

Public Utilities - Departmental Performance Report

Public Utilities						
The mission of the Department of Public Utilities is to provide public water, including water for fire protection, and public sanitary sewer service to the urban areas of Virginia Beach. The goals of this department include: 1) operate as a revenue supported enterprise; 2) provide quality public service at reasonable costs; 3) plan, build, operate, and maintain its facilities to meet the community needs, environmental responsibilities and regulatory requirements; and 4) develop an environment that fosters innovation, creative ideas, and adaptability to change in meeting the needs of our customers.						
Objective/Performance Measure	Unit	Annual Target	Actual 2008	Actual 2009	Est. 2010	Proj. FY 2011
Community						
Locate and Mark Water and Sewer						
Miss Utility Locating Requests Received	#	80,400.0	78,800.0	68,056.0	80,400.0	75,000.0
Maintain Fire Hydrants						
Defect Notices per 1,000 Hydrants	#	8.0	7.2	2.1	8.0	8.0
Fire Hydrants Serviced	#	1,600.0	1,600.0	1,590.0	1,600.0	1,600.0
Provide Safe Drinking Water						
Active Water Connections	#	131,683.0	131,085.0	131,367.0	132,405.0	133,005.0
Annual Water Quality Samples Tested	#	2,700.0	2,750.0	2,555.0	2,700.0	2,700.0
Respond to Water and Sanitary Sewer Line Defects						
Number of Stoppages	#	4,750.0	5,000.0	3,980.0	4,750.0	4,000.0
Number of Stoppages per Crew	#	1,200.0	1,300.0	796.0	1,200.0	1,000.0
On-time Arrival by Water Crews	%	94.0	94.0	94.0	94.0	94.0
Sanitary Sewer Laterals Replaced	#	335.0	325.0	358.0	335.0	335.0
Sanitary Sewer Main CCTV'd (feet)	#	185,000.0	150,000.0	172,570.0	185,000.0	185,000.0
Sanitary Sewer Main Cleaned (feet-in millions)	#	1.2	0.9	1.1	1.2	1.3
Water Main Breaks per 1,000 Miles	#	150.0	138.0	158.0	150.0	150.0
Financial						
Accurate Water Meter Reading						
Number of Misreads	#	604.0	600.0	604.0	604.0	585.0
Water Meters Read	#	801,500.0	796,000.0	787,443.0	801,500.0	801,500.0
Aged Meter Replacement Program						
Personnel per 1,000 Water Meters Replaced	#	4.1	5.1	4.3	4.1	3.9
Water Meters Replaced	#	7,000.0	5,765.0	6,848.0	7,000.0	7,500.0
Bad Debt Percentage of Billed Revenues						
Bad Debt Percentage of Billed Revenues	%	1.0	0.5	0.4	0.5	0.5
Safe Pump Station Operations						
Cost per Sewer Pump Station	\$	15,088	12,519	15,731	15,088	15,284
Cost per Water Pump Station	\$	292,228	295,540	309,367	292,228	292,228
Sewer Pump Stations Maintained Each Year	#	405.0	405.0	405.0	405.0	410.0
Sewer Pump Stations Maintained per Electrical Crew	#	101.3	101.3	101.3	101.3	82.0
Water Pump Stations Maintained Each Year	#	9.0	9.0	9.0	9.0	9.0
Water Pump Stations per Electrical Crew	#	4.5	4.5	4.5	4.5	4.5

Major Changes

In total, the Department of Public Utilities increased by \$4,141,847 in FY 2010-11 compared to the adjusted FY 2009-10 operating budget. There are two primary reasons: a proposed water rate increase that will generate \$4 million and the use of almost \$3 million of retained earnings in the operating budget to support a “true-up” payment for the Water Services Contract with the City of Norfolk.

Change	Impact
Implementation of a water rate increase to support a Right-of-Way Utility Transfer	<ul style="list-style-type: none"> • The Water Service Availability Charge is increasing 31¢ per month and the water usage rate is increasing 31¢ per 1,000 gallons. • The annual impact to a single-family dwelling is anticipated to be \$22.32.
Implementation of a four-year, stepped sewer rate increase to support capital and operating budget impacts of the regional consent order	<ul style="list-style-type: none"> • The proposed sewer rate increase for FY 2011-12 would generate \$4.16 million to begin addressing the capital needs of meeting the regional consent order issued to the Hampton Roads region by the EPA and DEQ. • The sewer rate for a 5/8” meter will increase from \$19.54 in FY 2010-11 to \$22.12 beginning in FY 2011-12. • The annual impact to a single-family dwelling, beginning July 2011, is anticipated to be \$30.96. • A table at the end of this departmental section shows the monthly impact of the proposed stepped plan on a single-family dwelling.
Payment of administrative costs to Human Services for administering the Water Assistance Program	<ul style="list-style-type: none"> • Human Services has previously absorbed the staffing and administrative costs for evaluating applicants and processing payments for the Water Assistance Program; however, in the upcoming year, Public Utilities will pay for some contracted manpower and administrative costs to continue the program.

Departmental Overview

The Department of Public Utilities, also called the Water and Sewer Enterprise Fund, provides water and sanitary sewer services to the residents of Virginia Beach. The water distribution system is the part of the utility infrastructure that carries potable water from the water treatment plant and delivers it to customers. The water system also provides fire protection through fire hydrants, installed throughout the pipe network. The sanitary sewer system is the part of the utility infrastructure that carries wastewater from individual properties and delivers it to one of two Hampton Roads Sanitation District sewer treatment plants in the City.

Public Utilities has a schedule of fees and charges for both water and sanitary sewer services. These charges are necessary to fund the water and sanitary sewer operations, Capital Improvement Program, ensure continued compliance with State and Federal laws and regulations, and ensure reliable quality customer service. The bills issued by Public Utilities represent a combined statement for Public Works and Public Utilities and include water supply, service availability, utility tax, and sanitary sewer service, as well as charges for storm water (Public Works).

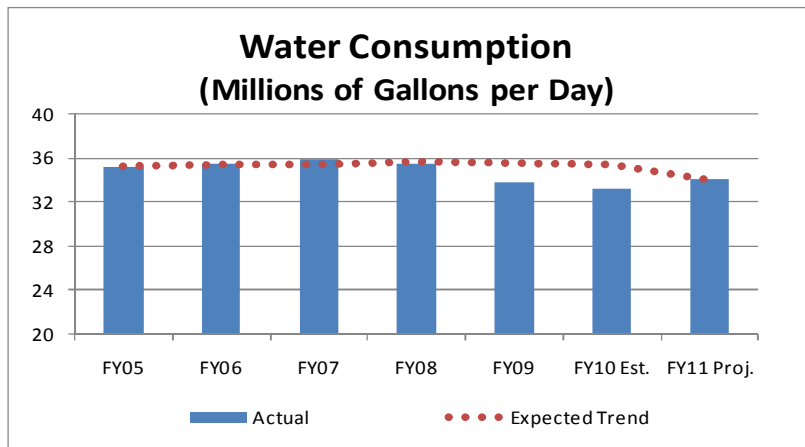
The core services provided by Public Utilities may be divided into the following general areas:

Engineering and Capital Construction - Includes review, development and implementation (project management and construction inspection) of the Capital Improvement Program (CIP) for the water and sanitary sewer systems; coordination of department efforts to reduce/eliminate sanitary sewer overflows to comply with the Clean Water Act and other requirements of the U.S. Environmental Protection Agency (EPA) and Virginia Department of Environmental Quality (DEQ) 2007 Hampton Roads consent order; assessment of the City’s water supply needs; operation and maintenance of the Lake Gaston and Stumpy Lake Water Supply Projects; and provision of engineering technical support in other areas such as water quality, groundwater monitoring, map maintenance, record keeping, and regional water and sanitary sewer issues.

- **Operations and Maintenance** - Includes provision of continuous, 24 hour per day water supply services and sanitary sewer collection system to meet customer demands; monitoring, maintenance and repair of the City's water and sanitary sewer systems including 9 water pump stations, 12 storage facilities, 405 sanitary sewer pump stations, 8,047 fire hydrants, and other components of the utility systems; protection of the utility systems by locating facilities in accordance with the Underground Utility Damage Prevention Act; compliance with Safe Drinking Water Act by collecting and analyzing monthly, quarterly, semi-annual and annual water samples; and flushing water distribution lines to maintain water quality.
- **Business Operations** - Includes management of the department's water and sanitary sewer customer call center that receives 180,000 calls annually, customer accounting of 131,367 water accounts (e.g., account initiation, billings, payment arrangements, revenue collection), field service orders, and service discontinuance; ensures the fiscal integrity and budgetary self-sufficiency of the water and sewer utility enterprise fund including compliance with the requirements of the Master Bond Resolution; administration of the Norfolk Water Services contract; and administration of various public education and awareness programs including water conservation, Fats Oils & Grease (FOG), and backflow prevention.

Trends and Issues

- As an enterprise operation, the Water and Sewer Fund must adjust operating expenses to meet anticipated revenues. The department's estimated revenues from current water and sewer rates (without considering any rate increases) were projected to decrease nearly 3% (from \$102.5 million to \$99.7 million) compared to the FY 2009-10 original budget. There are several causes of these reductions: (1) consumers are using less water due to higher efficiency appliances and smaller households, (2) a national trend to reduce individual consumption and increased focus on conservation, (3) higher vacancy rates for homes due to foreclosures, (4) the economy has slowed new home construction, so the growth in new accounts is minimal, and (5) interest rates are low; therefore, interest earnings on deposits are depressed.



Additionally, the department was affected by increased retirement rates and an increase in the cost of the Water Services Contract with the City of Norfolk. In response to these economic conditions, the department made adjustments to their operating expenses for current services and programs, including reducing pay-as-you-go funding in the Capital Improvement Program and the deferring the bond issuance for FY 2010-11 projects; however, Public Utilities will not be able to absorb additional impacts related to the regional consent order within the current rate structure.

- A key service and cost driver is the increased volume and cost for maintenance, repair and replacement of aging water and sanitary sewer infrastructure funded over a 15 to 20 year cycle in the Capital Improvement Program. The Federal Environmental Protection Agency and the State Department of Environmental Quality issued a consent order for Hampton Roads in September 2007. The intent of the consent order is to reduce and control sanitary sewer overflows in the region. This consent order mandates significant increases, primarily in capital expenditures to overhaul the sewer system, but also includes both operational and maintenance impacts. In total, the anticipated capital expenditures needed to comply with this mandate is over \$200 million.

Phase I of the consent order involves analysis of the sanitary sewer system with a deadline of FY 2012-13. Phase II is from FY 2012-13 to FY 2022-23 and involves comprehensive sanitary sewer system rehabilitation. The consent order will require major expenditures, including:

- Monitoring and evaluation for 240 sewer pump stations and service areas (including cleaning, closed circuit television (CCTV) inspection, and repairs of significant defects).
- Conducting an infiltration and inflow reduction program, including smoke testing for those 240 service areas.
- Flow monitoring for 100 to 200 sewer pump stations.
- Establishment of the Fats, Oils and Grease (FOG) Program to manage, inspect and enforce compliance on more than 1,600 food service establishments on an ongoing, annual basis.
- Root Control Program for more than 75 miles of mainline collector pipe each year.
- Immediate cleaning, televised inspection and repair of major defects for the line segments upstream and downstream of every sewer overflow and major blockage.
- Comprehensive sanitary sewer system rehabilitation plan.
- A sanitary sewer hydraulic model (integrated with the Hampton Roads Sanitation District (HRSD) model).
- Extensive engineering analysis to support the development of a Regional Wet Weather Management Plan in 2014.

Public Utilities Infrastructure as of FY 2010-11			
Asset	Existing Inventory	Annual Increase	Greater Than 30 Years Old
Water and Sewer Lines (miles)	3,103	24	1,300
Pump Stations	405	5	150
Fire Hydrants	8,047	170	4,900
Water Services	131,367	600	72,000
Sewer Manholes	28,075	75	12,000
Sewer Laterals	129,084	250	50,000

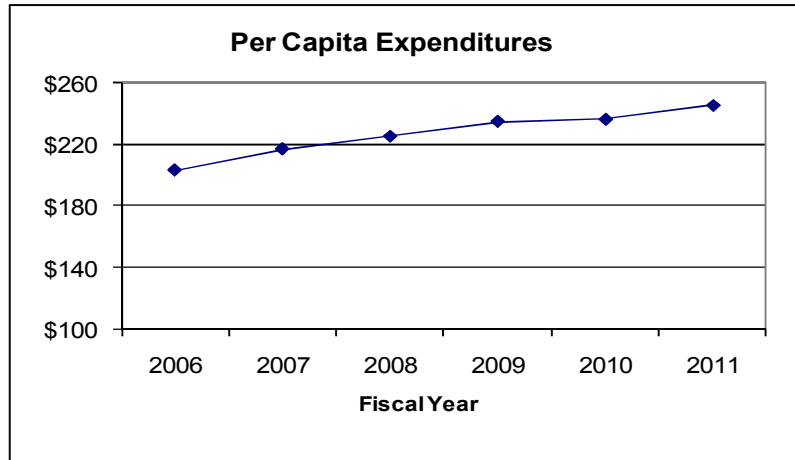
The cost of maintaining and upgrading the City's water and sewer system, and especially the financial effects of complying with the mandate, can be understood when considering the size, age and condition of the City's water and sewer system. The water and sanitary sewer system is extensive and has an estimated replacement cost exceeding \$3 billion. More than half of the system was constructed by the mid 1980's, by private developers and did not have today's

materials or standards. Right now, 56% of the water system and 40% of the sewer system is more than 30 years old; some components of these systems are more than 50 years old. It will require a substantial financial investment to replace over the next 30 years. This is illustrated by the fact that the typical sewer rehabilitation costs \$10,000 per lot, which equates to about \$800 per lot in annual debt service; however, the annual revenue from one lot averages only \$240.

For FY 2010-11, Public Utilities has re-prioritized the \$25 million Capital Improvement Program to further shift the focus on the sanitary sewer regulatory compliance, but that shift has reduced funding for several water initiatives as a result. A \$40 million annual capital investment is needed to ensure compliance with the consent order. A stepped sewer rate increase, beginning in FY 2011-12, will be necessary to address the \$15 million annual increase in capital investment. Year 1 will generate an additional \$4.16 million. This will enable the department to increase pay-as-you-go funding from \$5 million to \$8 million annually, to support increased debt service for the issuance of additional bond funding, and operational staffing to address the increased workload.

- Beginning in FY 2010-11, the Water and Sewer Enterprise Fund will begin paying a Right-of-Way Utility Transfer to compensate the City for the use of the public right-of-way to lay underground utilities. The establishment of this rental fee will ensure that Public Utilities provides some reimbursement to the City for the use of public land that was purchased with general tax dollars. Fees are already charged to other entities that receive benefits from using the public right-of-way. The Utility departments in both Norfolk and Newport News provide about \$10 million annually to those cities and in Chesapeake, the payments are in the \$2-3 million range. Public Utilities will begin paying \$4 million annually, based on 4.3% of their annual operating revenue. This additional cost will require a 31¢ increase to the monthly Water Service Availability Fee and a 31¢ increase per 1,000 gallons of water. The impact to the typical single family residence will be \$22.32 per year. The Right-of-Way Utility Transfer will provide \$2 million annually to the Pavement Maintenance Program in the Public Works operating budget and another \$2 million annually to the Street Reconstruction (CIP# 2-031) in the Roadways section.

- As the graph illustrates, per capita expenditures are increasing 3.8%, which maintains existing staffing and services and funds some additional expenses beyond those in the current year. In addition to the Right-of-Way Utility Transfer previously mentioned, Public Utilities has also budgeted almost \$3 million for a “true-up” payment to the City of Norfolk to make up the difference between the projected wholesale water rates for FY 2008 and FY 2009 and the actual costs incurred during that period. No costs related to the sanitary sewer rate increase are shown here because the proposed sewer rate increase does not begin until FY 2011-12.



- The Water and Sewer Enterprise Fund issues debt through revenue bond sales and maintains a strong AA/AAA bond rating. The Enterprise Fund has the benefit of being in a strong financial position due to effective management of resources and compliance with stringent fiscal policies. The policies for handling accounting practices, debt and financial management for Public Utilities were established in May 2002. These policies have the goal of increasing bond ratings which helps to decrease interest rates paid on bonds; maintain an unrestricted cash balance in retained earnings equal to 80 to 100% of annual operating expenses; provide adequate revenue coverage for payment of bonds equal to 1.5 times the minimum; and fund a minimum of 25% of the Capital Improvement Program through pay-as-you-go funding and retained earnings. There are plans for the issuance of approximately \$60 million of Water and Sewer Revenue Bonds in late spring 2010.
- The Department of Public Utilities is actually answering fewer customer service calls than the previous year. This is a result of launching a new web interface last July, which gives customers the convenience and flexibility of making online inquiries, managing their accounts online and expanded payment options, such as credit cards, which will be available soon. These enhancements will improve customer service and increase the availability of information for water and sewer customers.

For FY 2010-11, the following rates and fees will be increased:

Name of Fee	Current Amount	FY 2011 Proposed Amount	Date of Last Increase
Water Service Availability Charge	\$4.10 per month	\$4.41 per month	FY 2009-10
Water Usage Charge	\$4.10 per 1,000 Gallons	\$4.41 per 1,000 Gallons	FY 2009-10

The following table illustrates the financial impact of Water and Sewer rate increases on a typical single family residence using 5,000 gallons of water per month and a 5/8” meter for water and sewer. A full schedule of proposed sewer rates for each fiscal year through FY 2014-15 can be found in the ordinance section of the Capital Improvement Program, beginning on page 9-14.

DEPARTMENT OF PUBLIC UTILITIES PROPOSED WATER AND SANITARY SEWER RATE INCREASES FY 2011 THROUGH FY 2015						
	FY 2010	Proposed				
		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Monthly Water Supply Charge (Single Family Residence, 5,000 gallons)	\$24.60	\$26.46	\$26.46	\$26.46	\$26.46	\$26.46
Monthly Sanitary Sewer Charge (Single Family Residence, 5/8" Meter)	19.54	19.54	22.12	24.86	27.76	30.81
Total Water and Sanitary Sewer	\$44.14	\$46.00	\$48.58	\$51.32	\$54.22	\$57.27
Monthly Increase to Residential Bill (\$) (Single Family Residence, 5,000 gallons, 5/8" Meter)		\$1.86	\$2.58	\$2.74	\$2.90	\$3.05

Public Utilities - Departmental Resource Summary

	FY 2009 Actual	FY 2010 Adjusted	FY 2011 Adopted	Variance from FY 2010
<u>Program Summary</u>				
<u>241 Water and Sewer Fund</u>				
<u>Expenditures</u>				
Director's Office	388,345	401,940	392,717	(9,223)
Engineering	6,264,095	7,478,910	7,447,879	(31,031)
Lake Gaston Facilities	2,469,065	2,754,199	2,885,304	131,105
Water Services Contract	25,251,195	26,814,190	29,716,190	2,902,000
Operations Administration	3,006,289	2,967,108	2,932,305	(34,803)
Water Distribution	3,760,001	3,670,210	3,616,264	(53,946)
Water Pump Stations	2,491,831	2,659,866	2,644,232	(15,634)
Meter Operations	3,446,096	3,317,936	3,305,666	(12,270)
Sewer Collection	6,518,225	5,700,966	5,649,446	(51,520)
Sewer Pump Stations	6,273,550	6,110,775	6,220,274	109,499
Business Division	6,470,872	6,961,553	6,953,975	(7,578)
Debt Service	5,745,518	16,389,014	16,389,014	0
Reserve for Contingencies	0	3,281,998	3,069,281	(212,717)
Transfer to Other Funds	12,750,884	13,985,245	15,413,210	1,427,965
Transfer to Retained Earnings	13,461,583	0	0	0
Total Expenditures	<u>98,297,549</u>	<u>102,493,910</u>	<u>106,635,757</u>	<u>4,141,847</u>
<u>Revenues</u>				
Administration and Finance	98,246,866	102,493,910	103,658,757	1,164,847
Water Services Contract	0	0	2,977,000	2,977,000
Water Distribution	30,209	0	0	0
Meter Operations	16,822	0	0	0
Sewer Collection	2,852	0	0	0
Sewer Pump Stations	800	0	0	0
Total Revenues	<u>98,297,549</u>	<u>102,493,910</u>	<u>106,635,757</u>	<u>4,141,847</u>
General City Support	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Department Expenditure	98,297,549	102,493,910	106,635,757	4,141,847
Total Department Revenue	98,297,549	102,493,910	106,635,757	4,141,847
Total General City Support	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Position Summary by Program

241 Water and Sewer Fund

Director's Office	3.00	3.00	3.00	0.00
Engineering	78.00	81.00	81.00	0.00
Operations Administration	21.00	21.00	21.00	0.00
Water Distribution	41.00	41.00	41.00	0.00
Water Pump Stations	25.00	25.00	25.00	0.00
Meter Operations	45.00	45.00	45.00	0.00
Sewer Collection	64.00	64.00	64.00	0.00
Sewer Pump Stations	59.00	59.00	59.00	0.00
Business Division	65.50	65.50	65.50	0.00
Total	<u>401.50</u>	<u>404.50</u>	<u>404.50</u>	<u>0.00</u>
Total Position Summary	<u>401.50</u>	<u>404.50</u>	<u>404.50</u>	<u>0.00</u>

Resource Summary Notes

The \$2,977,000 revenue in the Water Services Contract shows the use of retained earnings to make a "true up" payment to the City of Norfolk for the difference between projected water rates and actual rates for FY 2007-08 and FY 2008-09. This payment is being made with retained earnings since these are prior year costs.