



CASE STUDY MOUNTAIN CREEK

STREAM BANK RESTORATION
Chattanooga, TN

PROJECT SUMMARY

Mountain Creek has been identified by the Tennessee Department of Environment & Conservation (TDEC) as a 303(d) listed stream, meaning that its pollution exceeds the State's standards for one or more water quality criteria. Habitat alteration and sediment have been identified as the main pollutants and are due in part to channel erosion caused by urban development and increased storm water runoff.

A severely eroded section of the creek was jeopardizing the structural stability and safety of an access road and outdoor classroom at a local elementary school. A Chattanooga-based environmental organization spearheaded a team of businesses, government agencies and the school system to find a solution.

The group determined that SCOURLOK® Engineered Bank Stabilization system, designed to resist extreme hydraulic and non-hydraulic stresses and promote vegetation, was the right choice to protect and restore the stream bank.



PROBLEM

A severely eroded section of Mountain Creek was jeopardizing the structural stability of a nearby school's parking lot & outdoor classroom



SOLUTION

SCOURLOK units were filled with in-situ soils, eliminating the cost of importing fill material to the jobsite



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FEATURES & BENEFITS

- Resists extreme hydraulic stresses, protecting vegetated and un-vegetated applications
- Units can easily be connected and contoured to accommodate projects of any size
- Units can be filled with in-situ soils, eliminating the cost of importing fill material to a jobsite
- Compact design makes shipping costs more effective than traditional hard armoring solutions
- Units ship pre-assembled for fast and easy installation, reducing overall installation costs
- Units are deployed faster than conventional methods and can be filled using machinery

SCOURLOK is comprised of interlocking metal baskets lined with a nonwoven geotextile and armored with PYRAMAT® 75 High Performance Turf Reinforcement Mat (HPTRM) to prevent erosion and promote sediment removal. Two tiers of SCOURLOK were installed along 105 feet of Mountain Creek for a 100-year flood event.

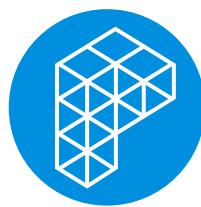
Additionally ARMORMAX® was used to stabilize and prevent future erosion to the slope above SCOURLOK.

Since completion, the stream has restored itself to its original channel depth. This has resulted in the formation of pools and riffles, which has led to several fish and minnow species relocating to this section of the stream. Prior to construction there was almost zero fish in this area. Additionally wildflowers and other native vegetation has emerged along the slope, attracting several butterfly species.



PERFORMANCE

Since installation, the stream has restored itself to its original depth, which has lead to the return of fish and aquatic life



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