PURPOSE

The Utility Capital Improvements Program (CIP) Budget provides for the construction and rehabilitation of wastewater systems and water transmission, distribution and supply facilities, to include the engineering and acquisition program for additional water supplies. Other water and wastewater system improvements are financed by accumulated JCSA funds for rehabilitation, replacement, extensions, and expansions.

BUDGET SUMMARY

	FY 12 Adopted	FY 13 Adopted	FY 14 Plan
Revenues:			
Water Facility Charges	$ 1,927,000	$ 1,952,200	$ 1,977,778
Sewer Facility Charges	1,344,000	1,364,160	1,391,443
Water Fund Transfer-Kingswood	-	-	200,000
Sewer Fund Transfer-DEQ Consent Order		750,000	1,000,000
Total Revenue	$ 3,271,000	$ 4,066,360	$ 4,569,221
Expenditures:			
Water Supply	$ 1,645,000	$ 2,113,000	$ 2,110,000
Water Distribution	-	-	450,000
Sewer System Improvements	1,466,000	1,703,360	1,759,221
Other Projects	160,000	250,000	250,000
Total Expenditures	$ 3,271,000	$ 4,066,360	4,569,221

BUDGET COMMENTS

This budget will continue our practice of directing facility charges (the initial connection fees when a new house or business connects to the system) towards financing CIP projects. Funds from an adopted 15% service rate increase in FY2013 and a planned 5 percent service rate increase in FY2014 transfer from the Sewer Fund to begin to provide additional funds for sewer infrastructure rehabilitation program requirements of the JCSA's Consent Order with the Virginia Department of Environmental Quality. This is the first time since the early to mid 1990s that water and sewer service charge revenues are being transferred to the CIP program. Historically, the CIP has been funded by connection fees. Increased expenditures for the Consent Order and reduced connection fees resulting from the economic downturn have made this change necessary. In FY2014, a transfer from the Water Fund builds funding for the Kingswood water system replacement scheduled for FY2017. Facility revenues increase 1.4 percent in FY2013 and 1.6 percent in FY2014 from adopted FY2012 levels.

The FY 2013-FY2017 CIP consists of thirteen separate, but interrelated, segments of the utility program, all of which are important in keeping pace with regulatory requirements and County development. The proposed five-year plan defines an integrated program for the development of each of the thirteen segments along parallel time frames, designed for adequate service to be provided in step with the County Comprehensive Plan and Strategic Management Plan. A brief description of the essential features of the thirteen segments follows with a Summary on page E-10.

1. WATER SUPPLY (105-100)

Desalination Plant Equipment Replacement (1155) – This is a capital maintenance project request for the Five Forks Water Treatment Plant (FFWTP). The project consists of replacing reverse osmosis membranes, well pumps and motors and other related equipment as needed. In order to maintain water quality and an appropriate output from FFWTP, membranes must be replaced before failure. There are 720 membranes at approximately $700 each with associated installation and design expenses. The existing fund balance of $64,387 is requested to be carried forward in the FY2013 CIP. A total of $245,000 is requested in both FY2013 and FY2014 to complete the membrane replacement. In order to maintain operational reliability and required output levels at the FFWTP, the $220,000 balance in FY2013 and FY2014 is requested to replace Well, High Pressure Feed and High Service Pumps and Motors that have reached the end of their service lives.

Project Development Agreement Debt Service (2008) – Debt Service Payments for the Project Development Agreement (PDA) with the City of Newport News are financed from connection fees collected in the Capital Improvement Fund. The funding level is approximately $1,648,000 annually.

Well Abandonment - This is a capital maintenance project request for the Central Water System. The project consists of the demolition of storage tanks, buildings, structures and related appurtenances at seven lower producing wells scheduled to be abandoned.

2. WATER DISTRIBUTION (105-110)

Water Meter Replacement-This is a capital maintenance project request for the Water Distribution System. The project consists of the replacing existing water meters reaching the end of their service lives with the next generation of meter technology to maintain accuracy and efficiency.

Kingswood Subdivision – This project consists of replacing the existing antiquated and undersized water distribution system with new distribution pipes and appurtenances.

White Oaks/Canterbury Subdivision –This project consists of replacing the existing antiquated and undersized water distribution system with new distribution pipes and appurtenances. Replacement of this infrastructure will also increase current fire flow capacities.

3. SEWER SYSTEM IMPROVEMENTS (105-150)

Sewer System Overflow Report Preparation (2300) - This is a modified project request. The Virginia Department of Environmental Quality (DEQ) has placed localities in the Hampton Roads area under a Consent Order which was effective 9/26/07. The order requires modeling, flow monitoring, sewer system evaluations and other reports. Engineering services are required to supplement in-house efforts in responding to the Consent Order. The existing fund balance of $1,072,620 is requested to be carried forward in the FY2013 CIP with an additional $45,000 requested in FY2013 to initiate projects as they are identified.

DEQ Consent Order Sewer System Improvements (2475) – This is a modified project request. The results of the Sewer System Evaluation Survey (SSES) inspections provide locations of sanitary sewer system defects and the construction improvements required to rehabilitate the system. These improvements include rehabilitation and/or replacement of numerous manholes and gravity sewer pipe throughout 48 of 76 Lift Station Basins. These 48 basins equate to approximately 76% of the gravity collection system piping. It is envisioned that these projects will require a significant investment and take approximately 20 years to complete. The existing fund balance of $2,012,203 is

requested to be carried forward in the FY2013 CIP with an additional $12,254,581 requested over the next five years to initiate projects as they are identified. This is a rehabilitation project.

DEQ Consent Order Management, Operation, and Maintenance (MOM) – The Virginia Department of Environmental Quality (DEQ) Consent Order, effective 9/26/07, requires that localities develop and implement a MOM Program. The DEQ requires certain MOM activities to be performed on a continuing basis to include such things as easement clearing; gravity sewer pipe and manhole inspection; force main and valve inspection; pump station inspection; flow monitoring and hydraulic modeling; fats, oils, and grease abatement; and repair/replacement/rehabilitation of defective assets. Costs for many of these programs have historically been covered in JCSA's operating budget. Additional funds are now necessary to cover costs of an enhanced program to comply with DEQ's MOM Program expectations.

DEQ Consent Order Capacity Enhancements – The Virginia Department of Environmental Quality (DEQ) Consent Order, effective 9/26/07, requires regional and local assessment of wastewater collection, conveyance, and treatment systems capacities. Localities are responsible for ensuring adequate capacity exists in their individually owned collection and conveyance systems (i.e., gravity sewers, pump stations, and force mains). Hydraulic modeling is underway which will be used to identify capacity deficiencies for a yet to be determined Level of Service. The Level of Service refers to a storm event (i.e., 2-, 5-, or 10-year rainfall recurrence) that the system is expected to adequately accommodate without experiencing a Sanitary Sewer Overflow (SSO). Until the capacity analysis is complete and the Level of Service is selected, capital costs cannot be accurately determined. However, reasonable assumptions can be made that funds need to be set aside in anticipation of the future expenditures.

Lift Station Wet Well Recoating/Rehabilitation (LS 2-6, 1-6, and 2-5) – The wastewater lift station wet wells are exposed to very corrosive atmospheres. The concrete surfaces of the wet well, the metal piping and miscellaneous components must be periodically recoated or replaced as a result of deterioration. During routine cleaning and inspection of the wet wells, it was determined that Lift Stations 2-6, 1-6, and 2-5 exhibited signs of significant deterioration. The concrete surfaces in all three wet wells need to be recoated, the piping in LS 2-6 and 2-5 needs to be recoated, and the piping in LS 1-6 needs to be replaced. This is necessary to extend the useful life of the lift stations and maintain their operational integrity.

4. OTHER PROJECTS (105-160)

Heavy Equipment/Trucks (3085) – This project consists of vehicle replacements and an equipment acquisition. In FY2013, a single axle, 2,000 gallon pump and haul truck will be replaced because it has reached the end of its service life ($50,000). A small mini-excavator will replace a backhoe that has reached the end of its service life. The excavator will minimize environmental impact and provide crews with greater accessibility and maneuvering during excavations ($50,000). Purchase of a sewer mainline camera will allow excavation crews to continue to locate pipe blockages and failures ($50,000). In FY2014 the following vehicles will reach the end of their service lives and are scheduled to be replaced: a single axle, crew cab line truck ($150,000) and a single axle, six ton dump truck ($100,000). The existing fund balance of $23,103 is requested to be carried forward in the FY2013 CIP.

Electrical Arc Flash Prevention – This project consists of an Arc Flash Prevention study of the electrical and power generation equipment at approximately 75 lift stations and 25 well facilities. The study is required to meet applicable safety standards and regulations.