

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
073801	S-94.12	Change

2. Date: October 1, 2009

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

Revised:

3. Project Name: Damascus WWTP Enhanced Nutrient Removal

5. Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: **Damascus & Vicinity P.A. 11**

E. Annual Operating Budget Impact (000's)

FY of Impact

Program Costs	Staff	
	Other	
Facility Costs	Maintenance	
	Debt Service	37	13
Total Costs.....		37	13
Impact on Water or Sewer Rate.....			

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '09	(10) Estimate FY '10	(11) Total 6 Years	(12) Year 1 FY '11	(13) Year 2 FY '12	(14) Year 3 FY '13	(15) Year 4 FY '14	(16) Year 5 FY '15	(17) Year 6 FY '16	(18) Beyond 6 Years
Planning, Design & Supervision	1,542	746	318	478	239	239					
Land											
Site Improvements & Utilities											
Construction	4,770		1,590	3,180	2,980	200					
Other	835		286	549	483	66					
Total	7,147	746	2,194	4,207	3,702	505					

C. Funding Schedule (000's)

	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
WSSC Bonds	429	45	132	252	222	30					
State Aid	6,718	701	2,062	3,955	3,480	475					

D. Description & Justification

DESCRIPTION

22-21 This project provides for the planning, design, and construction of improvements at the Damascus WWTP necessary to meet the requirements of MDE's Enhanced Nutrient Removal (ENR) Program. The preliminary recommendation was to convert existing basin configuration to Bardenpho process and provide methanol feed capability. After additional study, the existing two process trains will be divided into four process trains which will provide tankage/process redundancy for periodic maintenance. Splitting the existing process trains into four trains also allows the treatment capacity to closer match the current influent flows. The carbon source will be designed for methanol and several other biodiesel byproducts.

Service Area Patuxent North Drainage Basin

JUSTIFICATION

Plans & Studies

ENR Alternatives for Damascus WWTP, Gannett Fleming (June, 2005); Maryland Department of the Environment, Feasibility Study Approval Letter (July 27, 2005); Maryland Department of the Environment, Eligibility Determination Letter (December 22, 2008)

Specific Data

As the result of an Executive Order issued by the Governor of Maryland in November, 2002 calling for Maryland wastewater plants to be upgraded to the "limits of technology" for nutrient removal, the Maryland Department of the Environment introduced the ENR Strategy in May, 2003. The ENR Strategy calls for assigning "load goals" to municipal wastewater treatment plants based on annual average effluent concentrations of total nitrogen (4 mg/l) and total phosphorous (0.3 mg/l), and permitted design capacity. These load goals have been incorporated into the Chesapeake Bay Program tributary strategies Maryland adopted in 2004.

The ENR Strategy also calls for wastewater treatment plants to continue optimizing nutrient removal performance and attempt to achieve an annual average effluent nitrogen concentration of 3 mg/l as a goal, not a permit limit. Maryland has proposed new water quality standards for the Chesapeake Bay. Once these standards have been adopted, the load goals of the ENR Strategy will be incorporated into NPDES permits as enforceable effluent limits. The more stringent concentration goals will remain as goals.

The ENR Strategy also calls for the creation of an ENR grant program to provide funding for the necessary wastewater treatment plant upgrades. The Chesapeake Bay Restoration Act was passed in 2004 and authorized the collection of a surcharge on water and sewer utility bills paid by Maryland residents and businesses. The funds are to be used largely to fund up to 100% of eligible planning, design, and construction costs for ENR upgrades, which are defined generally as the cost of converting a Biological Nutrient Removal (BNR) facility to an ENR facility. The definition of "eligible", while not specifically defined in the legislation, is interpreted as the necessary liquid treatment processes to meet the ENR program limits for total nitrogen and phosphorous.

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 07
Date First Approved	FY 07
Initial Cost Estimate	1,560
Cost Estimate Last FY	5,805
Present Cost Estimate	7,147
Approved Request, Last FY	5,149
Total Expenditures & Encumbrances	746
Approval Request FY 11	3,702
Supplemental Approval Request Current FY (10)	

G. Status Information

Land Status: No land or R/W required
 % Project Completion: D-95%
 Est. Completion Date: July 2011

H. Map Map Reference Code:

MAP NOT AVAILABLE

D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: S - 94.12

Project Name: Damascus WWTP Enhanced Nutrient Removal

Cost Change

The cost estimate for this project has been revised to reflect the current construction cost estimate and the final cost sharing agreement with the Maryland Department of the Environment.

STATUS Preliminary Design (WSSC Contract No. CD4261A05,).

OTHER

The project scope has remained the same. Expenditures shown in Block B are based upon preliminary design estimates and may change based upon site specific conditions, additional design constraints. The expenditure estimates and funding schedule reflect the final cost sharing agreement with the Maryland Department of the Environment.

COORDINATION

Montgomery County Government, Montgomery County Department of Environmental Protection and Maryland Department of the Environment.

NOTE This project supports 100% Environmental Regulation.

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