in progress.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater		1,200,000			1,200,000
Total Revenue			1,200,000			1,200,000
Expense						
	Design & Engineering		50,000			50,000
	Construction		1,100,000			1,100,000
	Land Acquisition		50,000			50,000
Total Expense			1,200,000			1,200,000
Obligated to Date:						454,867
						37.91 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

Project Number:	02-130		
Project Title:	Chesapeake Dr. Drainage Improvements		
Asset Type:			
Division:	Storm Water Capital Projects		
Project Type:	Replacement	Budget Year:	2019
Year Identified:	2009	Project Status:	Fully Funded
Start Date:	7/1/2012	Region:	
Est. Completion Date:	7/30/2019		

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:

Design is complete and construction is in progress.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	880,000				880,000
Total Revenue		880,000				880,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	830,000				830,000
Total Expense		880,000				880,000
Obligated to Date:						749,857
						85.21 %

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:			
Division:	Storm Water Capital Projects		
Project Type:	New Facility	Budget Year:	2019
Year Identified:	2008		
Start Date:	1/1/2014	Project Status:	Fully Funded
Est. Completion Date:	7/30/2019	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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	415,000				415,000
Total Revenue		415,000				415,000
Expense						
	Design & Engineering	65,000				65,000
	Construction	350,000				350,000
Total Expense		415,000				415,000
Obligated to Date:						25,404
						6.12 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

Project Number:	04-100		
Project Title:	Cooper's Ditch Dredging		
Asset Type:			
Division:	Storm Water Capital Projects		
Project Type:	Renovation or Rehabilitation	Budget Year:	2019
Year Identified:	2006		
Start Date:	11/1/2013	Project Status:	Fully Funded
Est. Completion Date:	7/30/2019	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 in FY 2015. Design is complete and construction is in progress.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,000,000				2,000,000
Total Revenue		2,000,000				2,000,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	1,900,000				1,900,000
	Land Acquisition	50,000				50,000
Total Expense		2,000,000				2,000,000
Obligated to Date:						1,796,851
						89.84 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	370,000				370,000
Total Revenue		370,000				370,000
Expense						
	Design & Engineering	35,000				35,000
	Construction	300,000				300,000
	Land Acquisition	35,000				35,000
Total Expense		370,000				370,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

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: **2019**
 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 is complete and construction is in progress.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,100,000				2,100,000
Total Revenue		2,100,000				2,100,000
Expense						
	Design & Engineering	100,000				100,000
	Construction	1,950,000				1,950,000
	Land Acquisition	50,000				50,000
Total Expense		2,100,000				2,100,000
Obligated to Date:						763,944
						36.38 %

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:			
Division:	Storm Water Capital Projects		
Project Type:	Addition or Expansion	Budget Year:	2019
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 has completed master drainage and watershed studies that identified several needed improvements. Funds are available in the Drainage Pro-Rata account to address the master drainage improvements identified in the studies. Accordingly, \$1,908,000 in Drainage Pro-Rata funding was added to this project for 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-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 Edinburg 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
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Fund Balance - Other Funds	1,908,000				1,908,000
Total Revenue		1,908,000				1,908,000
Expense						
	Design & Engineering	200,000				200,000
	Construction	1,458,000				1,458,000
	Land Acquisition	250,000				250,000
Total Expense		1,908,000				1,908,000
Obligated to Date:						896,014
						46.96 %

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:			
Division:	Storm Water Capital Projects		
Project Type:	Study	Budget Year:	2019
Year Identified:	2018		
Start Date:	7/1/2017	Project Status:	Fully Funded
Est. Completion Date:	6/30/2020	Region:	

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 Department 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 amendment to add this project to the FY 2018 Capital Budget and appropriate \$1,368,456 to this project's budget for FY 2018. Funding was split equally between the DEQ grant and the local match (\$684,228 each). This project was added as a sub-project of the "Stormwater Quality Program/VPDES Permit Compliance" project # 05-140, and the City's portion was funded by reassigning \$684,228 from the budget of project # 05-140 (appropriated in FY 2015) to this new sub-project # 05-142.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Grant	684,228				684,228
	Cash - Stormwater	684,228				684,228
Total Revenue		1,368,456				1,368,456
Expense						
	Design & Engineering	100,000				100,000
	Construction	1,268,456				1,268,456
Total Expense		1,368,456				1,368,456
Obligated to Date:						525,219
						38.38 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: Renovation or Rehabilitation Budget Year: 2019
 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, 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	2,221,983				2,221,983
Total Revenue		2,221,983				2,221,983
Expense						
	Design & Engineering	175,927				175,927
	Construction	2,046,056				2,046,056
Total Expense		2,221,983				2,221,983
Obligated to Date:						2,107,451
						94.85 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 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 Department 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 amendment to add this project to the FY 2018 Capital Budget and appropriate \$2,045,950 to this project's budget for FY 2018. Funding was split equally between the DEQ grant and the local match (\$1,022,975 each). This project was added as a sub-project of the "Stormwater Quality Program/VPDES Permit Compliance" project # 05-140, and the City's portion was funded by reassigning \$1,022,975 from the budget of project # 05-140 (appropriated in FY 2015) to this new sub-project # 05-143.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Grant	1,022,975				1,022,975
	Cash - Stormwater	1,022,975				1,022,975
Total Revenue		2,045,950				2,045,950
Expense						
	Design & Engineering	100,000				100,000
	Construction	1,945,950				1,945,950
Total Expense		2,045,950				2,045,950

Obligated to Date: 0
0.00 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: Addition or Expansion Budget Year: 2019
 Year Identified: 2008
 Start Date: 1/1/2011 Project Status: Fully Funded
 Est. Completion Date: 7/30/2019 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 area.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	600,000				600,000
Total Revenue		600,000				600,000
Expense						
	Other	600,000				600,000
Total Expense		600,000				600,000
Obligated to Date:						533,452
						88.91 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

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: **2019**
 Year Identified: **2009**
 Start Date: **11/1/2013** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2020** 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	600,000				600,000
Total Revenue		600,000				600,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	500,000				500,000
	Land Acquisition	50,000				50,000
Total Expense		600,000				600,000
Obligated to Date:						250,910
						41.82 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	550,000				550,000
Total Revenue		550,000				550,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	450,000				450,000
	Land Acquisition	50,000				50,000
Total Expense		550,000				550,000
Obligated to Date:						2,100
						0.38 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	260,000				260,000
Total Revenue		260,000				260,000
Expense						
	Design & Engineering	30,000				30,000
	Land Acquisition	230,000				230,000
Total Expense		260,000				260,000
					Obligated to Date:	0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

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: 2019
 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	3,100,000				3,100,000
Total Revenue		3,100,000				3,100,000
Expense						
	Design & Engineering	500,000				500,000
	Construction	2,600,000				2,600,000
Total Expense		3,100,000				3,100,000
Obligated to Date:						495,577
						15.99 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

Project Number: **11-130**
 Project Title: **Shorewood Area Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 Year Identified: **2009**
 Start Date: **7/1/2011** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2020** Region:

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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater		540,000			540,000
Total Revenue			540,000			540,000
Expense						
	Design & Engineering		35,000			35,000
	Construction		500,000			500,000
	Land Acquisition		5,000			5,000
Total Expense			540,000			540,000
Obligated to Date:						176,567
						32.70 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2019
 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,000,000				1,000,000
Total Revenue		1,000,000				1,000,000
Expense						
	Design & Engineering	1,000,000				1,000,000
Total Expense		1,000,000				1,000,000
Obligated to Date:						798,694
						79.87 %

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:
 Division: **Storm Water Capital Projects**
 Project Type: Study Budget Year: 2019
 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. 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.

Comments:

On June 27, 2017, City Council approved an amendment to add two stormwater projects to the FY 2018 Capital Budget because the City was awarded grants from the Virginia Department of Environmental Quality (DEQ). The two new stormwater projects (project # 05-142 "Meads Court BMP" and project # 05-143 "New Mill Regional BMP") were established as sub-projects of this 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 this main project (# 05-140) to fund the City's local match requirements for the two new sub-projects (\$684,228 was reassigned to project # 05-142, and \$1,022,975 to project # 05-143).

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).

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	5,039,765				5,039,765
Total Revenue		5,039,765				5,039,765
Expense						
	Design & Engineering	3,539,765				3,539,765
	Construction	1,500,000				1,500,000
Total Expense		5,039,765				5,039,765
Obligated to Date:						1,103,506
						21.90 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

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: **2019**
 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	1,200,000				1,200,000
Total Revenue		1,200,000				1,200,000
Expense						
	Design & Engineering	100,000				100,000
	Construction	1,000,000				1,000,000
	Land Acquisition	100,000				100,000
Total Expense		1,200,000				1,200,000
Obligated to Date:						7,790
						0.65 %

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 Ln. Drainage Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 Year Identified: **2016**
 Start Date: **6/30/2015** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2019** 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	480,000				480,000
Total Revenue		480,000				480,000
Expense						
	Design & Engineering	50,000				50,000
	Construction	400,000				400,000
	Land Acquisition	30,000				30,000
Total Expense		480,000				480,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

Project Number: **20-200**
 Project Title: **Whittamore Rd. Outfall Improvements**
 Asset Type:
 Division: **Storm Water Capital Projects**
 Project Type: **Renovation or Rehabilitation** Budget Year: **2019**
 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 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Cash - Stormwater	300,000				300,000
Total Revenue		300,000				300,000
Expense						
	Design & Engineering	30,000				30,000
	Construction	250,000				250,000
	Land Acquisition	20,000				20,000
Total Expense		300,000				300,000
Obligated to Date:						0
						0.00 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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Project Summary

Fully Funded

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: **2019**
 Year Identified: **2011**
 Start Date: **9/1/2010** Project Status: **Fully Funded**
 Est. Completion Date: **6/30/2021** Region:

Description:

The project will continue improvements completed in Phase I and Phase II to improve drainage along Yadkin Road, and will include upgrading the culverts and a proposed best management practice (BMP) along the outfall. The improvements to the outfall ditch will include the creation of a wetlands bench to attenuate the stormwater flow, provide an improved system in this community, and remove run-off pollutants as required in the City's new MS4 permit.

Justification:

The existing pipe crossing in this area is a choke point that causes frequent flooding. This project will improve the capacity at this crossing and provide a higher level of flood protection for the area.

Comments:

On March 8, 2016, City Council approved an Amendment to the FY 2016 Capital Budget to accept \$57,545 in matching grant funds from the Virginia Dept. of Environmental Quality (VDEQ) Stormwater Local Assistance Fund program. This DEQ grant award fully funded the project so construction could proceed.

Project Forecast

Year	Total Expense	Total Revenue	Difference
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Project Details 2019

Account	Description	Prior Years	2019	2020 - 23	Future Years	Total Amount
Revenue						
	Grant	57,545				57,545
	Cash - Stormwater	805,000				805,000
Total Revenue		862,545				862,545
Expense						
	Construction	862,545				862,545
Total Expense		862,545				862,545
Obligated to Date:						675,532
						78.32 %

Related Projects

Operating Budget Impact

Budget Year	Exp (Rev)	FTE Impact
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