Bio-Stabilization of Slopes and Stream Banks

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ABSTRACT

Bio-stabilization has been used successfully at scores of sites across the USA. A typical feature of this approach is the use of inert materials, e.g., rock and geo-synthetics, in combination with transplants and live cuttings. The cuttings are placed in the ground in various arrays and patterns where they can provide soil reinforcement, drainage, and barriers to soil erosion or shallow earth movement. These techniques lend themselves readily to hand labor, where access is problematic; but can also be adapted to placement and installation using heavy machinery. Selected techniques will be described briefly. Two case studies, e.g., a highway cut slope stabilization and a stream bank protection project, will be described where a bio-stabilization approach was adopted. Project evaluations and lessons learned will be included.