

Public Utilities

FULLY FUNDED PROJECTS

Project Name	Completion Date	Total Appropriated	Obligated To Date	
30" Raw Water Main	December 2012	3,075,000	228,600	54-12
Replace existing 30" raw water main serving the Northwest River Water Treatment Plant.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Asset Management System	December 2012	850,000	659,113	24-13
Establish an asset management system for compliance for the regional consent order and internal auditors.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Cascade Park & Westgate Street Phase II	June 2011	825,226	738,815	22-13
Replaces approximately 2000 linear feet of 8 inch gravity sewer and appurtenances on Quail Ave., Partridge Ave., and Kennedy St. to Cascade Blvd.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Chesapeake and Albemarle Canal Waterline Relocation	August 2011	2,700,000	2,543,326	02-09
Replace existing waterline crossing with new waterline.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Force Main Upgrade - Greenbrier Parkway	July 2012	300,389	86,100	06-10
The project consists of a new force main along Greenbrier Parkway between Eden Way North and Volvo Parkway. The new force main will connect to the existing force mains at these two locations.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Hanbury Rd. 12" Water Main	March 2012	283,612	283,611	36-12
Install approximately 920' of 12" water main from Millwood Avenue to Great Bridge Intermediate School.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Joliff Road Waterline Phase II	Ongoing	653,800	19	29-05
This 12 inch and 16 inch water main will improve system hydraulics and fire protection in this area of Western Branch.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Laboratory Equipment Replacement, Phase I	Ongoing	213,852	100,829	50-12
Establish and maintain a designated reserve account to fund replacement of analytical laboratory equipment at the Northwest River Water Treatment Plant.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Lake Gaston H2O Protection	Continuous	891,529	500,000	31-10
To allow for purchases of land in the North Landing Watershed.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Lake Gaston Phase VI Lake Gaston Water Treatment Plant refinement and completion.	Continuous	1,464,307	1,051,877	18-89

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Lake Gaston WTP Membrane Replacement - Phase I To establish and maintain a designated reserve account to fund ultra-filtration membrane replacement at the Lake Gaston Water Treatment Plant.	Ongoing	1,725,000	1,139,311	52-12

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Military Highway - 36" Water Main Install approximately 4,200 feet of 36" water main from Enterprise Circle at the terminus of the Lake Gaston 36" water main to Galberry Road.	July 2012	2,627,000	365,423	38-12

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Murray Drive Whittamore Road Water Project Provide design services and construction for water for neighborhoods in the vicinity of the Battlefield Golf Club.	February 2011	6,000,000	4,562,540	40-13

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Northwest River Potable Pump Modifications Replace potable water pump drives and motors at the Northwest River Water Treatment Plant.	May 2011	1,043,000	1,018,997	48-12

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Northwest River Water Treatment Plant Miscellaneous Modifications Evaluation Engineering study to identify, prioritize, and perform a variety of improvements to the Northwest River Water Treatment Plant.	December 2012	3,932,840	1,097,730	19-13

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Northwest River WTP Basin Cover Replacement Replace original settling basin and media filter protective covers at the Northwest River Water Treatment Plant.	December 2012	495,000	36,539	40-12

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Northwest River WTP Storm Hardening To provide additional storm protection for critical areas of the Northwest River Water Treatment Plant.	December 2012	125,000	0	35-12

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Portsmouth Area Expansion Project consisted of the construction of a new 2 million gallon ground storage tank and 1 million gallon pumping station at the Lake Gaston Water Treatment Plant to facilitate the additional withdrawal of one (1) million gallons per day of finished water from the Portsmouth transmission mains located adjacent to Military Highway in the Bowers Hill area. Project also consisted of 1,950 feet of both on-site and off-site water main improvements.	April 2011	4,600,000	4,529,682	44-12

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Pressure Transducer	June 2012	100,000	99,788	19-15
Installation and purchase of pressure transducers for potable water system.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Pump Station and Wet Well Upgrading Phase III	Ongoing	1,050,000	782,761	69-12
Replace worn-out equipment to meet Department of Environmental Quality regulations.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Sewer Renewal - Anne Ave.	July 2011	1,411,576	1,405,172	29-12
Replace gravity sewer on Anne Avenue between Bainbridge and Southport. An 8" water main was extended from the existing 6" water and tied into Bainbridge Blvd.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Sewer Renewal - Gregg St - Alleyway	April 2011	497,770	435,067	07-10
Replace approx. 1,830 linear feet of 8" and 10" gravity sewer main and appurtenances in the alleyway between Gregg Street and Jones Street all the way to Great Bridge Boulevard.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Sewer Renewal - Manhole Inserts	January 2013	199,963	199,853	30-12
To purchase and install manhole inserts.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Sewer System Repairs	June 2013	1,696,100	876,912	31-12
Funding for minor unanticipated sewer line and manhole replacement.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Surface Water Membrane Replacement II	Ongoing	2,594,185	1,869,272	03-06
To establish and maintain a designated reserve account to fund membrane replacement at the water treatment plant.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Telemetry Upgrade	Ongoing	430,401	427,412	26-12
Replace radio equipment with 800 MHz units.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Unserviced Areas	September 2015	6,909,175	439,213	51-12
Support unserved areas throughout the city as announced in the Cost Sharing Program. Due to the need to provide sufficient time for neighborhoods to consider and file petitions for service, a determination of which areas are to be included in this project.				
Project Name	Completion Date	Total Appropriated	Obligated To Date	
Unserviced Areas - Joliff-Moore Jaye	April 2011	2,833,371	1,182,037	51-124
Support unserved areas throughout the City as announced in the Cost Sharing Program.				

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Violet St. Pump Station Emergency Generator	June 2012	350,000	33,000	19-14

Install an emergency generator with switchgear at the Violet St. Water Pump Station in South Norfolk.

Project Name	Completion Date	Total Appropriated	Obligated To Date	
Water System Renewal	Ongoing	893,000	306,216	24-12
<p>This project provides funding for small capital replacement of water lines. The following projects are planned: replace offset at creek crossing along Deep Creek Boulevard; replace numerous antiquated fire hydrants; upgrade six large meter vaults; replace 2" galvanized water lines on Port Chambers Court, Collins Court and Vallejo Place; and transfer service from 6" water main to 12" water main on Stewart Street (from Park Avenue to Jefferson Street).</p>				
Total - Fully Funded Projects		50,771,096	26,999,215	

18th Street Sewer from D Street to Seaboard

15-17

Project Type	Replacement	Public Utilities
Description	Renew or replace approximately 1,250 of the existing 8" and 12" sewer mains along 18th Street between its intersection with "D" Street and its intersection with Seaboard Avenue in South Norfolk.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2016	Completion Date July 2017
		Status New

15-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	580,738
	FY 2017	0
5 Year Total		580,738
Prior Years		0
Beyond 5 Years		0
Project Total		580,738

15-17	Revenue Bonds - Utility Fund	580,738
Total Project Funding		580,738

15-17	FY 2013	5 Year Total	Project Total
Construction	0	580,738	580,738
Project Total	0	580,738	580,738

Operating Impacts

Bainbridge - Assoc. Sewer w/HRSD Gravity Sewer Renewal

16-17

Project Type

Replacement

 Public Utilities

Description Repair and/or replace City sewer facilities in the area of HRSD projects.

Purpose and Need The nature of the HRSD projects will require adjustment, relocation, repair or replacement of the City sewer facilities.

History and Status

Start Date July 2017 Completion Date July 2018 Status New

Project Funding by Year

16-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	5,000,000
5 Year Total		5,000,000
Prior Years		0
Beyond 5 Years		0
Project Total		5,000,000

Project Funding Sources

16-17	Revenue Bonds - Utility Fund	5,000,000
Total Project Funding		5,000,000

Estimated Project Costs by Expense Category

16-17	FY 2013	5 Year Total	Project Total
Construction	0	5,000,000	5,000,000
Project Total	0	5,000,000	5,000,000

Operating Impacts

Bainbridge Boulevard Elevated Storage Tank Renovation

12-16

Project Type Renovation or Rehabilitation Public Utilities

Description Painting, cleaning and repairing of water storage tank.

Purpose and Need To extend the life of this water storage tank

History and Status

Start Date July 2015

Completion Date June 2016

Status Feasibility Study

Project Funding by Year

12-16	FY 2013	0
	FY 2014	1,074,997
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		1,074,997
Prior Years		0
Beyond 5 Years		0
Project Total		1,074,997

Project Funding Sources

12-16	Fund Balance - Utility Fund	1,074,997
Total Project Funding		1,074,997

Estimated Project Costs by Expense Category

12-16	FY 2013	5 Year Total	Project Total
Construction	0	947,997	947,997
Design and Engineer	0	127,000	127,000
Project Total	0	1,074,997	1,074,997

Operating Impacts

Battlefield Blvd. Water Main

17-17

Project Type	Replacement	Public Utilities
Description	Replace approximately 4430 linear feet of 20" water main, 33,630 linear feet of 30" water main and 14,770 linear feet of 36" water main and all appurtenances.	
Purpose and Need	Replace existing water line due to age and increased demands.	
History and Status		
Start Date	March 2013	Completion Date March 2015
		Status New

Project Funding by Year

17-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		6,000,000
Project Total		6,000,000

Project Funding Sources

17-17	Revenue Bonds - Utility Fund	6,000,000
Total Project Funding		6,000,000

Estimated Project Costs by Expense Category

17-17	FY 2013	5 Year Total	Project Total
Construction	0	0	6,000,000
Project Total	0	0	6,000,000

Operating Impacts

Battlefield to Centerville Water Main Phase I

21-14

Project Type	New Facility	Public Utilities
Description	Phase I will consist of a 24-inch water main extension, approximately 4,000 feet, starting from the existing 30-inch water main on Battlefield Boulevard at Hanbury Road and continuing along Etheridge Manor Boulevard to Jule Drive.	
Purpose and Need	This is the first phase of a project that will provide an additional water main loop in this area. The loop will improve system hydraulics, reliability and fire protection in this area of the city.	
History and Status	New alignment plans are approaching 90% design stage and will be submitted by end of September 2011. The 65% review is completed. A Preliminary Environmental Assessment Report (PEAR) has been submitted and reviewed.	

Start Date July 2009 Completion Date December 2014 Status Construction- Implementation

Project Funding by Year

21-14	FY 2013	0
	FY 2014	3,191,957
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		3,191,957
Prior Years		450,000
Beyond 5 Years		0
Project Total		3,641,957

Project Funding Sources

21-14	Fund Balance - Utility Fund	3,641,957
Total Project Funding		3,641,957

Estimated Project Costs by Expense Category

21-14	FY 2013	5 Year Total	Project Total
Construction	0	2,751,885	2,751,885
Design and Engineer	0	0	450,000
Land Acquisition	0	30,000	30,000
Other	0	410,072	410,072
Project Total	0	3,191,957	3,641,957

Operating Impacts

Battlefield to Centerville Water Main Phase II

22-14

Project Type	New Facility	Public Utilities
Description	Phase II will consist of a 24-inch water main extension, approximately 4,000 feet, starting from the intersection of Jule Drive and Etheridge Manor Boulevard and continuing along Etheridge Manor Boulevard to Centerville Turnpike.	
Purpose and Need	This is the second phase of a project that will provide an additional water main loop in this area. The loop will improve system hydraulics, reliability and fire protection in this area of the city.	
History and Status	100% plans are under review.	

Start Date	July 2009	Completion Date	June 2018	Status	Construction- Implementation
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Project Funding by Year			Project Funding Sources		
22-14	FY 2013	0	22-14	Revenue Bonds - Utility Fund	4,627,664
	FY 2014	0		Total Project Funding	4,627,664
	FY 2015	0			
	FY 2016	0			
	FY 2017	0			
	5 Year Total	0			
	Prior Years	464,000			
	Beyond 5 Years	4,163,664			
	Project Total	4,627,664			
Estimated Project Costs by Expense Category					
22-14		FY 2013	5 Year Total	Project Total	
	Construction	0	0	4,163,664	
	Design and Engineer	0	0	464,000	
	Project Total	0	0	4,627,664	

Operating Impacts

Centerville Turnpike Loop 3

43-12

Project Type **Addition or Expansion** **Public Utilities**

Description Install approximately 7,700 feet of 16" water main from Mt. Pleasant Rd. to Elbow Road.

Purpose and Need This project that will provide an additional water main loop in this area. The loop will improve system hydraulics, reliability and fire protection in this area of the city.

History and Status

Start Date **September 2013** Completion Date **December 2014** Status **Construction- Implementation**

Project Funding by Year

43-12	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
	5 Year Total	0
	Prior Years	0
	Beyond 5 Years	3,086,749
	Project Total	3,086,749

Project Funding Sources

43-12	Revenue Bonds - Utility Fund	3,086,749
	Total Project Funding	3,086,749

Estimated Project Costs by Expense Category

43-12	FY 2013	5 Year Total	Project Total
Construction	0	0	1,801,412
Design and Engineer	0	0	913,135
Other	0	0	372,202
Project Total	0	0	3,086,749

Operating Impacts

Chesapeake Ave - Poindexter to Ohio Sewer

18-17

Project Type	Replacement	Public Utilities
Description	Replace approximately 510 linear feet of 8-inch gravity sanitary sewer main between Guerriere St. and Ohio St.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2016	Completion Date July 2017
		Status New

18-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	532,954
	FY 2017	0
5 Year Total		532,954
Prior Years		0
Beyond 5 Years		0
Project Total		532,954

18-17	Revenue Bonds - Utility Fund	532,954
Total Project Funding		532,954

18-17	FY 2013	5 Year Total	Project Total
Construction	0	532,954	532,954
Project Total	0	532,954	532,954

Operating Impacts

Crestwood Sewer Phase I (Pump Station #931)

19-17

Project Type	Replacement	Public Utilities
Description	Renew approximately 6090 linear feet of sanitary sewer main and appurtenances in Crestwood Subdivision that flows to Gregg Street Alleyway. Project includes alleyways between Jones and Great Bridge Blvd., Grant and Gregg, Outlaw and Grant, Bainbridge Blvd. and Tuskegee and the sewers on Lincoln Rd. and Outlaw.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2013	Completion Date June 2014
		Status New

19-17	FY 2013	2,463,756
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
	5 Year Total	2,463,756
	Prior Years	0
	Beyond 5 Years	0
	Project Total	2,463,756

19-17	Revenue Bonds - Utility Fund	2,463,756
	Total Project Funding	2,463,756

19-17	FY 2013	5 Year Total	Project Total
	Construction	2,463,756	2,463,756
	Project Total	2,463,756	2,463,756

Operating Impacts

Crestwood Sewer Phase II (Pump Station #931)

20-17

Project Type Replacement Public Utilities

Description Renew or replace 6700 feet of 8" gravity sewer main & appurtenances for mains flowing to Lincoln St. This includes Carver St. and alleys between the following streets: Dunn and Outlaw; Bainbridge and Tuskegee; Tuskegee and Ray; Ray and Pile; Pile and Durham; and Durham and Laura.

Purpose and Need TV inspection and excessive maintenance indicates severe deterioration requiring replacement.

History and Status

Start Date July 2014

Completion Date June 2015

Status New

Project Funding by Year

20-17	FY 2013	0
	FY 2014	1,331,535
	FY 2015	1,500,000
	FY 2016	0
	FY 2017	0
	5 Year Total	2,831,535
	Prior Years	0
	Beyond 5 Years	0
	Project Total	2,831,535

Project Funding Sources

20-17	Revenue Bonds - Utility Fund	2,831,535
	Total Project Funding	2,831,535

Estimated Project Costs by Expense Category

20-17	FY 2013	5 Year Total	Project Total
	Construction	0	2,831,535
	Project Total	0	2,831,535

Operating Impacts

Crestwood Sewer Phase III (Pump Station #12)

21-17

Project Type	Replacement	Public Utilities
Description	Replace approx. 3,360 linear feet of 8" gravity sewer main and appurtenances along Booker St, the alleyway north of Carver St, and the alleyways on both sides of Charles St to the interstate.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2015	Completion Date June 2016
		Status New

Project Funding by Year

21-17	FY 2013	0
	FY 2014	0
	FY 2015	1,600,364
	FY 2016	0
	FY 2017	0
5 Year Total		1,600,364
Prior Years		0
Beyond 5 Years		0
Project Total		1,600,364

Project Funding Sources

21-17	Revenue Bonds - Utility Fund	1,600,364
Total Project Funding		1,600,364

Estimated Project Costs by Expense Category

21-17	FY 2013	5 Year Total	Project Total
Construction	0	1,600,364	1,600,364
Project Total	0	1,600,364	1,600,364

Operating Impacts

Customer Service & Billing Software

34-12

Project Type	Replacement	Public Utilities
Description	Replacement of Customer Service and Billing Software system.	
Purpose and Need	The current system is based upon aging mainframe architecture that limits the support of the application technically and functionally.	
History and Status	Proposals received November 15, 2010. Interviews held January 2011. Project scope was identified and agreed to with vendor in March 2011. Contract language negotiations were completed in June 2011. Negotiations on contract modifications were completed in July 2011. UPDATE after Council approved the CIP: cost of project is expected to be significantly lower than initially estimated. The \$1.34 million scheduled for FY 2014 appears unnecessary.	

Start Date July 2007 Completion Date April 2013 Status Construction- Implementation

Project Funding by Year			Project Funding Sources		
34-12	FY 2013	1,400,000	34-12	Fund Balance - Utility Fund	1,500,000
	FY 2014	1,344,392	34-12	Revenue Bonds - Utility Fund	5,744,392
	FY 2015	0	Total Project Funding		
	FY 2016	0	7,244,392		
	FY 2017	0			
5 Year Total		2,744,392			
Prior Years		4,500,000			
Beyond 5 Years		0			
Project Total		7,244,392			

Estimated Project Costs by Expense Category			
34-12	FY 2013	5 Year Total	Project Total
Other	1,400,000	2,744,392	7,244,392
Project Total	1,400,000	2,744,392	7,244,392

Operating Impacts

Deep Creek Loop 2

22-17

Project Type	Addition or Expansion	Public Utilities
Description	Install approximately 1,940 feet of 10-inch water main along the City line from the north end of Gust Lane to the north end of Deep Creek Blvd	
Purpose and Need	This project that will provide an additional water main loop in this area. The loop will improve system hydraulics, reliability and fire protection in this area of the city.	
History and Status		
Start Date	January 2013	Completion Date June 2014
		Status New

Project Funding by Year

22-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		432,093
Project Total		432,093

Project Funding Sources

22-17	Fund Balance - Utility Fund	432,093
Total Project Funding		432,093

Estimated Project Costs by Expense Category

22-17	FY 2013	5 Year Total	Project Total
Construction	0	0	432,093
Project Total	0	0	432,093

Operating Impacts

Deep Creek Pump Station Upgrade

20-14

Project Type	Renovation or Rehabilitation	Public Utilities
Description	Install New Pumps, Upgrade Telemetry, Controls and Equipment	
Purpose and Need	The Deep Creek Pump Station was placed in service in 1987. Equipment upgrades and replacements are required to provide optimum reliability.	
History and Status	Scope and fee for engineering services have been determined. Request to approve award has been executed and a notice to proceed issued to the engineer, effective September 9, 2011. Project design is underway.	

Start Date	June 2011	Completion Date	December 2014	Status	Construction- Implementation
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Project Funding by Year			Project Funding Sources		
20-14	FY 2013	0	20-14	Fund Balance - Utility Fund	2,230,250
	FY 2014	120,000	Total Project Funding		2,230,250
	FY 2015	0			
	FY 2016	1,878,123			
	FY 2017	0			
5 Year Total			1,998,123		
Prior Years			232,127		
Beyond 5 Years			0		
Project Total			2,230,250		
Estimated Project Costs by Expense Category					
20-14	FY 2013	5 Year Total	Project Total		
Construction	0	1,110,836	1,110,836		
Design and Engineer	0	120,000	352,127		
Equipment	0	767,287	767,287		
Project Total	0	1,998,123	2,230,250		

Operating Impacts

Elbyrne Drive Water & Sewer

23-17

Project Type	Replacement	Public Utilities
Description	Renew or replace approximately 2,160 feet of the existing 8" sewer main along Elbyrne Drive between its intersection with Wingfield Avenue and its intersection with Pond Lane in South Norfolk.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2017	Completion Date June 2023
		Status New

23-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	2,155,000
5 Year Total		2,155,000
	Prior Years	0
	Beyond 5 Years	0
Project Total		2,155,000

23-17	Revenue Bonds - Utility Fund	2,155,000
Total Project Funding		2,155,000

23-17	FY 2013	5 Year Total	Project Total
Construction	0	2,155,000	2,155,000
Project Total	0	2,155,000	2,155,000

Operating Impacts

Generator Replacement Program

25-13

Project Type	Renovation or Rehabilitation	Public Utilities
Description	Replace generators that have reached the end of their useful life.	
Purpose and Need	Assure that sewer pump stations continue to meet Class I reliability requirements.	
History and Status		
Start Date	July 2008	Completion Date June 2014
		Status Construction- Implementation

Project Funding by Year

25-13	FY 2013	75,000
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		75,000
Prior Years		300,000
Beyond 5 Years		0
Project Total		375,000

Project Funding Sources

25-13	Fund Balance - Utility Fund	375,000
Total Project Funding		375,000

Estimated Project Costs by Expense Category

25-13	FY 2013	5 Year Total	Project Total
Equipment	75,000	75,000	375,000
Project Total	75,000	75,000	375,000

Operating Impacts

Generator Replacement Program Phase II

25-14

Project Type Renovation or Rehabilitation Public Utilities

Description Replace generators that have reached the end of their useful life.

Purpose and Need Assure that sewer pump stations continue to meet Class I reliability requirements.

History and Status

Start Date July 2013

Completion Date January 2016

Status Construction- Implementation

Project Funding by Year

25-14	FY 2013	0
	FY 2014	75,000
	FY 2015	75,000
	FY 2016	75,000
	FY 2017	75,000
	5 Year Total	300,000
	Prior Years	0
	Beyond 5 Years	75,000
	Project Total	375,000

Project Funding Sources

25-14	Fund Balance - Utility Fund	375,000
	Total Project Funding	375,000

Estimated Project Costs by Expense Category

25-14	FY 2013	5 Year Total	Project Total
Equipment	0	300,000	375,000
Project Total	0	300,000	375,000

Operating Impacts

Generator Replacement Program Phase III

24-17

Project Type	Renovation or Rehabilitation	Public Utilities
Description	Replace generators that have reached the end of their useful life.	
Purpose and Need	Assure that sewer pump stations continue to meet Class I reliability requirements.	
History and Status		
Start Date	July 2018	Completion Date June 2023
		Status New

Project Funding by Year

24-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		225,000
Project Total		225,000

Project Funding Sources

24-17	Fund Balance - Utility Fund	225,000
Total Project Funding		225,000

Estimated Project Costs by Expense Category

24-17	FY 2013	5 Year Total	Project Total
Equipment	0	0	225,000
Project Total	0	0	225,000

Operating Impacts

Great Bridge Boulevard Water Main Phase I

23-14

Project Type	Addition or Expansion	Public Utilities
Description	Approximately 10,050 linear feet of 20" water main from Bainbridge Boulevard to River Walk Parkway.	
Purpose and Need	This is the first phase of a project that will provide an additional water main loop in this area. The loop will improve system hydraulics and fire protection in this area.	
History and Status		
Start Date	July 2014	Completion Date January 2017
Status	Construction- Implementation	

Project Funding by Year

23-14	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	2,000,000
5 Year Total		2,000,000
Prior Years		0
Beyond 5 Years		4,000,000
Project Total		6,000,000

Project Funding Sources

23-14	Revenue Bonds - Utility Fund	6,000,000
Total Project Funding		6,000,000

Estimated Project Costs by Expense Category

23-14	FY 2013	5 Year Total	Project Total
Construction	0	1,650,000	5,650,000
Design and Engineer	0	250,000	250,000
Other	0	100,000	100,000
Project Total	0	2,000,000	6,000,000

Operating Impacts

Laboratory Equipment Replacement, Phase II

18-14

Project Type **Replacement** Public Utilities

Description Establish and maintain a designated reserve account to fund replacement of analytical laboratory equipment at the Northwest River Water Treatment Plant.

Purpose and Need Sophisticated laboratory equipment periodically requires replacement to insure reliable test results and to maintain rigorous laboratory certification standards.

History and Status

Start Date **July 2013** Completion Date **June 2019** Status **Construction- Implementation**

Project Funding by Year

18-14	FY 2013	0
	FY 2014	100,000
	FY 2015	0
	FY 2016	100,000
	FY 2017	0
5 Year Total		200,000
Prior Years		0
Beyond 5 Years		100,000
Project Total		300,000

Project Funding Sources

18-14	Fund Balance - Utility Fund	300,000
Total Project Funding		300,000

Estimated Project Costs by Expense Category

18-14	FY 2013	5 Year Total	Project Total
Construction	0	200,000	300,000
Project Total	0	200,000	300,000

Operating Impacts

Lake Gaston WTP Membrane Replacement Phase II

21-13

Project Type	Replacement	Public Utilities
Description	To establish and maintain a designated reserve account to fund ultra-filtration membrane replacement at the Lake Gaston Water Treatment Plant.	
Purpose and Need	This project serves as a funding source for ultra-filtration membrane elements at the Lake Gaston Water Treatment Plant. Each funding "Phase" is a cycle comprised of five separate appropriations of \$345,000. Following the fifth appropriation, a new funding cycle (phase) is begun.	
History and Status	New project originally funded for FY 2013. Final membrane purchase under Phase I (project #52-12) has been issued and that project is near completion.	

Start Date July 2012 Completion Date June 2018 Status Construction- Implementation

Project Funding by Year

21-13	FY 2013	345,000
	FY 2014	345,000
	FY 2015	345,000
	FY 2016	345,000
	FY 2017	345,000
5 Year Total		1,725,000
Prior Years		0
Beyond 5 Years		0
Project Total		1,725,000

Project Funding Sources

21-13	Fund Balance - Utility Fund	1,725,000
Total Project Funding		1,725,000

Estimated Project Costs by Expense Category

21-13	FY 2013	5 Year Total	Project Total
Equipment	345,000	1,725,000	1,725,000
Project Total	345,000	1,725,000	1,725,000

Operating Impacts

Lake Gaston WTP Membrane Replacement Phase III

25-17

Project Type	Replacement	Public Utilities
Description	To establish and maintain a designated reserve account to fund ultra-filtration membrane replacement at the Lake Gaston Water Treatment Plant.	
Purpose and Need	Ultra-filtration membranes have an expected service life of seven years. Replacement cost is \$200,000 per membrane cassette.	
History and Status	Savings for future replacements is ongoing.	
Start Date	July 2017	Completion Date June 2023
		Status New

Project Funding by Year

25-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		1,380,000
Project Total		1,380,000

Project Funding Sources

25-17	Fund Balance - Utility Fund	1,380,000
Total Project Funding		1,380,000

Estimated Project Costs by Expense Category

25-17	FY 2013	5 Year Total	Project Total
Equipment	0	0	1,380,000
Project Total	0	0	1,380,000

Operating Impacts

Liberty Street Sewer (500 Block to Collingswood)

26-17

Project Type	Replacement	Public Utilities
Description	Renew or replace 3100 feet of gravity sewer main & appurtenances on Liberty St from Collingswood Ave. to 18th St, with a branch to 22nd St and 20th St. This will include one railroad crossing.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2016	Completion Date July 2017
		Status New

Project Funding by Year			Project Funding Sources		
26-17	FY 2013	0	26-17	Revenue Bonds - Utility Fund	1,389,259
	FY 2014	0		Total Project Funding	1,389,259
	FY 2015	0			
	FY 2016	1,389,259			
	FY 2017	0			
	5 Year Total	1,389,259			
	Prior Years	0			
	Beyond 5 Years	0			
	Project Total	1,389,259			

Estimated Project Costs by Expense Category			
26-17	FY 2013	5 Year Total	Project Total
Construction	0	1,389,259	1,389,259
Project Total	0	1,389,259	1,389,259

Operating Impacts

Maintenance & Operations Equipment Replacement

18-15

Project Type	Equipment	Public Utilities
Description	Equipment replacement for Maintenance & Operations facility.	
Purpose and Need	Replace aging and non-replaced yard equipment at the Maintenance & Operations facility to optimize field operations.	
History and Status		
Start Date	July 2011	Completion Date June 2017
		Status Construction- Implementation

Project Funding by Year

18-15	FY 2013	750,000
	FY 2014	600,000
	FY 2015	600,000
	FY 2016	600,000
	FY 2017	0
5 Year Total		2,550,000
Prior Years		800,000
Beyond 5 Years		0
Project Total		3,350,000

Project Funding Sources

18-15	Fund Balance - Utility Fund	3,350,000
Total Project Funding		3,350,000

Estimated Project Costs by Expense Category

18-15	FY 2013	5 Year Total	Project Total
Equipment	750,000	2,550,000	3,350,000
Project Total	750,000	2,550,000	3,350,000

Operating Impacts

Maintenance & Operations Equipment Replacement Phase II

27-17

Project Type	Equipment	Public Utilities
Description	Equipment replacement for Maintenance & Operations facility.	
Purpose and Need	Replace aging and non-replaced yard equipment at the Maintenance & Operations facility to optimize field operations.	
History and Status		
Start Date	July 2016	Completion Date June 2021
		Status New

Project Funding by Year

27-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	600,000
	5 Year Total	600,000
	Prior Years	0
	Beyond 5 Years	2,400,000
	Project Total	3,000,000

Project Funding Sources

27-17	Fund Balance - Utility Fund	3,000,000
	Total Project Funding	3,000,000

Estimated Project Costs by Expense Category

27-17	FY 2013	5 Year Total	Project Total
Equipment	0	600,000	3,000,000
Project Total	0	600,000	3,000,000

Operating Impacts

Manhole Rehabilitation (1709 Vertical Feet)

28-17

Project Type Renovation or Rehabilitation Public Utilities

Description Funding for manhole rehabilitation projects.

Purpose and Need To rehabilitate sanitary sewer manholes not currently identified that may be the cause of leaks, cave-ins, or other operational issues.

History and Status

Start Date July 2013

Completion Date June 2015

Status

Project Funding by Year

28-17	FY 2013	0
	FY 2014	922,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		922,000
Prior Years		0
Beyond 5 Years		0
Project Total		922,000

Project Funding Sources

28-17	Revenue Bonds - Utility Fund	922,000
Total Project Funding		922,000

Estimated Project Costs by Expense Category

28-17	FY 2013	5 Year Total	Project Total
Construction	0	922,000	922,000
Project Total	0	922,000	922,000

Operating Impacts

Melton Street Sewer Renewal

29-17

Project Type	Replacement	Public Utilities
Description	Replace approximately 480 feet of gravity sewer along the full length of Melton Street	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2015	Completion Date June 2016
		Status New

Project Funding by Year

29-17	FY 2013	0
	FY 2014	0
	FY 2015	247,160
	FY 2016	0
	FY 2017	0
5 Year Total		247,160
Prior Years		0
Beyond 5 Years		0
Project Total		247,160

Project Funding Sources

29-17	Revenue Bonds - Utility Fund	247,160
Total Project Funding		247,160

Estimated Project Costs by Expense Category

29-17	FY 2013	5 Year Total	Project Total
Construction	0	247,160	247,160
Project Total	0	247,160	247,160

Operating Impacts

Meter Reading Equipment and Software

53-12

Project Type	Replacement	Public Utilities
Description	Replace the current meter reading equipment and software used to record customer meter readings and initiate billing.	
Purpose and Need	The current equipment is obsolete and will not be supported by the vendor. Replacement is needed to ensure Public Utilities maintains the capability to generate timely and accurate customer invoices.	
History and Status		
Start Date	July 2007	Completion Date June 2020
		Status New

53-12	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	2,000,000
5 Year Total		2,000,000
Prior Years		1,316,579
Beyond 5 Years		8,000,000
Project Total		11,316,579

53-12	Fund Balance - Utility Fund	11,316,579
Total Project Funding		11,316,579

53-12	FY 2013	5 Year Total	Project Total
Equipment	0	2,000,000	11,316,579
Project Total	0	2,000,000	11,316,579

Operating Impacts

Money Point Crossing

30-17

Project Type	Replacement	Public Utilities
Description	Install approximately 1600 linear feet of 12-inch water main from South Military Highway across the Southern Branch of the Elizabeth River to the Money Point area.	
Purpose and Need	To provide a looped system for improved system reliability, improved fire protection and improved water quality.	
History and Status		
Start Date	January 2013	Completion Date December 2013 Status New

Project Funding by Year		
30-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		1,828,263
Project Total		1,828,263

Project Funding Sources		
30-17	Revenue Bonds - Utility Fund	1,828,263
Total Project Funding		1,828,263

Estimated Project Costs by Expense Category			
30-17	FY 2013	5 Year Total	Project Total
	Construction	0	0
Project Total		0	1,828,263

Operating Impacts

Northwest River Plant Membrane Replacement Phase III

01-09

Project Type	Replacement	Public Utilities
Description	To establish and maintain a designated reserve account to fund membrane replacement at the water treatment plant.	
Purpose and Need	Surface water membranes have an expected service life of seven years. Ground water membranes have an expected useful life of three years. Replacement costs are \$1,050,000 and \$309,000, respectively.	
History and Status	Plans for replacing surface water elements are underway.	
Start Date	July 2010	Completion Date June 2016
Status	Construction- Implementation	

Project Funding by Year

01-09	FY 2013	350,000
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	1,100,000
5 Year Total		1,450,000
Prior Years		1,450,000
Beyond 5 Years		0
Project Total		2,900,000

Project Funding Sources

01-09	Fund Balance - Utility Fund	2,900,000
Total Project Funding		2,900,000

Estimated Project Costs by Expense Category

01-09	FY 2013	5 Year Total	Project Total
Equipment	350,000	1,450,000	2,900,000
Project Total	350,000	1,450,000	2,900,000

Operating Impacts

Northwest River Plant Membrane Replacement Phase IV

01-14

Project Type **Replacement** Public Utilities

Description To establish and maintain a designated reserve account to fund membrane replacement at the water treatment plant.

Purpose and Need Surface water membranes have an expected service life of seven years. Ground water membranes have an expected useful life of three years. Replacement costs are \$1,050,000 and \$309,000, respectively.

History and Status

Start Date **July 2013** Completion Date **June 2019** Status **Construction- Implementation**

Project Funding by Year

01-14	FY 2013	0
	FY 2014	350,000
	FY 2015	350,000
	FY 2016	350,000
	FY 2017	350,000
5 Year Total		1,400,000
Prior Years		0
Beyond 5 Years		350,000
Project Total		1,750,000

Project Funding Sources

01-14	Fund Balance - Utility Fund	1,750,000
Total Project Funding		1,750,000

Estimated Project Costs by Expense Category

01-14	FY 2013	5 Year Total	Project Total
Equipment	0	1,400,000	1,750,000
Project Total	0	1,400,000	1,750,000

Operating Impacts

Orville Ave Alleyway Sewer - Bainbridge to Seaboard

31-17

Project Type	Replacement	Public Utilities
Description	Replace approximately 1,900 feet of gravity sewer along the full length of the Orville Ave alleyway.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2016	Completion Date July 2017
		Status New

31-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	1,350,733
	FY 2017	0
5 Year Total		1,350,733
Prior Years		0
Beyond 5 Years		0
Project Total		1,350,733

31-17	Revenue Bonds - Utility Fund	1,350,733
Total Project Funding		1,350,733

31-17	FY 2013	5 Year Total	Project Total
Construction	0	1,350,733	1,350,733
Project Total	0	1,350,733	1,350,733

Operating Impacts

Pump Station and Wet Well Upgrading Phase IV

02-14

Project Type	Replacement	Public Utilities
Description	Replace worn-out equipment to meet Department of Environmental Quality regulations.	
Purpose and Need	Equipment in stations has a limited useful life. As a result it must be periodically replaced to ensure that the facilities remain in operation preventing sewer overflows. Structural repairs to buildings and structures are also periodically required.	
History and Status		
Start Date	July 2012	Completion Date June 2018
		Status Construction- Implementation

02-14	FY 2013	300,000
	FY 2014	400,000
	FY 2015	400,000
	FY 2016	400,000
	FY 2017	400,000
5 Year Total		1,900,000
Prior Years		0
Beyond 5 Years		0
Project Total		1,900,000

02-14	Fund Balance - Utility Fund	1,900,000
Total Project Funding		1,900,000

02-14	FY 2013	5 Year Total	Project Total
Equipment	300,000	1,900,000	1,900,000
Project Total	300,000	1,900,000	1,900,000

Operating Impacts

Pump Station and Wet Well Upgrading Phase V

32-17

Project Type **Replacement** Public Utilities

Description Replace worn-out equipment to meet Department of Environmental Quality regulations.

Purpose and Need Equipment in stations has a limited useful life. As a result, it must be periodically replaced to ensure that the facilities remain in operation preventing sewer overflows. Structural repairs to buildings and structures are also required periodically.

History and Status

Start Date **July 2017** Completion Date **June 2022** Status **New**

Project Funding by Year

32-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		1,600,000
Project Total		1,600,000

Project Funding Sources

32-17	Fund Balance - Utility Fund	1,600,000
Total Project Funding		1,600,000

Estimated Project Costs by Expense Category

32-17	FY 2013	5 Year Total	Project Total
Equipment	0	0	1,600,000
Project Total	0	0	1,600,000

Operating Impacts

Raleigh Place Sewer (Pump Station #7)

33-17

Project Type	Replacement	Public Utilities
Description	Renew approximately 7730 linear feet of 8-inch gravity sanitary sewer main and appurtenances in the Raleigh Place Subdivision in South Norfolk from Rosemont Ave. to the intersection of Burrow Avenue and Bainbridge Blvd.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2016	Completion Date July 2017
		Status New

Project Funding by Year			Project Funding Sources		
33-17	FY 2013	0	33-17	Revenue Bonds - Utility Fund	3,402,390
	FY 2014	0		Total Project Funding	3,402,390
	FY 2015	0			
	FY 2016	0			
	FY 2017	0			
	5 Year Total	0			
	Prior Years	0			
	Beyond 5 Years	3,402,390			
	Project Total	3,402,390			

Estimated Project Costs by Expense Category				
33-17	FY 2013	5 Year Total	Project Total	
	Construction	0	0	3,402,390
	Project Total	0	0	3,402,390

Operating Impacts

Raw Water Transmission Main

39-12

Project Type	Addition or Expansion	Public Utilities
Description	This project provides for installation of approximately 9 miles of 36-inch raw water pipeline and transmission facilities from Red Top in Suffolk to the Lake Gaston Water Treatment Plant in Western Branch area of City.	
Purpose and Need	The Lake Gaston treatment plant currently treats water provided from excess capacity drawn from Norfolk's raw water resources. The new pipeline and transmission facilities ensure that the City is able to draw it's one-sixth allocation from the Lake Gaston under terms of a contract with the City of Virginia Beach.	
History and Status	Horizontal directional drilling (HDD) under ponds and streams was completed (Summer 2012). Design of Sections A & B are complete and the Section A has been advertised; bid opening is scheduled for December 13. A private engineering firm is proceeding with design of the remaining project sections, excluding the tank and pump station site.	
Start Date	February 2009	Completion Date January 2015
Status	Construction- Implementation	

Project Funding by Year

39-12	FY 2013	6,000,000
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
	5 Year Total	6,000,000
	Prior Years	9,000,000
	Beyond 5 Years	0
	Project Total	15,000,000

Project Funding Sources

39-12	Revenue Bonds - Utility Fund	15,000,000
	Total Project Funding	15,000,000

Estimated Project Costs by Expense Category

39-12	FY 2013	5 Year Total	Project Total
Construction	5,500,000	5,500,000	13,800,000
Design and Engineer	500,000	500,000	1,200,000
Project Total	6,000,000	6,000,000	15,000,000

Operating Impacts

Red Top Tank and Raw Water Pump Station

17-14

Project Type	Addition or Expansion	Public Utilities
Description	Installation of a raw water tank and pump station to allow utilization of Lake Gaston Water.	
Purpose and Need	Meet future water demands.	
History and Status		
Start Date	July 2013	Completion Date January 2015 Status Construction- Implementation

Project Funding by Year

17-14	FY 2013	5,796,370
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		5,796,370
Prior Years		0
Beyond 5 Years		0
Project Total		5,796,370

Project Funding Sources

17-14	Revenue Bonds - Utility Fund	5,796,370
Total Project Funding		5,796,370

Estimated Project Costs by Expense Category

17-14	FY 2013	5 Year Total	Project Total
Construction	5,796,370	5,796,370	5,796,370
Project Total	5,796,370	5,796,370	5,796,370

Operating Impacts

River Bank Filtration Study - Northwest River Plant

34-17

Project Type	Study	Public Utilities
Description	This study addresses the feasibility of using river bank filtration, an innovative method of lowering organic content from surface water, at the Northwest River treatment plant.	
Purpose and Need	The study would determine whether the use of river bank filtration would reduce reliance on surface water reverse osmosis units that are heavily used during summer months.	
History and Status	New project that would commence in FY 2017.	
Start Date	July 2016	Completion Date December 2016 Status Feasibility Study

Project Funding by Year

34-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	175,000
5 Year Total		175,000
Prior Years		0
Beyond 5 Years		0
Project Total		175,000

Project Funding Sources

34-17	Fund Balance - Utility Fund	175,000
Total Project Funding		175,000

Estimated Project Costs by Expense Category

34-17	FY 2013	5 Year Total	Project Total
Other	0	175,000	175,000
Project Total	0	175,000	175,000

Operating Impacts

Sanitary Sewer Evaluation Study

27-12

Project Type	Study	Public Utilities
Description	To conduct sanitary sewer evaluation study (SSES).	
Purpose and Need	This study and associated activities as required by proposed consent order from Virginia Department of Environmental Quality (DEQ).	
History and Status	Monitoring and analysis continue. Currently monitoring flows at more than 110 pump stations. Pressures in the force mains are being monitored at 49 locations. Twelve recording rain gauges are located throughout the City to collect data on storm events. Fifteen pump stations have been determined to be SSES basins. Smoke testing has been completed on all but a few of the basins. CCTV and engineering analyses to begin. Revised Maintenance, Operations, and Maintenance (MOM) program submitted to DEQ in September - follow-up comments received November 2011.	

Start Date July 2007 Completion Date January 2014 Status Construction- Implementation

Project Funding by Year

27-12	FY 2013	200,000
	FY 2014	500,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		700,000
Prior Years		8,615,450
Beyond 5 Years		0
Project Total		9,315,450

Project Funding Sources

27-12	Fund Balance - Utility Fund	169,599
27-12	Revenue Bonds - Utility Fund	9,145,851
Total Project Funding		9,315,450

Estimated Project Costs by Expense Category

27-12	FY 2013	5 Year Total	Project Total
Construction	0	0	655,371
Design and Engineer	0	0	7,060,079
Other	200,000	700,000	1,600,000
Project Total	200,000	700,000	9,315,450

Operating Impacts

Service Area Gravity Sewer Improvements - Phase I (Pump Station #3)

35-17

Project Type	Replacement	Public Utilities
Description	This project provides improvements to the existing gravity sewer system in the Indian River area, including improvements to Pump Station 3.	
Purpose and Need	The Sanitary Sewer Evaluation Study (SSES) required by DEQ revealed deficiencies in the sewer system in the Indian River area. The DEQ consent order requires that the City remediate deficiencies identified in the study. The study, along with City maintenance logs, indicates severe deterioration that require replacement.	
History and Status	Interim reports from SSES (project 27-12) identified deficiencies in Indian River area sewer system and pump station.	
Start Date	July 2013	Completion Date June 2019
		Status New

Project Funding by Year			Project Funding Sources		
35-17	FY 2013	1,016,210	35-17	Revenue Bonds - Utility Fund	4,672,978
	FY 2014	1,656,768		Total Project Funding	4,672,978
	FY 2015	0			
	FY 2016	2,000,000			
	FY 2017	0			
	5 Year Total	4,672,978			
	Prior Years	0			
	Beyond 5 Years	0			
	Project Total	4,672,978			
Estimated Project Costs by Expense Category					
35-17	FY 2013	5 Year Total	Project Total		
	Construction	1,016,210	4,672,978	4,672,978	
	Project Total	1,016,210	4,672,978	4,672,978	

Operating Impacts

Sewer Management Operations & Maintenance

13-16

Project Type	Replacement	Public Utilities
Description	Replace failing components necessary in the management, operations, and maintenance (MOM) of the sanitary sewer system. This project will prevent sanitary sewer overflows by improving the capability of the City's sewer force main and gravity piping systems (including manholes) along with upgrades to pump station facilities.	
Purpose and Need	Deficiencies were indentified in the Sanitary Sewer Evaluation Study (SSES project 27-12) required by consent order issued by DEQ. This project addresses compliance with the consent order.	
History and Status		
Start Date	July 2013	Completion Date June 2019
		Status Construction- Implementation

Project Funding by Year			Project Funding Sources		
13-16	FY 2013	0	13-16	Revenue Bonds - Utility Fund	4,500,000
	FY 2014	1,000,000		Total Project Funding	4,500,000
	FY 2015	1,000,000			
	FY 2016	1,500,000			
	FY 2017	1,000,000			
	5 Year Total	4,500,000			
	Prior Years	0			
	Beyond 5 Years	0			
	Project Total	4,500,000			

Estimated Project Costs by Expense Category			
13-16	FY 2013	5 Year Total	Project Total
Construction	0	3,825,000	3,825,000
Design and Engineer	0	675,000	675,000
Project Total	0	4,500,000	4,500,000

Operating Impacts

Sewer Renewal - Manhole Inserts Phase II

03-14

Project Type	Renovation or Rehabilitation	Public Utilities
Description	To purchase and install manhole inserts.	
Purpose and Need	Manhole inserts have proven an effective approach to limiting the inflow of storm and surface water into the sanitary sewer system. The inflow of surface water into the system can overload system capacity and lead to sewer overflows into streams and rivers. The City is installing inserts throughout the sewer system in compliance with the proposed DEQ Consent Order.	
History and Status	The need to limit inflows of surface water into sanitary sewer system became critical in 1999 with several severe floods, including Hurricane Floyd. This is a continuation of a project first started in July 2001.	

Start Date	July 2012	Completion Date	June 2018	Status	Construction- Implementation
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Project Funding by Year			Project Funding Sources		
03-14	FY 2013	100,000	03-14	Fund Balance - Utility Fund	500,000
	FY 2014	100,000		Total Project Funding	500,000
	FY 2015	100,000			
	FY 2016	100,000			
	FY 2017	100,000			
	5 Year Total	500,000			
	Prior Years	0			
	Beyond 5 Years	0			
	Project Total	500,000			

Estimated Project Costs by Expense Category			
03-14	FY 2013	5 Year Total	Project Total
Equipment	100,000	500,000	500,000
Project Total	100,000	500,000	500,000

Operating Impacts

Sewer Renewal - Manhole Inserts Phase III

36-17

Project Type	Renovation or Rehabilitation	Public Utilities
Description	To purchase and install manhole inserts.	
Purpose and Need	Manhole inserts have proven an effective approach to limiting the inflow of storm and surface water into the sanitary sewer system. The inflow of surface water into the system can overload system capacity and lead to sewer overflows into streams and rivers. The City is installing inserts throughout the sewer system in compliance with the proposed DEQ Consent Order.	
History and Status	The need to limit inflows of surface water into sanitary sewer system became critical in 1999 with several sever floods, including Hurricane Floyd. This is a continuation of a project first started in July 2001.	

Start Date	July 2017	Completion Date	June 2022	Status	New
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Project Funding by Year			Project Funding Sources		
36-17	FY 2013	0	36-17	Fund Balance - Utility Fund	400,000
	FY 2014	0		Total Project Funding	400,000
	FY 2015	0			
	FY 2016	0			
	FY 2017	0			
	5 Year Total	0			
	Prior Years	0			
	Beyond 5 Years	400,000			
	Project Total	400,000			

Estimated Project Costs by Expense Category			
36-17	FY 2013	5 Year Total	Project Total
Construction	0	0	400,000
Project Total	0	0	400,000

Operating Impacts

Sewer Renewal (Phase I SSES Implementation)

32-12

Project Type	Replacement	Public Utilities
Description	This project will address two distinct service areas: Indian River and Rosemont Avenue. Plans will replace deficient sanitary sewer components identified as critical in the SSES. The project will improve the gravity sewer system of the Indian River service area by replacing pipes at Pump Station #7 and those located in swampy areas. The project also includes improvements on Rosemont Avenue (South Norfolk).	
Purpose and Need	This project includes improvements identified in the Sanitary Sewer Evaluation Study (SSES) for the Indian River service area. The project is needed to prevent sewer overflows in the service areas.	
History and Status	Engineer consultants have been selected to perform engineering design and construction, administration, inspection, and hydraulic modeling for both projects.	
Start Date	July 2010	Completion Date June 2016
Status	Construction- Implementation	

Project Funding by Year			Project Funding Sources		
32-12	FY 2013	2,029,247	32-12	Revenue Bonds - Utility Fund	5,766,036
	FY 2014	0		Total Project Funding	5,766,036
	FY 2015	0			
	FY 2016	0			
	FY 2017	0			
	5 Year Total	2,029,247			
	Prior Years	3,736,789			
	Beyond 5 Years	0			
	Project Total	5,766,036			
Estimated Project Costs by Expense Category					
32-12	FY 2013	5 Year Total	Project Total		
	Construction	2,029,247	2,029,247	5,566,036	
	Design and Engineer	0	0	200,000	
	Project Total	2,029,247	2,029,247	5,766,036	

Operating Impacts

Sewer Renewal (Phase II SSES Implementation)

33-12

Project Type Replacement Public Utilities

Description This project includes two service areas: the Volvo Parkway Force Main Repair and the Indian River Force Main Upgrade. The project will replace the force main systems in the area of the pump stations.

Purpose and Need This project is the second phase implementation of improvements necessary to address deficiencies identified in the Sanitary Sewer Evaluation Study (project 27-12). The project will prevent sanitary sewer overflows by improving the capability of the city's sewer pump station force main systems.

History and Status

Start Date July 2011

Completion Date June 2013

Status Construction- Implementation

Project Funding by Year

33-12	FY 2013	700,000
	FY 2014	1,000,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
	5 Year Total	1,700,000
	Prior Years	2,183,742
	Beyond 5 Years	0
	Project Total	3,883,742

Project Funding Sources

33-12	Revenue Bonds - Utility Fund	3,883,742
	Total Project Funding	3,883,742

Estimated Project Costs by Expense Category

33-12	FY 2013	5 Year Total	Project Total
Construction	700,000	1,700,000	3,681,742
Design and Engineer	0	0	202,000
Project Total	700,000	1,700,000	3,883,742

Operating Impacts

Sewer Renewal (Phase IV SSES Implementation)

37-17

Project Type	Replacement	Public Utilities
Description	Renew or replace sanitary sewer identified as part of SSES and identified as critical.	
Purpose and Need	This project is the fourth phase of plans to address sewer system deficiencies identified in SSES required by DEQ proposed consent order. Sections of the sanitary sewer system are in need of replacement or repair in order to prevent sewer overflows and provide customers with reliable service.	
History and Status	Work required by SSES is being identified.	
Start Date	July 2015	Completion Date June 2021
		Status New

Project Funding by Year			Project Funding Sources		
37-17	FY 2013	0	37-17	Fund Balance - Utility Fund	19,000,000
	FY 2014	0			
	FY 2015	2,000,000		Total Project Funding	19,000,000
	FY 2016	0			
	FY 2017	0			
	5 Year Total	2,000,000			
	Prior Years	0			
	Beyond 5 Years	17,000,000			
	Project Total	19,000,000			

Estimated Project Costs by Expense Category				
37-17	FY 2013	5 Year Total	Project Total	
	Construction	0	2,000,000	19,000,000
	Project Total	0	2,000,000	19,000,000

Operating Impacts

Sewer System Repairs Phase II

04-14

Project Type	Replacement	Public Utilities
Description	Funding for minor unanticipated sewer line and manhole replacement.	
Purpose and Need	To replace sewer lines not currently identified that may occur as the result of problems experienced with leaks, cave-ins, or other operational issues.	
History and Status	Continuation of project 24-12 that first started in July 2007.	
Start Date	July 2012	Completion Date July 2018
		Status Construction- Implementation

Project Funding by Year

04-14	FY 2013	250,000
	FY 2014	250,000
	FY 2015	250,000
	FY 2016	250,000
	FY 2017	250,000
	5 Year Total	1,250,000
	Prior Years	0
	Beyond 5 Years	0
	Project Total	1,250,000

Project Funding Sources

04-14	Fund Balance - Utility Fund	1,250,000
	Total Project Funding	1,250,000

Estimated Project Costs by Expense Category

04-14	FY 2013	5 Year Total	Project Total
Construction	250,000	1,250,000	1,250,000
Project Total	250,000	1,250,000	1,250,000

Operating Impacts

Sewer System Repairs Phase III

38-17

Project Type	Renovation or Rehabilitation	Public Utilities
Description	Funding for minor unanticipated sewer line and manhole replacement.	
Purpose and Need	To replace sewer lines not currently identified that may occur as the result of problems experienced with leaks, cave-ins, or other operational issues.	
History and Status	Continuation of project 24-12 (July 2007) and project 04-14 (July 2013).	
Start Date	July 2017	Completion Date June 2022 Status New

Project Funding by Year

38-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		1,000,000
Project Total		1,000,000

Project Funding Sources

38-17	Fund Balance - Utility Fund	1,000,000
Total Project Funding		1,000,000

Estimated Project Costs by Expense Category

38-17	FY 2013	5 Year Total	Project Total
Construction	0	0	1,000,000
Project Total	0	0	1,000,000

Operating Impacts

South Norfolk Improvements

45-12

Project Type	Replacement	Public Utilities
Description	Install new water mains and replace substandard water mains and appurtenances at various locations in South Norfolk.	
Purpose and Need	This project will improve the City's water supply and reliability considering recent and upcoming growth in South Norfolk. The project consists of improvements to the City's water distribution system to allow transfer of demand to the Northwest River/Lake Gaston supply. A master plan will be developed from hydraulic modeling of the City's system. Specific improvements will be designed and constructed in phases and will include upgrades to existing mains, new water main loops and interconnections in the South Norfolk & Washington Boroughs, which are presently supplied by Norfolk water.	
History and Status	Poindexter Streetscape Phase 2 Additional Work - Sewer renewal along Decatur Street is complete. Sewer renewal and water service line replacement along Chesapeake Avenue has started.	

Start Date	July 2008	Completion Date	June 2014	Status	Construction- Implementation
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Project Funding by Year			Project Funding Sources		
45-12	FY 2013	150,000	45-12	Revenue Bonds - Utility Fund	4,868,427
	FY 2014	2,018,427		Total Project Funding	4,868,427
	FY 2015	0			
	FY 2016	0			
	FY 2017	0			
	5 Year Total	2,168,427			
	Prior Years	2,700,000			
	Beyond 5 Years	0			
	Project Total	4,868,427			

Estimated Project Costs by Expense Category				
45-12	FY 2013	5 Year Total	Project Total	
Design and Engineer	150,000	2,168,427	4,868,427	
Project Total	150,000	2,168,427	4,868,427	

Operating Impacts

Storm Harden Field Operations Building

23-12

Project Type **Renovation or Rehabilitation** **Public Utilities**

Description To provide additional storm protection for critical areas of the Northwest River Water Treatment Plant. Historical experience with hurricanes, northeasters and other extreme weather events have highlighted the need for additional protection to insure the highest degree of plant reliability for our customers. This project will be combined with the Northwest River WTP Miscellaneous Modifications Project (19-13).

Purpose and Need Storm resistant design was not incorporated into the original NWRWTP.

History and Status Contract signed on March 16, 2011. Notice to Proceed effective April 6, 2011. Other tasks of competing priority in the Miscellaneous Modifications project were selected for design ahead of this project. Storm hardening design will be undertaken at the earliest possible time.

Start Date July 2007

Completion Date June 2013

Status Construction- Implementation

Project Funding by Year

23-12	FY 2013	0
	FY 2014	3,871,568
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		3,871,568
Prior Years		4,000,000
Beyond 5 Years		0
Project Total		7,871,568

Project Funding Sources

23-12	Revenue Bonds - Utility Fund	7,871,568
Total Project Funding		7,871,568

Estimated Project Costs by Expense Category

23-12	FY 2013	5 Year Total	Project Total
Construction	0	3,871,568	7,221,568
Design and Engineer	0	0	400,000
Other	0	0	250,000
Project Total	0	3,871,568	7,871,568

Operating Impacts

Telemetry Upgrade Phase II

16-14

Project Type	Replacement	Public Utilities
Description	Replace radio equipment with 800 MHz units.	
Purpose and Need	Upgrade telemetry to facilitate monitoring of system operation.	
History and Status		
Start Date	July 2013	Completion Date July 2019
Status	Construction- Implementation	

Project Funding by Year

16-14	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	150,000
	FY 2017	0
5 Year Total		150,000
Prior Years		0
Beyond 5 Years		150,000
Project Total		300,000

Project Funding Sources

16-14	Fund Balance - Utility Fund	300,000
Total Project Funding		300,000

Estimated Project Costs by Expense Category

16-14	FY 2013	5 Year Total	Project Total
Construction	0	50,000	100,000
Equipment	0	100,000	200,000
Project Total	0	150,000	300,000

Operating Impacts

Telemetry Upgrade Phase III

39-17

Project Type	Replacement	Public Utilities
Description	Replace radio equipment with 800 MHz units.	
Purpose and Need	Upgrade telemetry to facilitate monitoring of system operation.	
History and Status		
Start Date	July 2019	Completion Date June 2025
		Status New

Project Funding by Year

39-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		150,000
Project Total		150,000

Project Funding Sources

39-17	Fund Balance - Utility Fund	150,000
Total Project Funding		150,000

Estimated Project Costs by Expense Category

39-17	FY 2013	5 Year Total	Project Total
Equipment	0	0	150,000
Project Total	0	0	150,000

Operating Impacts

Water Renewals - Waterline Upgrading

71-12

Project Type	Replacement	Public Utilities
Description	To replace water mains and appurtenances with adequate sizes and proper materials throughout various locations within the city.	
Purpose and Need	These improvements are necessary to replace water mains and appurtenances to provide fire protection and increase flows and pressures creating reliable flow patterns in the system to meet peak demands.	
History and Status	Pending	
Start Date	July 2009	Completion Date June 2014
Status	Construction- Implementation	

Project Funding by Year			Project Funding Sources		
71-12	FY 2013	625,000	71-12	Fund Balance - Utility Fund	2,030,558
	FY 2014	0		Total Project Funding	2,030,558
	FY 2015	0			
	FY 2016	0			
	FY 2017	0			
	5 Year Total	625,000			
	Prior Years	1,405,558			
	Beyond 5 Years	0			
	Project Total	2,030,558			
Estimated Project Costs by Expense Category					
71-12	FY 2013	5 Year Total	Project Total		
	Construction	625,000	625,000	2,030,558	
	Project Total	625,000	625,000	2,030,558	

Operating Impacts

Water Renewals - Waterline Upgrading Phase II

14-16

Project Type	Replacement	Public Utilities
Description	To replace water mains and appurtenances with adequate sizes and proper materials throughout various locations within the city.	
Purpose and Need	These improvements are necessary to replace water mains and appurtenances to provide fire protection and increase flows and pressures creating reliable flow patterns in the system to meet peak demands.	
History and Status		
Start Date	July 2014	Completion Date June 2020
Status	Construction- Implementation	

Project Funding by Year			Project Funding Sources		
14-16	FY 2013	0	14-16	Fund Balance - Utility Fund	3,750,000
	FY 2014	750,000		Total Project Funding	3,750,000
	FY 2015	750,000			
	FY 2016	750,000			
	FY 2017	750,000			
	5 Year Total	3,000,000			
	Prior Years	0			
	Beyond 5 Years	750,000			
	Project Total	3,750,000			
Estimated Project Costs by Expense Category					
14-16	FY 2013	5 Year Total	Project Total		
	Construction	0	3,000,000	3,750,000	
	Project Total	0	3,000,000	3,750,000	

Operating Impacts

Water Renewals - Waterline Upgrading Phase III

40-17

Project Type Replacement Public Utilities

Description To replace water mains and appurtenances with adequate sizes and proper materials throughout various locations within the city.

Purpose and Need These improvements are necessary to replace water mains and appurtenances to provide fire protection and increase flows and pressures creating reliable flow patterns in the system to meet peak demands.

History and Status

Start Date January 2013 Completion Date December 2018 Status New

Project Funding by Year

40-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		2,250,000
Project Total		2,250,000

Project Funding Sources

40-17	Fund Balance - Utility Fund	2,250,000
Total Project Funding		2,250,000

Estimated Project Costs by Expense Category

40-17	FY 2013	5 Year Total	Project Total
Construction	0	0	2,250,000
Project Total	0	0	2,250,000

Operating Impacts

Water System Renewal Phase II

21-15

Project Type	Replacement	Public Utilities
Description	This project provides funding for small capital replacement of water lines. Typically, these replacements are not anticipated.	
Purpose and Need	To replace small water lines and antiquated appurtenances not currently identified that may occur as the result of problems experienced with leaks or other operational issues.	
	Replacement criteria includes excessive repairs of existing water line, low water pressure in area, age of the system, and type of pipe.	
History and Status	Phase II is continuation of project 24-12 first started in July 2009.	
Start Date	July 2012	Completion Date July 2018
		Status Construction- Implementation

Project Funding by Year			Project Funding Sources		
21-15	FY 2013	150,000	21-15	Fund Balance - Utility Fund	950,000
	FY 2014	200,000		Total Project Funding	950,000
	FY 2015	200,000			
	FY 2016	200,000			
	FY 2017	200,000			
	5 Year Total	950,000			
	Prior Years	0			
	Beyond 5 Years	0			
	Project Total	950,000			
Estimated Project Costs by Expense Category					
21-15	FY 2013	5 Year Total	Project Total		
	Construction	150,000	950,000	950,000	
	Project Total	150,000	950,000	950,000	

Operating Impacts

Water System Repair Phase III

41-17

Project Type	Renovation or Rehabilitation	Public Utilities
Description	Funding for minor unanticipated water line replacement.	
Purpose and Need	To replace small water lines and antiquated appurtenances not currently identified that may occur as the result of problems experienced with leaks or other operational issues.	
	Replacement criteria includes excessive repairs of existing water line, low water pressure in area, age of the system, and type of pipe.	
History and Status	Continuation of project first started July 2009.	
Start Date	July 2017	Completion Date June 2022
		Status New

Project Funding by Year

41-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
	5 Year Total	0
	Prior Years	0
	Beyond 5 Years	800,000
	Project Total	800,000

Project Funding Sources

41-17	Fund Balance - Utility Fund	800,000
	Total Project Funding	800,000

Estimated Project Costs by Expense Category

41-17	FY 2013	5 Year Total	Project Total
Construction	0	0	800,000
Project Total	0	0	800,000

Operating Impacts

Waters Road Water Main

15-16

Project Type	New Facility	Public Utilities
Description	Install approximately 2,500 feet of 10-inch water main along Waters Road from Old Vintage Road northeastward to 1105 Waters Road.	
Purpose and Need	This water main will provide an additional water main loop in this area. This project will improve the water system reliability, pressures, and fire protection in the area.	
History and Status		
Start Date	July 2015	Completion Date June 2016
		Status Construction- Implementation

Project Funding by Year

15-16	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		1,198,234
Project Total		1,198,234

Project Funding Sources

15-16	Revenue Bonds - Utility Fund	1,198,234
Total Project Funding		1,198,234

Estimated Project Costs by Expense Category

15-16	FY 2013	5 Year Total	Project Total
Construction	0	0	798,000
Design and Engineer	0	0	300,000
Other	0	0	100,234
Project Total	0	0	1,198,234

Operating Impacts

Western Branch Ground Storage Tank Renovation

24-14

Project Type Renovation or Rehabilitation Public Utilities

Description Painting, cleaning, and repairing of water storage tank.

Purpose and Need To extend the life of this water storage tank.

History and Status

Start Date July 2013

Completion Date June 2017

Status Construction- Implementation

Project Funding by Year

24-14	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	0
	FY 2017	0
5 Year Total		0
Prior Years		0
Beyond 5 Years		1,074,997
Project Total		1,074,997

Project Funding Sources

24-14	Fund Balance - Utility Fund	1,074,997
Total Project Funding		1,074,997

Estimated Project Costs by Expense Category

24-14	FY 2013	5 Year Total	Project Total
Construction	0	0	1,074,997
Project Total	0	0	1,074,997

Operating Impacts

Western Branch Interconnect to Lake Gaston WTP

47-12

Project Type **Addition or Expansion** **Public Utilities**

Description This project has two phases: Phase I consists of installing 1,817 feet of 20" water main and 2,969 feet of a 16" water main along Jolliff Road. The project will bridge the gap between the existing 12" water main adjacent to Jolliff Middle school and the existing 20" water main at the intersection of Jolliff Road and David's Mill Drive. The water main route will take it across I-664. Phase II of the project will connect the Western Branch plant to the Cavalier Industrial Park and Deep Creek area of the City. Phase II consists of approximately 6,000 feet of water main from near Cavalier Industrial Park to Jolliff Road at Airline Boulevard. The size of the water main will be determined by modeling the City's water system.

Purpose and Need This project will improve system hydraulics and reliability. It offers the flexibility to use either the Portsmouth or Chesapeake systems to serve Western Branch. With this connection, the Western Branch Elevated Water Tank and the Cavalier Elevated Water Tank could support either system if either tank was offline.

History and Status Phase I of the project, installing water main is complete and has been activated. That portion of the project provides 1 million gallons of water per day to the Lake Gaston water treatment plant.

Start Date **July 2008**

Completion Date **April 2014**

Status **Construction- Implementation**

Project Funding by Year

47-12	FY 2013	200,000
	FY 2014	3,035,000
	FY 2015	0
	FY 2016	0
	FY 2017	0
	5 Year Total	3,235,000
	Prior Years	5,063,000
	Beyond 5 Years	0
	Project Total	8,298,000

Project Funding Sources

47-12	Fund Balance - Utility Fund	3,077,500
47-12	Revenue Bonds - Utility Fund	5,220,500
	Total Project Funding	8,298,000

Estimated Project Costs by Expense Category

47-12	FY 2013	5 Year Total	Project Total
Construction	200,000	3,235,000	8,298,000
Project Total	200,000	3,235,000	8,298,000

Operating Impacts

Westwood and Redstart Avenue Sewer

42-17

Project Type	Replacement	Public Utilities
Description	Renew or replace 2000 feet of 8" gravity sewer main & appurtenances on Restart & Westwood Avenues, and a branch to Bainbridge Blvd.	
Purpose and Need	TV inspection and excessive maintenance indicates severe deterioration requiring replacement.	
History and Status		
Start Date	July 2016	Completion Date July 2017
		Status New

Project Funding by Year

42-17	FY 2013	0
	FY 2014	0
	FY 2015	0
	FY 2016	1,105,776
	FY 2017	0
5 Year Total		1,105,776
Prior Years		0
Beyond 5 Years		0
Project Total		1,105,776

Project Funding Sources

42-17	Revenue Bonds - Utility Fund	1,105,776
Total Project Funding		1,105,776

Estimated Project Costs by Expense Category

42-17	FY 2013	5 Year Total	Project Total
Construction	0	1,105,776	1,105,776
Project Total	0	1,105,776	1,105,776

Operating Impacts

