

Proposed Project

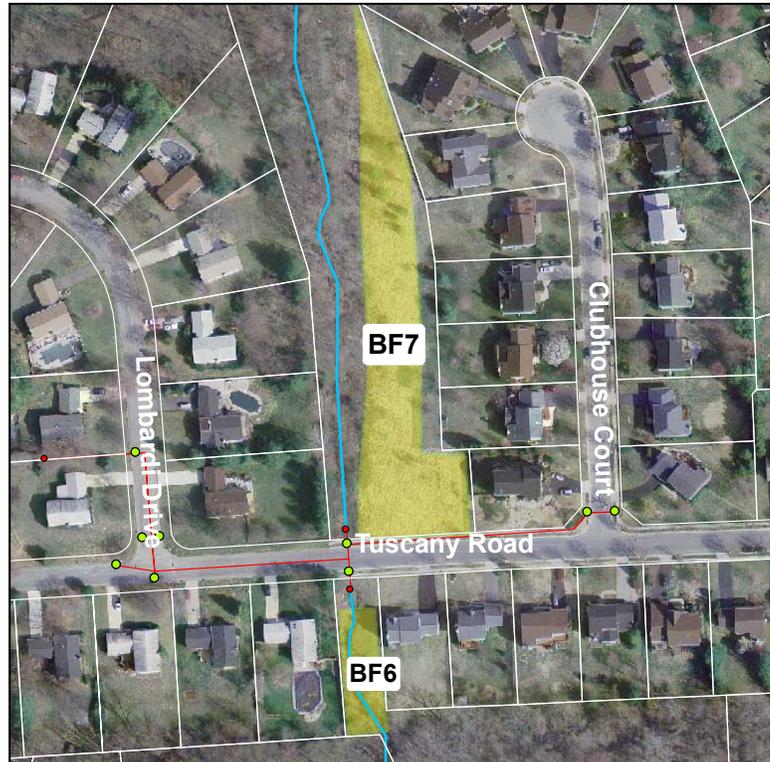
Upper Little Patuxent Watershed

Project Number: BF7
Subwatershed: Font Hill 1

Project Type: Riparian Buffer
Replacement / Reforestation
Project Size: 1.03 acres

Project Location: Adjacent to Tuscany Road.

Project Description: The area shown in the map to the right lies within a forest conservation easement and natural resources open space. The buffer adjacent to the stream shown in the map to the right appears to be mostly intact and the open areas between the stream and properties along Clubhouse Court appear to be unmowed. In order to increase overall forested area, this project would entail planting of native trees and shrubs to widen the existing buffer to approximately 100 feet. The project size would need to be decreased if project 1629_1630a, a shallow marsh proposed along Tuscany Road, is constructed.



Use of volunteer assistance for site preparation, planting and necessary maintenance and monitoring of the site could help reduce overall project cost.

Project Benefits:

Stabilization	No significant stream stabilization benefit is anticipated.
Habitat	Planting here will provide some habitat improvement but is limited by the proximity of the houses and roadway.
Water Quality	A wider stream buffer will trap runoff and pollutants such as fertilizers from the adjacent property.

Project Constraints:

Environmental	No environmental/permitting constraints are present.
Property Ownership	This project lies entirely within County owned property (Fairways natural resources open space). A majority of the area is also within an existing Howard County Recreation and Parks forest conservation easement.
Facility Access	Excellent access to this site is obtained from Tuscany Road.
Design / Construction	No major design or construction constraints are present. The design should incorporate native vegetation and a marked no-mow zone for understory development.

Proposed Project

Upper Little Patuxent Watershed

Project Number: BF7
Subwatershed: Font Hill 1

Project Type: Riparian Buffer Replacement / Reforestation
Project Size: 1.03 acres

Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL (Volunteer Labor)	TOTAL (Without Volunteer Labor)
Riparian Buffer Replacement					
Plant Material (trees)	1.03	AC	\$3,750.00	\$3,863	\$3,863
Plant Material (shrubs)	1.03	AC	\$2,725.00	\$2,807	\$2,807
Mulch, Tree Shelter	701	PLANTS	\$6.00	\$4,206	\$4,206
Cost to Plant	701	PLANTS	\$6.00	\$0	\$4,206
Site Preparation (volunteer)		AC	\$0.00	\$0	\$0
Basic Site Maintenance and Monitoring (volunteer)		AC	\$0.00	\$0	\$0
Direct Construction Subtotal				\$10,876	\$15,082
Base Construction Cost				\$10,876	\$15,082
Mobilization (10% of Directs or \$1,000)				\$0	\$0
Subtotal				\$10,876	\$15,082
Contingency (30%)				\$3,263	\$4,525
Construction Subtotal				\$14,138	\$19,606
Env't'l Studies / Permitting (5% of Construction or \$1,000)				\$0	\$0
Landscape Design and Surveys (25% of Construction or \$5,000)				\$0	\$0
Total Capital Cost				\$14,138	\$19,606
Operations and Maintenance Costs					
Annual Maintenance	5	Percent		\$544	\$754
Discount Rate	5	Percent			
Expected Life	5	Years			
Net Present Value of Annual Costs				\$2,354	\$3,265
Life Cycle Cost				\$16,500	\$22,900

Cost Notes and Assumptions:

Project costs were derived for both volunteer and paid labor. In calculating costs for volunteer labor it is assumed that local volunteer organizations could accomplish the project with County assistance and oversight. Site preparation, planting and any necessary maintenance and monitoring would be conducted by volunteers.

Planting density is planned at 1 tree or shrub planted at 8 foot intervals for a total of 681 plants per acre.

Size and species of trees and shrub plant material is based on approved Howard County Recreation and Parks information and is typically a 3-4 foot plant. Use of more mature or more immature plant material would affect the planting density and cost per plant.

Cost of plant material is based on 2009 survey of local and regional wholesale native plant nurseries. Plant material (seedlings) may also be obtained from the Maryland Department of Natural Resources, State Forest Tree Nursery at a much reduced cost or through Howard County's Stream ReLeaf program at no cost.