

**A. Identification and Coding Information**

2. Date: October 1, 2011      7. Pre PDF Pg.No.:      8. Req. Adeq. Pub. Fac.

1. Project Number	Agency Number	Update Code	Revised:	
113803	W-161.01	Change		

3. Project Name: Large Diameter Water Pipe Rehabilitation Program      5. Agency: **WSSC**

4. Program: **Sanitation**      6. Planning Area: Bi-County

**E. Annual Operating Budget Impact (000's)**      FY of Impact

Program Costs	Staff .....	.....	
	Other .....	.....	
Facility Costs	Maintenance .....	.....	
	Debt Service .....	15803	19
Total Costs.....		15803	19
Impact on Water or Sewer Rate.....		31¢	19

**B. Expenditure Schedule (000's)**

	(8) Total	(9) Thru FY '11	(10) Estimate FY '12	(11) Total 6 Years	(12) Year 1 FY '13	(13) Year 2 FY '14	(14) Year 3 FY '15	(15) Year 4 FY '16	(16) Year 5 FY '17	(17) Year 6 FY '18	(18) Beyond 6 Years
Cost Elements											
Planning, Design & Supervision	11,100	600	640	9,860	790	1,430	1,430	2,070	2,070	2,070	
Land											
Site Improvements & Utilities											
Construction	154,568	9,500	13,180	131,888	20,768	20,224	20,224	20,224	25,224	25,224	
Other	15,555		1,382	14,173	2,156	2,165	2,165	2,229	2,729	2,729	
<b>Total</b>	<b>181,223</b>	<b>10,100</b>	<b>15,202</b>	<b>155,921</b>	<b>23,714</b>	<b>23,819</b>	<b>23,819</b>	<b>24,523</b>	<b>30,023</b>	<b>30,023</b>	

**C. Funding Schedule (000's)**

WSSC Bonds	181,223	10,100	15,202	155,921	23,714	23,819	23,819	24,523	30,023	30,023
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**D. Description & Justification**

**DESCRIPTION**

21-308 The purpose of this program is to plan, design and rehabilitate or replace Large Diameter Water Transmission Mains that have reached the end of their useful life. Condition Assessment and/or corrosion monitoring is performed on metallic pipelines, including ductile iron, cast iron, and steel, to identify lengths of pipe requiring replacement or rehabilitation and cathodic protection. The PCCP Inspection and Condition Assessment Program identifies individual pipe sections that require repair or replacement to assure the continued safe and reliable operation of the pipeline. The Program also identifies extended lengths of pipe that require the replacement of an increased number of pipe sections in varying stages of deterioration that are most cost effectively accomplished by the replacement or rehabilitation of long segments of the pipeline or the entire pipeline. Rehabilitation or replacement of these mains provides value to the customer by minimizing the risk of catastrophic failure and ensuring a safe and reliable water supply. The Program includes installation of Acoustic Fiber Optic Monitoring equipment in order to accomplish these goals in PCCP mains.

\* EXPENDITURES FOR LARGE DIAMETER WATER PIPE REHABILITATION ARE EXPECTED TO CONTINUE INDEFINITELY.

**JUSTIFICATION**

**Plans & Studies**  
Utility Wide Master Plan, (December 2007); 30 Year Infrastructure Plan (2007); FY2012 Water Transmission System Asset Management Plan, GHD, Inc. (March 2011).

**Specific Data**  
WSSC has approximately 960 miles of large diameter water main ranging from 16-inch to 96-inch in diameter. This includes 350 miles of cast iron, 225 miles of ductile iron, 35 miles of steel and 350 miles of PCCP. Internal inspection and condition assessment is performed annually on specific PCCP pipelines. Of the 350 miles of PCCP, 145 miles are 36-inch diameter and larger, and 59 miles are 54-inch diameter or larger. The inspection program includes internal visual and sounding, sonic/ultrasonic testing, and electromagnetic testing to establish the condition of each pipe section and determine if maintenance repairs, rehabilitation, or replacement are needed.

**Cost Change**  
The cost increase is due to an increase in the number of miles of cast iron pipe being replaced and requiring cathodic protection and an increase in the number of PCCP pipe sections that require repair or replacement due primarily to pipeline aging. The cost increase also includes the design and construction of PCCP pipeline improvements including interconnections and entry ports to facilitate inspections of 42-inch diameter and 36-inch diameter PCCP pipelines.

**STATUS** Not Applicable (WSSC Contract Nos. BM5063A09 , BM5063B09).

**F. Approval and Expenditure Data (000's)**

Date First in Capital Program	FY 11
Date First Approved	FY 11
Initial Cost Estimate	60,000
Cost Estimate Last FY	127,941
Present Cost Estimate	181,223
Approved Request, Last FY	12,276
Total Expenditures & Encumbrances	10,100
Approval Request FY 13	23,714
Supplemental Approval Request Current FY (12)	

**G. Status Information**

Land Status:	Not applicable
% Project Completion:	On-Going
Est. Completion Date:	On-going

**H. Map      Map Reference Code:**

**MAP NOT AVAILABLE**

**D. DESCRIPTION & JUSTIFICATION (CONT.)**

**Agency Number: W - 161.01**

**Project Name: Large Diameter Water Pipe Rehabilitation Program**

**OTHER**

The project scope has remained the same. Expenditure and schedule projections shown in Block B above are Order of Magnitude estimates and are expected to change based upon the results of the inspections and condition assessments. Additional costs associated with inspection, monitoring and emergency repairs are included in the Operating Budget.

**COORDINATION**

Maryland State Highway Administration, Montgomery County Department of Public Works and Transportation, Montgomery County Government (including localities where work is to be performed), Prince George's County Government (including localities where work is to be performed), Maryland-National Capital Park & Planning Commission, Prince George's County Department of Public Works & Transportation, Local Community Civic Associations and WSSC Projects A-107.00, Pressure Reducing Valve Rehabilitation Program and W-1.00, Water Reconstruction Program.

**NOTE** This project supports 100% System Improvement.