

Proposed Project

Upper Little Patuxent

Project Number: PT2 12
Subwatershed: Little Patuxent 2

Project Type: Stream Restoration
Project Size: Approx. 300 linear feet

Project Location: South of Route 40, in between N. Chatham Road and Plum Tree Drive.



Project Description: This project initiates at an outfall that contains a severe scour pool directly downstream. Overall the channel is incised and contains actively eroding banks. This project would involve realigning the existing channel into the valley in order to reconnect the stream channel with the floodplain. The channel would transition back to the existing alignment with a series of step pools, in order to tie to the confluence. Additionally, a plunge pool should be applied immediately downstream of the outfall to reduce scour.

Project Benefits:

Stabilization	The stream banks and channel bed will be stabilized to reduce scour.
Water Quality	Implementation of this project will provide a reduction in sediment supply and the associated water quality benefits.
Education	The project could provide educational benefits due to the proximity of the project to adjacent residential areas.

Project Constraints:

Environmental	Stream/wetland permitting will be necessary and stream closure periods may affect timing of work. This project will cause impacts to the existing riparian buffer.
Property Ownership	This project is situated on an apartment complex property and commercial property.
Facility Access	Access to this site is obtained through Plum Tree Drive and N. Chatham Road.
Design / Construction	A sewer line crosses the channel near the confluence that will need to be addressed during the design and construction. No major design or construction constraints are present.

Proposed Project

Upper Little Patuxent

Project Number: PT2 12

Subwatershed: Little Patuxent 2

Project Type: Stream Restoration/Outfall Repair

Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL
Stream Restoration				
Stream restoration/stabilization	300	LF	\$599.00	\$179,700
Buffer enhancement ²		LF	\$30.00	\$0
Outfall stabilization/protection		SF	\$100.00	\$0
			Direct Construction Subtotal	\$179,700
Indirect Costs				
E/SC, MOT, MOS (included above)				\$0
Construction Stakeout (2%)	1	LS	\$3,594.00	\$3,594
			Base Construction Cost	\$183,294
			Mobilization (10% of Directs or \$1,000)	\$17,970
			Subtotal	\$201,264
			Contingency (30%)	\$60,379
			Construction Subtotal	\$261,643
			Env't'l Studies / Permitting (5% of Construction or \$5,000)	\$13,082
			Engineering and Surveys	\$110,100
			Post-Construction Monitoring (\$40 / LF or \$4,000)	\$12,000
			Total Capital Cost	\$396,825
Operations and Maintenance Costs				
Annual Maintenance	5	Percent	\$8,985	
Discount Rate	5	Percent		
Expected Life	5	Years		
			Net Present Value of Annual Costs	\$38,900
			Life Cycle Cost	\$435,800

¹Cost per linear foot is based on linear regression of previous stream restoration/stabilization jobs ranging from 35 to 2215 linear feet.

²Stream restoration/stabilization includes the re-vegetation of areas immediately adjacent to the channel and within the limits of disturbance.