CASE STUDY

SOLMAX

MOUNTAIN CREEK STREAM BANK STABILIZATION, TENNESSEE

Restoring stream bank while promoting vegetation

Industry:	Water
Application:	Erosion control
Location:	Chattanooga, Tennessee
Product:	**PROPEX®** Scourlok®

Overview

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, partly due to channel erosion caused by urban development and increased stormwater runoff.

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

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Challenge

The group determined that the **PROPEX** Scourlok Engineered Bank Stabilization system, designed to withstand extreme hydraulic and non-hydraulic stresses and promote vegetation, was the appropriate choice to protect and restore the stream bank. **PROPEX** Scourlok consists of interlocking metal baskets lined with a nonwoven geotextile and armored with **PROPEX** Pyramat® 75 High Performance Turf Reinforcement Mat (HPTRM) to prevent erosion and promote sediment removal. Two tiers of PROPEX Scourlok were installed along 105 ft (32 m) of Mountain Creek to withstand a 100-year flood event. Additionally, **PROPEX** Armormax® was used to stabilize the slope above **PROPEX** Scourlok and prevent future erosion.

Solution

Since the completion of the project, the stream has naturally restored itself to its original channel depth. This restoration has led to the formation of pools and riffles, resulting in the relocation of several fish and minnow species to this section of the stream. Prior to the construction, there were almost no fish in this area. Moreover, various wildflowers and native vegetation have emerged along the slope, attracting several butterfly species.