

Proposed Project

Project Number: PT1_03
Subwatershed: Plumtree Branch 1

Project Type: Pond Retrofit
Project Size: 9.1 acre drainage area/ 3.3 acres impervious

Project Location: At corner of St. Johns Lane and Northfield Road next to church parking lot



Project Description: This project would entail retrofitting an existing pond located on the Church of Latter Day Saints at the corner of St. Johns Lane and Northfield Road. The pond captures runoff from the church and its parking lots. The pond would be excavated to increase detention volume and improve water quality. The design would incorporate water quality features such as a micropool, aquatic bench, forebay and meandering flow path. Because the proposed project is conversion to a wet pond and is located near private residences, property owners would be kept informed and involved in the planning and design process.

This pond is currently maintained as mowed turf. If the proposed project is not completed, educating the property owner on the benefits of allowing more natural vegetation to grow in the pond area or replanting at least a portion of the area with non-woody vegetation is recommended.

Project Benefits:

Water Quality	Conversion to a wet pond designed to current standards would provide water quality treatment and pollutant removal.
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Project Constraints:

Environmental	There are no environmental constraints anticipated with this project.
Property Ownership	This project is located on private property.
Facility Access	Access to this site is obtained from the church parking lot.
Design / Construction	No significant design or construction issues were noted.

Proposed Project

Upper Little Patuxent

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Subwatershed: Plumtree Branch 1

Project Type: Pond Retrofit
Project Size: 9.1 acre drainage area/ 3.3 acres impervious

Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL
Site Work				
Clear and Grub	0.2	AC	\$5,000.00	\$1,150
Pavement / Sidewalk Removal		SY	\$7.50	\$0
Curb-Gutter Removal		LF	\$10.00	\$0
Remove Pilot Channels		LF	\$6.00	\$0
Remove Barrel Pipe		LF	\$77.00	\$0
Pond Construction				
Grading and Excavation (Class I)	490	CY	\$30.00	\$14,700
Hauling and Disposal	490	CY	\$20.00	\$9,800
Embankment		CY	\$60.00	\$0
Forebay	56	CY	\$45.00	\$2,520
Safety bench	220	CY	\$30.00	\$6,600
Riser		LS	\$10,000.00	\$0
Outflow Pipe		LF	\$80.00	\$0
Outlet Protection	1	LS	\$8,000.00	\$8,000
Rip Rap Stabilization		LF	\$50.00	\$0
SWM Landscaping	1,115	SY	\$10.00	\$11,150
Direct Construction Subtotal				\$53,920
Indirect Costs				
E/SC, MOT, MOS (20% of Directs or \$10,000)	1	LS	\$10,784.00	\$10,784
Construction Stakeout (\$1,000/Day)	3	Day	\$3,000.00	\$3,000
Base Construction Cost				\$67,704
Mobilization (10% of Directs or \$1,000)				\$5,392
Subtotal				\$73,096
Contingency (30%)				\$21,929
Construction Subtotal				\$95,025
Env't'l Studies / Permitting (5% of Construction or \$5,000)				\$5,000
Engineering and Surveys (25% of Construction or \$40,000, maximum \$50,000)				\$40,000
Total Capital Cost				\$140,025
Operations and Maintenance Costs				
Annual Maintenance	6	Percent	\$3,235	
Discount Rate	5	Percent		
Expected Life	20	Years		
Net Present Value of O&M Costs				\$40,318
Life Cycle Cost				\$180,400