

Anacostia #2 WWPS Upgrades

A. Identification and Coding Information			PDF Date	October 1, 2022	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Lower Anacostia 9
S - 000089.24	382204	Change			Planning Areas	Landover & Vicinity PA 72

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	6,058	2,727	1,252	2,079	1,323	440	316				
Land											
Construction	52,451		8,000	44,451	21,000	20,700	2,751				
Other	5,578		925	4,653	2,232	2,114	307				
Total	64,087	2,727	10,177	51,183	24,555	23,254	3,374				

C. Funding Schedule (000's)

WSSC Bonds	48,664	1,901	5,943	40,820	18,010	19,674	3,136				
SDC	10,972	635	3,518	6,819	4,822	1,997					
DC Water Contribution	4,451	191	716	3,544	1,723	1,583	238				

D. Description & Justification

DESCRIPTION

This project provides for the replacement of transformers, switch gear, and MCC-A with redesign of 13.8kv switch gear in two IPA enclosures and 4.16KV switch gear in one IPA enclosure at the Anacostia #2 Wastewater Pump Station (WWPS). The Anacostia #2 WWPS is WSSC Water's largest and most critical WWPS with an average flow of 50 to 60 MGD, and storm peaks up to 260 MGD instantaneous flow. This WWPS receives wastewater from a large portion of WSSC Water's service area and delivers it to the Blue Plains Advanced Wastewater Treatment Plant in Washington, DC. Secondly, this project involves replacement of five existing bar screens and associated electrical upgrades and implementing NFPA 820 requirements for the pump station. Thirdly, the coarse screening of Beaver Dam S.A. flows will be evaluated and rehabilitated. Fourthly, this project includes replacement of the pump station's roof.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life; System Capacity: This project will enhance existing infrastructure by building additional capacity in order to meet existing and/or future demand; Employee Safety: This project includes components that help protect the health and safety of employees

JUSTIFICATION

The majority of the electrical equipment, excluding all 4.16kV MCCs and the unit substation, were installed with the original construction in the late 1970s and is beyond its useful life. In addition, several equipment parts are becoming increasingly difficult to find since the equipment is obsolete. Failure of any of the above critical components could cause serious issues in providing reliable power to the pump station. This replacement, rehabilitation, and upgrade work was recommended by various business case evaluations undertaken as part of WSSC Water's Asset Management Program.

COST CHANGE

The schedule and expenditure projections have been updated to reflect the revised scope of the project and updated engineer's estimates.

OTHER

The project scope has been revised to include replacement of the pump station's roof. The schedule and expenditure projections shown in Block B above are a mix of preliminary design and planning level estimates and are expected to change based upon site conditions and design constraints. DC Water will contribute a share of the electrical upgrades and bar screens project costs, which is indicated on the funding schedule shown in Block C above.

COORDINATION

Coordinating Agencies: DC Water;(responsible for a share of funding); Maryland Department of the Environment; Potomac Electric Power Company
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$3,201	27
Total Cost	\$3,201	27
Impact on Water and Sewer Rate	\$0.01	27

F. Approval and Expenditure Data (000's)

Date First in Program	FY'22
Date First Approved	FY'22
Initial Cost Estimate	31,298
Cost Estimate Last FY	42,473
Present Cost Estimate	64,087
Approved Request Last FY	17,475
Total Expense & Encumbrances	2,727
Approval Request Year 1	24,555

G. Status Information

Land Status	Public/Agency owned land
Project Phase	Design
Percent Complete	30 %
Estimated Completion Date	March 2026
Growth	18%
System Improvement	82%
Environmental Regulation	
Population Served	
Capacity	199 MGD

H. Map

