Renovation or The project inc silt in order to Over the years retention pond	Rehabilitation ludes the removal of restore storage capac significant amounts o	Store	ormwater Projec ulated amounts ntrol of storm w	ts of sediment and				
The project inc silt in order to Over the years retention pond	ludes the removal of restore storage capac significant amounts o	significant accum city and improve co	ulated amounts ntrol of storm w	of sediment and				
Over the years retention pond	significant amounts of	of allt and andiman	The project includes the removal of significant accumulated amounts of sedimer silt in order to restore storage capacity and improve control of storm water.					
Purpose and Need Over the years significant amounts of silt and sediment have accumment retention ponds limiting their capacity. This project is needed to man capacity and maintain the water quality function by limiting runoff the streams.								
State and Fede the bay.	ral requirements to r	meet and enhance s	tormwater runc	off quality into				
ly 2011 Co	mpletion Date Dece	mber 2019 Status	Plannin	g and Design				
ng by Year		Project Fundi	ng Sources					
200,000	73-120 Cash - Storr	73-120 Cash - Stormwater Fund						
100,000	Total Proied	ct Funding		2 400 000				
400,000				2,100,000				
200,000								
400,000	Entime			•				
1,300,000	Estima		by Expense Ca	tegory				
1,100,000	73-120	FY 2015	5 Year Total	Project Total				
0	Construction	200,000	1,300,000	2,400,000				
2,400,000	Project Total	200,000	1,300,000	2,400,000				
D-Date \$1,10	0,000 Obligated-1	to-Date \$34,46	57 3.13	% Obligated				
	capacity and m streams. State and Fede the bay. y 2011 Co g by Year 200,000 100,000 400,000 1,300,000 1,300,000 1,100,000 0 2,400,000	capacity and maintain the water questreams. State and Federal requirements to react the bay. y 2011 Completion Date December 200,000 100,000 200,000 400,000 1,300,000 1,300,000 1,300,000 1,100,000 2,400,000 2,400,000 Construction Project Total	capacity and maintain the water quality function by lim streams. State and Federal requirements to meet and enhance so the bay. y 2011 Completion Date December 2019 Status y 2011 Completion Date December 2019 Status y 2011 Completion Date December 2019 Status y 2010 Cash - Stormwater Fund Total Project Funding 73-120 Cash - Stormwater Fund Total Project Funding 73-120 FY 2015 Construction 200,000 Project Total 200,000 Project Total 200,000 Project Total 200,000	capacity and maintain the water quality function by limiting runoff to a streams. State and Federal requirements to meet and enhance stormwater runo the bay. y 2011 Completion Date December 2019 Status Plannin ng by Year Project Funding Sources 200,000 100,000 400,000 1,300,000 1,300,000 1,300,000 0 2,400,000 2,400,000 2,400,000 Obligated-to-Date \$34,467 3.13				

Citywide Outfa	03-160						
Project Type	Renovation or	Rehabilitation	St	ormwater Projec	ts		
Description	This project wi	project will remove accumulated sediment and silt from ditches and outfalls.					
Purpose and Need	Accumulated s maintain ditch	sediment and silt removal is required on a regular basis in order to n capacity and improve stormwater runoff quality .					
History and Status	City wide outfa for those lead will be contrac	tfall ditches were identified and ranked to provide a maintenance schedule ad ditches based on actual conditions. Major outfall maintenance activities racted to maintain system capacity started in 2010.					
Start Date J	uly 2012 Co	mpletion Date Dece	mber 2019 Statu	s Construction	- Implementation		
Project Fund	ing by Year		Project Fund	ing Sources			
⁰³⁻¹⁶⁰ FY 2015	200,000	⁰³⁻¹⁶⁰ Cash - Storr	⁰³⁻¹⁶⁰ Cash - Stormwater Fund				
FY 2016	100,000	Total Projec	Total Project Funding				
FY 2017	200,000		0				
FY 2018	100,000						
FY 2019	150,000				_		
5 Year Total	750,000	Estima	ted Project Costs	by Expense Ca	tegory		
Prior Years	520,000	03-160	FY 2015	5 Year Total	Project Total		
Future Require	0	Construction	150,000	500,000	870,000		
Project Total	1,270,000	Land Acquisition	50,000	250,000	400,000		
1		Project Total	200,000	750,000	1,270,000		
Appropriations-	to-Date \$52	0,000 Obligated-	to-Date	\$0 0.00	% Obligated		
Operating							

Impacts

Citywide System Rehab									
Project Type	Renovation or	Renovation or Rehabilitation Stormwater Projects							
Description	The project inc within selected	The project includes the replacement and upgrade of aging pipe systems and structures within selected neighborhoods in order to provide a ten year level of protection.							
Purpose and Need	The presence of there is a need	The presence of numerous reported cave-ins and sinkholes within an area indicates there is a need for a system type improvement.							
History and Status	A large numbe neighborhood	large number of cave-ins have been identified across the City, particularly in eighborhoods developed during the 1970s.							
Start Date Ju	uly 2012 Co	ompletion Date Decemb	er 2019 Statu	s Plannin	g and Design				
Project Fundi	ng by Year		Project Fund	ing Sources					
⁴³⁻¹⁷⁰ FY 2015	300,000	43-170 Cash - Stormw	43-170 Cash - Stormwater Fund						
FY 2016	200,000	Total Project F	Total Project Funding 2.700						
FY 2017	300,000								
FY 2018	500,000								
FY 2019	500,000	Estimated	Project Costs	by Expense Ca	tegory				
5 Year Total	1,800,000	43-170	FY 2015	5 Year Total	Project Total				
Prior Years	900,000	Construction	250.000	1.550.000	2.350.000				
Project Total	2 700 000	Design and Engineer	50,000	250,000	350.000				
	2,700,000		50,000	230,000	550,000				
		Project Total	300,000	1,800,000	2,700,000				

Project Type	ype Renovation or Rehabilitation Stormwater Projects							
Description	Citywide drai pipes, regrad	nage improvements in ing ditches and associa	cluding acquisition ated activities.	n of easements, re	eplacement of			
Purpose and Need	Major expenditures are necessary to increase drainage capacity in systems that experienced flooding from recent storm events. Many of these were brought to the City's attention by citizens' concerns raised during and after the 1999 hurricane seaso							
History and Status								
Start Date J	uly 2012 (Completion Date Dece	ember 2019 Statu	us Plannin	g and Design			
Project Fund	ing by Year		Project Fund	ling Sources				
⁰⁷⁻¹⁵⁰ FY 2015	50,000	⁰⁷⁻¹⁵⁰ Cash - Store	mwater Fund		756,347			
FY 2016	50,000	Total Proje	Total Proiect Funding					
FY 2017	50,000		_					
FY 2018	50,000							
FY 2019	100,000	- Estima	ted Project Cost	s by Expense Ca	tegory			
5 Year Total	300,000	LStilla			Drainat Tatal			
Prior Years	456,347	07-150	FY 2015	5 Year Total	Project Total			
Future Require	0	Construction	50,000	300,000	756,347			
Project Total	756,347	Project Total	50,000	300,000	756,347			
Appropriations-t	to-Date \$4	-56.347 Obligated-	to-Date	\$0 0.00	% Obligated			

Impacts

Major Equipment Purchases-PW Stormwater Div.								
Project Type	Equipment	Equipment Stormwater Projects						
Description	To purchase re Stormwater Di	nase replacement vehicles and major equipment in the Public Works' ater Division.						
Purpose and Need	Over 50% of th maintenance c	he current fleet have exceeded their service life, resulting in increasing costs and more equipment down time.						
History and Status								
Start Date M	arch 2014 Co	mpletion Date	Statu	S	New			
Project Fund	ing by Year		Project Fund	ing Sources				
⁰⁷⁻¹⁸⁰ FY 2015	2,171,000	07-180 Cash - Storn	⁰⁷⁻¹⁸⁰ Cash - Stormwater Fund					
FY 2016	636,000	Total Projec	Total Project Funding					
FY 2017	0							
FY 2018	0							
FY 2019	0	Estimat	ad Draiget Costs		to 50 m /			
5 Year Total	2,807,000	ESUIIId		by Expense Ca	legory			
Prior Years	1,137,000	07-180	FY 2015	5 Year Total	Project Total			
Future Require	0	Equipment	2,171,000	2,807,000	3,944,000			
Project Total	3,944,000	Project Total	2,171,000	2,807,000	3,944,000			
Appropriations- Operating Impacts	to-Date \$1,13	7,000 Obligated-1	:o-Date \$1,103,3	22 97.04	% Obligated			

Project Type	Renovation or	Renovation or RehabilitationStormwater ProjectsCitywide drainage improvements including acquisition of easements, replacement of pipes, regrading ditches and associated activities to address existing neighborhood drainage deficiencies .							
Description	Citywide drain pipes, regradir drainage defici								
Purpose and Need	Major expendi drainage syste	Major expenditures are necessary to increase drainage capacity and upgrade deficient drainage systems in existing neighborhoods citywide.							
History and Status									
Start Date	uly 2012 Co	ompletion Date	Ongoing	Status	Plannin	g and Design			
Project Fund	ing by Year		Project	Funding S	ources				
⁰⁸⁻¹⁵⁰ FY 2015	224,600	⁰⁸⁻¹⁵⁰ Cash - S	tormwater Fund			2,800,000			
FY 2016	295,600	Total Pr	oject Funding			2,800,000			
FY 2017	295,600								
FY 2018	595,600								
FY 2019	388,600	Esti	mated Project	Costs by F	Expense Cat	tegory			
5 Year Total	1,800,000	08-150	FY 201	5 5 Y	ear Total	Project Total			
Prior Years	1,000,000	Construction	224	600	1.800.000	2.800.000			
i uture Nequire	2 800 000				1,000,000	2,000,000			
Project Total	2,000,000	Project Lotal	224	600	1.800.000	2,800,000			

Addition or Expansion Stormwater Projects						ts
The project will include an updated study, construction of stormwater pip and lakes/BMPs to provide flood and water quality improvements.					pipes, ditches	
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.						
Drainage study	comple	ted in 1999 id	entified solu	tions	to prevent flood	ing.
ary 2017 Co	mpletio	n Date Decer	mber 2020	Status		New
g by Year			Project F	undi	ng Sources	
0	09-150	Cash - Storm	water Fund			5,000,000
0		Total Project	Funding			5.000.000
500,000		,	0			
1,500,000						
2,000,000		Estimat	ad Project (osts	by Expanse Ca	tegory
4,000,000		EStillidu		.0515		
0	09-150		FY 2015		5 Year Total	Project Total
1,000,000	Constr	uction		0	3,500,000	4,500,000
5,000,000	Design	and Engineer		0	200,000	200,000
	Land A	cquisition		0	300,000	300,000
	Projec	t Total		0	4,000,000	5,000,000
-Date	\$0	Obligated-te	o-Date	ç	60 0.00	% Obligated
	The project wil and lakes/BMP This area exper A study compl improve the co Drainage study ary 2017 Co g by Year 0 0 500,000 1,500,000 2,000,000 4,000,000 0 1,000,000 5,000,000	The project will include and lakes/BMPs to pro This area experiences f A study completed in 2 improve the conditions Drainage study complet ary 2017 Completio g by Year 0 0 500,000 1,500,000 2,000,000 4,000,000 0 1,000,000 0 1,000,000 0 1,000,000	The project will include an updated s and lakes/BMPs to provide flood and This area experiences frequent flood A study completed in 1999 recommon improve the conditions and prevent Drainage study completed in 1999 id ary 2017 Completion Date Decer g by Year 0 0 500,000 1,500,000 2,000,000 4,000,000 0 1,000,000 0 1,000,000 0 0 1,000,000 5,000,000 Construction Design and Engineer Land Acquisition Project Total	The project will include an updated study, constru- and lakes/BMPs to provide flood and water qualit This area experiences frequent flooding due to th A study completed in 1999 recommended several improve the conditions and prevent flooding. Drainage study completed in 1999 identified solur ary 2017 Completion Date December 2020 S g by Year Project F 0 0 500,000 1,500,000 2,000,000 4,000,000 0 1,000,000 5,000,000 5,000,000 	The project will include an updated study, construction and lakes/BMPs to provide flood and water quality imp This area experiences frequent flooding due to the old A study completed in 1999 recommended several larg improve the conditions and prevent flooding. Drainage study completed in 1999 identified solutions ary 2017 Completion Date December 2020 Status g by Year Project Fundi 0 500,000 1,500,000 2,000,000 4,000,000 0 1,000,000 0 1,000,000 0 5,000,000 - Design and Engineer 0 Land Acquisition 0 Project Total 0 - Date \$0 Obligated-to-Date \$	The project will include an updated study, construction of stormwater and lakes/BMPs to provide flood and water quality improvements. This area experiences frequent flooding due to the old and undersized A study completed in 1999 recommended several large size drainage frimprove the conditions and prevent flooding. Drainage study completed in 1999 identified solutions to prevent flood ary 2017 Completion Date December 2020 Status g by Year Project Funding Sources 0 0 0 0 500,000 1,500,000 4,000,000 0 1,000,000 0 1,000,000 0 1,000,000 5,000,000 - 1,000,000 5,000,000 - 1,000,000 - 1,000,000 - 1,000,000 - 1,000,000 - 1,000,000 - 1,000,000 - 1,000,000 - 1,000,000 - 2,000,000 - 2

Shillelagh Road	Road Drainage Outfall Improvement						77-120
Project Type	Addition or Exp	pansion			St	ormwater Project	S
Description	Improve and w culvert crossing	iden the g to prev	main outfall for ent frequent flo	Shillelagh oding in the	Roa e are	d and upgrade the ea.	e downstream
Purpose and Need	The Shillelagh as one of the d widening the o	The Shillelagh Road / Herring ditch community was identified after the storms of 199 as one of the drainage areas to study. The study, completed in 1999, recommended widening the outfall ditch and upgrading the downstream culverts.					storms of 1999 commended
History and Status	Project improv	ements a	are slated to beg	gin in FY 20	16.		
Start Date September 2016 Completion Date December 2018 Status Planning and Design						gand Design	
Project Fundi	unding by Year Project Funding Sources						
⁷⁷⁻¹²⁰ FY 2015	0	77-120	Cash - Stormwa	ater Fund			3,100,000
FY 2016	2,000,000		Total Project F	unding			3,100,000
FY 2017	1,100,000						
FY 2018	0						
FY 2019	2 100 000		Estimated	Project Co	osts	by Expense Cat	egory
S Year Total	3,100,000	77-120		FY 2015		5 Year Total	Project Total
Future Require	0	Constru	uction		0	2,600,000	2,600,000
Project Total	3,100,000	Design	and Engineer		0	500,000	500,000
		Project	Total		0	3,100,000	3,100,000
Appropriations-t	to-Date	\$0	Obligated-to-[Date		\$0 0.009	% Obligated

Stormwater Mapping & Master Drainage Plan III								
Project Type	Study Stormwater Projects							
Description	This project continues updating of the Stormwater Inventory Mapping and Master Drainage Plan.							
Purpose and Need	The updating of the Stormwater Inventory Mapping and Master Drainage Plan is essential in providing quick, accurate information to City staff, consultants and the general public. The mapping will provide inventory mapping to support emergency responses and GASB 34 accounting.							
History and Status	The City's master drainage plan was completed in 1986. Many changes have occurred in the stormwater system and land/environment it supports since then. Because of changes in the drainage system and surrounding environment, an updated master drainage plan and maps are necessary. This is the third phase of a project started in 2006.							
Start Data	uly 2012 Completion Data	Opening Status Enasibili	ty Study					

Project	Eunding by Voor		Droio	+ Eunding C		
Start Date	July 2012	Completion Date	Ungoing	Status	Feasibility Study	

Project Fundin	g by Year			Project Fund	ing Sources		
¹⁰⁻¹⁵⁰ FY 2015	200,000	10-150	Cash - Stormwa	ater Fund		800,000	
FY 2016	100,000		Total Project Funding 80				
FY 2017	200,000		5	0			
FY 2018	100,000						
FY 2019	200,000					_	
5 Year Total	800,000		Estimated	Project Costs	by Expense Ca	tegory	
Prior Years	0	10-150		FY 2015	5 Year Total	Project Total	
Future Require	0	Desig	n and Engineer	200,000	800,000	800,000	
Project Total	800,000	Projec	ct Total	200,000	800,000	800,000	
Appropriations-to	Appropriations-to-Date			Date	\$0 0.00	% Obligated	

Stormwater Qu	ality Program Phase II		11-150				
Project Type	Study Stormwater Projects						
Description	This program is to ensure compliance with the Virginia Pollution Discharge Elimin System Permit and to update the City's MS4 (Municipal separate stormwater sew system) program plan. This project will include the development of PARS system (regional stormwater tracking and reporting system), extensive data collection an inspection of all stormwater management facilities in accordance with the new pr requirements and establishing a monitoring and sampling program to comply wit new TMDL requirements. Also, as part of the permit requirements the City will b completing stormwater retrofit projects to address stormwater runoff discharge waterways and creeks.						
Purpose and Need	The City and neighboring localities a Conservation and Recreation (VDCF finalize the new MS4 permit require required to comply with the new per compliance. Also, Chesapeake and are required to comply with an EPA pollutant TMDL (also know as the p	are currently working with Virginia Dep R) and Environmental Protection Agence ements. Once a permit is issued then t ermit and this project is needed to me all localities within the Chesapeake Ba Watershed Implementation Plan (WIR ollution diet) for the Chesapeake Bay.	partment of cy (EPA) to he City is et permit ay watershed P) to address				
History and Status	Total Maximum Daily Load (TMDL) Watershed Implementation Plan (W project started in 2010.	are being required by the EPA as part (VIP) to clean up the Chesapeake Bay. I	of the Phase I of this				

Start Date	September 201	2 Cor	npletio	n Date 🛛 🤇	Ongoing	Statu	s F	easibilit	ty Study
Project	Funding by Yea	ar	Project Funding Sources						
¹¹⁻¹⁵⁰ FY 2015 340,565		,565	¹¹⁻¹⁵⁰ Cash - Stormwater Fund					7,500,000	
FY 20	016 364	,000	Total Project Funding 7,500				7,500,000		
FY 2017 2,000,000		,000							
FY 20	018 2,000	,000							
FY 20	019 1,307	,000							
5 Year To	otal 6,011	L,565	Estimated Project Costs by Expense Category						
Prior Ye	ears	0	11-150		FY	2015	5 Year Tota	al P	roject Total
Future Requ	uire 1,488	3,435	Constr	uction		0	4,511,5	65	6,000,000
Project To	otal 7,500	0,000	Design	and Enginee	er	340,565	1,500,0	00	1,500,000
			Project	t Total		340,565	6,011,5	65	7,500,000
Appropriations-to-Date			\$0	Obligated-	to-Date		\$0	0.00%	Obligated

Sunray Area O	utfall Re-Gra	ding				13-130	
Project Type	Renovation or Rehabilitation Stormwater Projects					rts	
Description	The project includes the excavation and re-grading along the outfall due to the significant accumulation of sediment and silt which needs to be removed to maintain the hydraulic capacity needed for this major stormwater drainage facility in this watershed.						
Purpose and Need	Over the years ditch and parti hydraulic capa	significant amounts of silt and sediment have accumulated along the ularly close to roadway crossings. The project is needed to maintain the ity needed to serve the Sunray Ditch Watershed.					
History and Status Drainage study completed in 2001, as a result of continued flooding in the neighborhood, identified needs and recommended improvements to resolve flooding programs.							
Start Date Ma	arch 2016 Co	mpletion Date Dece	mber 2017 S	tatu	s Plannin	g and Design	
Project Fundi	ng by Year		Project F	undi	ng Sources		
¹³⁻¹³⁰ FY 2015	0	0 Cash - Stormwater Fund				1,200,000	
FY 2016	1,200,000	Total Projec	1.200.000				
FY 2017	0					, ,	
FY 2018	0						
FY 2019	0	Estimated Broject Costs by Expanse Category					
5 Year Total	1,200,000				Droject Total		
Prior Years	0	13-130	FT 2015		5 fedi Total		
Future Require	0	Construction		0	1,000,000	1,000,000	
Project Total	1,200,000	Design and Engineer	r	0	100,000	100,000	
		Land Acquisition		0	100,000	100,000	
		Project Total		0	1,200,000	1,200,000	

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

Operating

Impacts

0.00% Obligated

\$0

Washington	Manor Draina	ge Out	fall Improve	ments		80-120		
Project Type	Addition or Ex	Addition or Expansion Stormwater Projects						
Description	Improve and v prevent frequ	Improve and widen the main outfall and upgrade the downstream culvert crossing to prevent frequent flooding in the area.						
Purpose and Ne	ed The Washingt completed in a downstream of	The Washington Manor community experienced flooding during 1999 storms. A study completed in 2000 recommended widening the outfall ditch and upgrading the downstream culverts.						
History and Stat	us							
Start Date	March 2015 C	ompletio	on Date Septeml	per 2017 Statu	s Plannin	g and Design		
Project Fu	nding by Year			Project Fund	ing Sources			
⁸⁰⁻¹²⁰ FY 2015	⁰⁻¹²⁰ FY 2015 1,250,000		⁸⁰⁻¹²⁰ Cash - Stormwater Fund					
FY 2016	0		Total Project Funding 1,250					
FY 2017	0		_	_				
FY 2018	0							
FY 2019	0		Estimated Project Costs by Expense Category					
5 Year Total	1,250,000	80-120		FY 2015	5 Year Total	Proiect Total		
Future Require		Const	ruction	1.050.000	1.050.000	1,050,000		
Project Total	1,250,000	Desigi	n and Engineer	100,000	100,000	100,000		
		Land	Acquisition	100,000	100,000	100,000		
		Projec	ct Total	1,250,000	1,250,000	1,250,000		
Appropriation	ns-to-Date	\$0	Obligated-to-l	Date	\$0 0.00	% Obligated		
Appropriation Operating Impacts	ns-to-Date	\$0	Obligated-to-I	Date	\$0 0.00	% Obligated		