

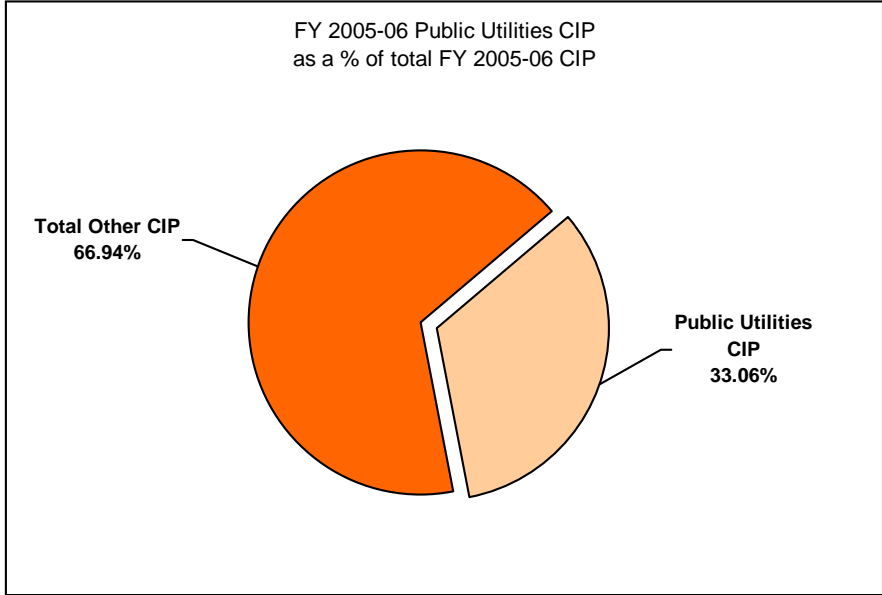
# Public Utilities CIP

## Public Utilities Capital Improvement Program

The Public Utilities CIP is comprised of water and sewer system projects. They include the replacement of existing aging systems and, to meet the community's changing demands, system upgrades. This section comprises 33.06% of the total FY 2005-06 budget. Public Utility CIP projects will be funded through Public Utility Revenue Bonds.

In the five-year plan, slightly more than \$64.9 million of planned projects are programmed. One new project included in the program is entitled "Replacement of filters at Lake Kilby."

The Public Utilities CIP focus is replacement and ongoing existing facility maintenance. For the City's water and sewer systems, the approved FY 2005-06 \$9.86 million is the long-term maintenance plan's next phase.



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Funding Sources for Public Utilities CIP							
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Prior Year Funding	\$40,775,393	-	-	-	-	-	40,775,393
Public Utility Bonds		9,860,000	12,362,500	13,944,000	14,400,000	14,379,000	64,945,500
<b>Total Funding</b>	<b>\$ 40,775,393</b>	<b>9,860,000</b>	<b>12,362,500</b>	<b>13,944,000</b>	<b>14,400,000</b>	<b>14,379,000</b>	<b>105,720,893</b>

Projects for Public Utilities CIP							
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Vacuum Sewer Well/System Rehabilitation	\$ 1,730,290	790,000	1,276,000	1,525,000	2,034,000	1,750,000	9,105,290
North Truxton Sewers	491,500	-	-	-	-	-	491,500
Sewage Pump Station Replacement Equipment	1,609,500	50,000	-	-	-	-	1,659,500
Brighton/South Portsmouth Sewers	279,259	-	-	-	-	-	279,259
Sewer Cave-in Repair	1,096,762	300,000	300,000	300,000	300,000	300,000	2,596,762
Camden Avenue Sewer Rehabilitation	858,000	631,000	518,500	593,000	-	-	2,600,500
Raw Water Rehabilitation	134,000	-	-	-	-	-	134,000
Repairs to Four Dams	1,086,500	-	-	-	-	-	1,086,500
Neighborhood Water and Sewer Projects	13,791,883	4,250,000	4,750,000	5,250,000	5,750,000	6,250,000	40,041,833
Water Plant Residuals Management and Disposal	3,783,500	650,000	-	-	600,000	700,000	5,733,500
Water Plant Replacement Equipment	2,967,213	1,114,000	1,147,000	1,182,000	1,220,000	1,257,000	8,887,213
High Service Water Pumps	25,000	-	-	-	-	-	25,000
Meter Replacement Program	308,000	250,000	464,000	478,000	491,000	508,000	2,499,000
Establish Wetlands Mitigation Bank	10,000	-	-	-	-	-	10,000
Miscellaneous Water Work	2,141,563	123,000	127,000	130,000	134,000	138,000	2,793,563
Deep Well Repairs	108,000	-	-	-	-	-	108,000

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	Projects for Public Utilities CIP						Total
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	
Godwin St. Reservoir Replacement	9,290,923	750,000	-	-	-	-	10,040,923
Water Main Replacement	582,000	146,000	155,000	163,000	171,000	176,000	1,393,000
Lake Kilby Raw Water Pumping Station Replacement	395,000	656,000	3,000,000	3,698,000	-	-	7,749,000
Lake Cohoon Raw Water Pump Station and Pipeline	-	-	-	-	-	800,000	800,000
Low Pressure Transmission Mains	-	-	625,000	625,000	2,500,000	2,500,000	6,250,000
New- Replace Filters at Lake Kilby (1-10)	-	150,000	-	-	1,200,000	-	1,350,000
<b>Total Funding</b>	<b>40,775,393</b>	<b>9,860,000</b>	<b>12,362,500</b>	<b>13,944,000</b>	<b>14,400,000</b>	<b>14,379,000</b>	<b>105,720,893</b>

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**Public Utilities Project Details**

Project: 74805		Project Title: Vacuum Sewer Well/System Rehabilitation					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 1,730,290	790,000	1,276,000	1,525,000	2,034,000	1,750,000	9,105,290
<b>Funding</b>							
PU Bonds		790,000	1,276,000	1,525,000	2,034,000	1,750,000	7,375,000
Prior Year Funding	\$ 1,730,290	-	-	-	-	-	1,730,290
<b>Total Funding</b>	<b>\$ 1,730,290</b>	<b>790,000</b>	<b>1,276,000</b>	<b>1,525,000</b>	<b>2,034,000</b>	<b>1,750,000</b>	<b>9,105,290</b>

Project Description: The Department of Public Utilities is responsible for the operation and maintenance of an extensive wastewater collection system. 72% of the system is at the end of its useful engineering life. Included in the wastewater collection system is 10 miles of vacuum sewer piping and 29 sewer suction wells supporting the older downtown, Midtown, Westhaven and Glensheallah portions of the city. This project provides for vacuum sewer replacement and/or rehabilitation.

Project: 74891		Project Title: North Truxton Sewers					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 491,500	-	-	-	-	-	491,500
<b>Funding</b>							
Prior Year Funding	491,500	-	-	-	-	-	491,500
<b>Total Funding</b>	<b>\$ 491,500</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>491,500</b>

Project Description: When the city undertakes major neighborhood street and storm drainage improvements, the department takes the opportunity to rehabilitate/replace water and sanitary sewer lines. This project provides the funding to accomplish the Public Utilities portion of these neighborhood projects.

Project: 74898		Project Title: Sewage Pump Station Replacement Equipment					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 1,609,500	50,000	-	-	-	-	1,659,500
<b>Funding</b>							
PU Bonds	-	50,000	-	-	-	-	50,000
Prior Year Funding	\$ 1,609,500						1,609,500
<b>Total Funding</b>	<b>\$ 1,609,500</b>	<b>50,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,659,500</b>

Project Description: The Department of Public Utilities is responsible for the operation and maintenance of 61 wastewater-pumping stations. For five of the major pumping stations, this project provides for major equipment, controls, and pump replacement.

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Project: 74899		Project Title: Brighton/South Portsmouth Sewers					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 279,259	-	-	-	-	-	279,259
<b>Funding</b>							
Prior Year Funding	279,259	-	-	-	-	-	279,259
Total Funding	\$ 279,259	-	-	-	-	-	279,259

Project Description: When the City undertakes major street and storm drainage improvements in a neighborhood, the department takes the opportunity to rehabilitate/replace water and sanitary sewer lines. This project provides the funding to accomplish the Public Utilities portion of these neighborhood projects.

Project: 74935		Project Title: Sewer Cave-in Repair					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 1,096,762	300,000	300,000	300,000	300,000	300,000	2,596,762
<b>Funding</b>							
PU Bonds	1,096,762	300,000	300,000	300,000	300,000	300,000	2,596,762
Total Funding	\$ 1,096,762	300,000	300,000	300,000	300,000	300,000	2,596,762

Project Description: The Department of Public Utilities is responsible for the operation and maintenance of approximately 436 miles of sewer mains, plus manholes, force mains, valves, sewer laterals and other sewage collection components. 72% of Portsmouth's sewage system is at the end of its useful engineering life. Using in-house forces and outside contractors, this project provides for the replacement and or rehabilitation of minor segments of the failing sewage system.

Project: 74936		Project Title: Camden Avenue Sewer Rehabilitation					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 858,000	631,000	518,500	593,000	-	-	2,600,500
<b>Funding</b>							
Prior Year Funding	\$ 858,000	-	-	-	-	-	858,000
PU Bonds		631,000	518,500	593,000	-	-	1,742,500
Total Funding	\$ 858,000	631,000	518,500	593,000	-	-	2,600,500

Project Description: Consisting of 9,431 linear feet of 18-inch, 30-inch and 36-inch reinforced concrete pipe and 40 sanitary sewer manholes, the Camden Avenue Gravity Sewage Collection is a major sewage collection main. From the intersection of George Washington Highway and Hanbury Avenue along Suburban Parkway and north along Oak Street, the system traverses northeast and discharges into Hampton Roads Sanitation District's Camden Avenue Pump.

Project: 75906		Project Title: Water Rehabilitation					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 134,000	-	-	-	-	-	134,000
<b>Funding</b>							
Prior Year Funding	\$ 134,000	-	-	-	-	-	134,000

Project Description: The Department of Public Utilities operates three raw water intake-pumping stations on its reservoirs. This project provides for the replacement of one of these stations (Lake Meade) raw water intake fish/debris traveling screens.

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Project: 75910		Project Title: Repairs to Four Dams					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 1,086,500	-	-	-	-	-	1,086,500
<b>Funding</b>							
Prior Year Funding	1,086,500	-	-	-	-	-	1,086,500
Total Funding	\$ 1,086,500	-	-	-	-	-	1,086,500

Project Description: Impounding its surface water supply, the Department of Public Utilities maintains four dams. Under the National Dam Safety Act, these dams are regulated. This project provides Lake Meade Dam repair funding. In an evolution & inspection report, the need for these repairs were identified and detailed.

Project: 75939		Project Title: Neighborhood Water and Sewer Projects					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 13,971,883	4,250,000	4,750,000	5,250,000	5,750,000	6,250,000	40,041,833
<b>Funding</b>							
Prior Year Funding	13,791,883	-	-	-	-	-	13,791,883
PU Bonds	-	4,250,000	4,750,000	5,250,000	5,750,000	6,250,000	26,250,000
Total Funding	13,791,883	4,250,000	4,750,000	5,250,000	5,750,000	6,250,000	40,041,833

Project Description: For replacing or rehabilitating the water and sewer infrastructure throughout the city, one neighborhood at a time, the Department of Public Utilities has developed an aggressive program. This work is based upon neighborhood water and sewer infrastructure age and condition. Work will continue in the Brighton/South Portsmouth and Simmondsdale neighborhoods, and planning and construction will commence in Prentice Park and Ebony Heights.

Project: 75943		Project Title: Water Plant Residuals Management and Disposal					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 3,783,500	650,000	-	-	600,000	700,000	5,733,500
<b>Funding</b>							
Prior Year Funding	3,783,500	-	-	-	-	-	3,783,500
PU Bonds	-	650,000	-	-	600,000	700,000	1,950,000
Total Funding	\$ 3,783,500	650,000	-	-	600,000	700,000	5,733,500

Project Description: The Department of Public Utilities operates the lake Kilby Water Treatment Plant. The treatment process removes naturally suspended organic and inorganic water particles. These particles are known as residuals. Currently the residuals removed in the treatment process are placed in a lagoon. Over its 24-year life, the lagoon has accumulated considerable residuals and requires clean out. By dewatering and disposal in approved landfills, this multi-year project provides for the lagoon's restoration capacity.

Comment: Ending

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Project: 75944		Project Title: Water Plant Replacement and Equipment					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 2,967,213	1,114,000	1,147,000	1,182,000	1,220,000	1,257,000	8,887,213
<b>Funding</b>							
Prior Year Funding	2,967,213	-	-	-	-	-	2,967,213
PU Bonds	-	1,114,000	1,147,000	1,182,000	1,220,000	1,257,000	5,920,000
<b>Total Funding</b>	<b>\$ 2,967,213</b>	<b>1,114,000</b>	<b>1,147,000</b>	<b>1,182,000</b>	<b>1,220,000</b>	<b>1,257,000</b>	<b>8,887,213</b>

Project Description: The Department of Public Utilities is responsible for the operation and maintenance of 32 million per day capacity water treatment plants and associated raw water pumping stations. This project provides for the addition, replacement, rehabilitation or life-extension overhaul of pumps, electrical and control systems, valves, HVAC systems, roofs, emergency generators, chemical storage and feed systems, security systems and other major equipment items.

Project: 75945		Project Description: High Service Water Pumps					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 25,000	-	-	-	-	-	25,000
<b>Funding</b>							
Prior Year Funding	\$ 25,000	-	-	-	-	-	25,000

Project Description: From the Lake Kilby Water Treatment Facility to its service areas, the Department of Public Utilities operates 10 large vertical turbine (high service) pumps conveying treated water. This project provides for major water component replacement on one of these pumps (shafting, impellers, wear rings and bearings).

Project: 75946		Project Title: Meter Replacement Program					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 308,000	250,000	464,000	478,000	491,000	508,000	2,499,000
<b>Funding</b>							
Prior Year Funding	308,000	-	-	-	-	-	308,000
PU Bonds	-	250,000	464,000	478,000	491,000	508,000	2,191,000
<b>Total Funding</b>	<b>\$ 308,000</b>	<b>250,000</b>	<b>464,000</b>	<b>478,000</b>	<b>491,000</b>	<b>508,000</b>	<b>2,499,000</b>

Project Description: The Department of Public Utilities is responsible for the reading, operating and maintenance of over 31,000 water meters. Using economically justified age and accuracy criteria, this project provides for systematic water meter replacement.

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Project: 75947		Project Title: Establish Wetlands Mitigation Bank					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 10,000	-	-	-	-	-	10,000
<b>Funding</b>							
Prior Year Funding	\$ 10,000	-	-	-	-	-	10,000
Project Description: Federal Environmental law requires jurisdictional wetland property disturbance mitigation by the creation or preservation of other wetland property. This project provided preliminary feasibility assessment funding for a Public Utility watershed land holding conversion into constructed wetlands. As "credit" against wetland acreage disturbed by other projects, the department would use the wetlands established.							

Project: 75953		Project Title: Miscellaneous Water Work					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$2,141,563	123,000	123,000	130,000	134,000	138,000	2,793,563
<b>Funding</b>							
Prior Year Funding	2,141,563	-	-	-	-	-	2,141,563
PU Bonds	-	123,000	123,000	130,000	134,000	138,000	652,000
Total Funding	\$2,141,563	123,000	123,000	130,000	134,000	138,000	2,793,563
Project Description: The Department of Public Utilities is responsible for the operation and maintenance of approximately 546 water main miles, over 2,500 fire hydrants, 12,000 valves, four elevated tanks, two water booster-pumping stations, and other components compromising the water system. Not included in the Neighborhood Replacement Program, this project provides for routine water system component replacement and/or rehabilitation Not included in the Neighborhood Replacement Program. The work will be performed with in-house and contractor forces.							

Project: 75954		Project Title: Deep Well Repairs					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 108,000	-	-	-	-	-	108,000
<b>Funding</b>							
Prior Year Funding	\$ 108,000	-	-	-	-	-	108,000
Project Description: To supplement its surface supply, the Department of Public Utilities operates five (5) deep wells. This project provides funding for life extension and deep well pump, motor and appurtenance replacement.							

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Project: 75958		Project Title: Godwin St, Reservoir Replacement					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$9,290,923	750,000	-	-	-	-	10,040,923
<b>Funding</b>							
Prior Year Funding	\$9,290,923	-	-	-	-	-	9,290,923
PU Bonds	-	750,000	-	-	-	-	750,000
<b>Total Funding</b>	<b>\$9,290,923</b>	<b>750,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10,040,923</b>

Project Description: At its facility on Godwin Street, the Department of Public Utilities operates a major water storage station. The pumping station was constructed in 1888, and the water storage tanks were constructed in 1917 and 1942. Based on age and reliability, these facilities require replacement. On a more centralized location, a replacement facility will be constructed on Frederick Boulevard.

Project: 75962		Project Title: Water Main Replacement					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 582,000	146,000	155,000	163,000	171,000	176,000	1,393,000
<b>Funding</b>							
Prior Year Funding	582,000	-	-	-	-	-	582,000
PU Bonds	-	146,000	155,000	163,000	171,000	176,000	811,000
<b>Total Funding</b>	<b>\$ 582,000</b>	<b>146,000</b>	<b>155,000</b>	<b>163,000</b>	<b>171,000</b>	<b>176,000</b>	<b>1,393,000</b>

Project Description: The Department of Public Utilities is responsible for the operation and maintenance of approximately 546 water main miles. Approximately 50 miles are constructed utilizing 2" diameter galvanized pipe It is beyond its useful life and is deteriorated. This project provides for replacement of the 2" pipe with high-density polyethylene pipe and also replaces the water service lines connected with the 2" main. Work will be performed with in-house and contractor forces.

Project: 75965		Project Title: Lake Kilby Raw Water Pumping System					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$ 395,000	656,000	3,000,000	3,698,000	-	-	7,749,000
<b>Funding</b>							
Prior Year Funding	395,000	-	-	-	-	-	395,000
PU Bonds	-	656,000	3,000,000	3,698,000	-	-	7,354,000
<b>Total Funding</b>	<b>\$ 395,000</b>	<b>656,000</b>	<b>3,000,000</b>	<b>3,698,000</b>	<b>-</b>	<b>-</b>	<b>7,749,000</b>

Project Description: The Department of Public Utilities operates the Lake Kilby Water Treatment Facility. This project provides for the demolition of an abandoned building and construction of a combined Lake Kilby/Lake Meade raw water intake and pumping station. This project replaces 1936 and 1952 facilities.

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Project: 75966		Project Title: Lake Cohoon Raw Water Pump Station and Pipeline					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$	-	-	-	-	800,000	800,000
<b>Funding</b>							
PU Bonds		-	-	-	-	800,000	800,000
Total Funding	\$	-	-	-	-	800,000	800,000

Project Description: The Department of Public Utilities has a four-reservoir system. On two of the four reservoirs, the department maintains raw water intakes. This project would provide a raw water intake with a connection to the Lake Kilby Plant from a third reservoir, Lake Cohoon. Lake Cohoon contains 53% of the combined reservoir's supply.

Project: New		Project Title: Lake Kilby Replacement Filters 1-10					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$	-	150,000	-	1,200,000	-	1,350,000
<b>Funding</b>							
Prior Year Funding		-	-	-	-	-	-
PU Bonds		150,000	-	-	1,200,000	-	1,350,000
Total Funding	\$	-	150,000	-	1,200,000	-	1,350,000

Project Description: The Department of Public Utilities operates the Lake Kilby Water Treatment Facility. This project provides for filter 1 through 10 replacements at the treatment facility with conventional media filters or membrane technology.

Project: 75968		Project Title: Low Pressure Transmission Mains					
	Funding to Date	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	Total
Project Cost	\$	-	625,000	625,000	2,500,000	2,500,000	6,250,000
<b>Funding</b>							
Prior Year Funding		-	-	-	-	-	-
PU Bonds		-	625,000	625,000	2,500,000	2,500,000	6,250,000
Total Funding	\$	-	625,000	625,000	2,500,000	2,500,000	6,250,000

Project Description: Conveying water from the Suffolk Lake Kilby Water Treatment Plant some 23 miles into Portsmouth, the Department of Public Utilities operates three low-pressure transmission mains. These mains were constructed in 1888, 1906 and 1950. This project provides for a plan to evaluate the remaining life of these mains and addresses the best way to rehabilitate or replace them in a phased and affordable manner.