

Description

Streambank stabilization involves a combination of erosion and sediment control practices to protect streams, banks, and in-stream habitat from accelerated erosion. BMPs associated with streambank stabilization may include protection of existing vegetation, check dams/grade control, temporary and permanent seeding, outlet protection, rolled erosion control products, temporary diversions, dewatering operations and bioengineering practices such as brush layering, live staking and fascines.



Photograph SS-1. Streambank stabilization using geotextiles following installation of a permanent in-stream grade control structure.

Appropriate Uses

Streambank stabilization may be a construction activity in and of itself, or it may be in conjunction with a broader construction project that discharges to a waterway that is susceptible to accelerated erosion due to increases in the rate and volume of stormwater runoff. Depending on the health of the stream, water quality sampling and testing may be advisable prior to and/or during construction to evaluate health and stability of the stream and potential effects from adjacent construction activities.

Design and Installation

Streambank stabilization consists of protecting the stream in a variety of ways to minimize negative effects to the stream environment. The following lists the minimum requirements necessary for construction streambank stabilization:

- Protect existing vegetation along the stream bank in accordance with the Vegetated Buffers and Protection of Existing Vegetation Fact Sheets. Preserving a riparian buffer along the streambank will help to remove sediment and decrease runoff rates from the disturbed area.
- Outside the riparian buffer, provide sediment control in the form of a silt fence or equivalent sediment control practice along the entire length of the stream that will receive runoff from the area of disturbance. In some cases, a double-layered perimeter control may be justified adjacent to sensitive receiving waters and wetlands to provide additional protection.
- Stabilize all areas that will be draining to the stream. Use rolled erosion control products, temporary or permanent seeding, or other appropriate measures.
- Ensure all point discharges entering the stream are adequately armored with a velocity dissipation device and appropriate outlet protection.

See individual design details and notes for the various BMPs referenced in this practice. Additional information on bioengineering techniques for stream stabilization can be

Streambank Stabilization	
Functions	
Erosion Control	Yes
Sediment Control	No
Site/Material Management	No

found in the *Major Drainage* chapter of Volume 1 and additional guidance on BMPs for working in waterways can be found in UDFCD's *Best Management Practices for Construction in Waterways Training Manual*.

Maintenance and Removal

Inspect BMPs protecting the stream for damage on a daily basis. Maintain, repair, or replace damaged BMPs following the guidance provided in individual BMP Fact Sheets for practices that are implemented. Some streambank stabilization BMPs are intended to remain in place as vegetation matures (e.g. erosion control blankets protecting seeded stream banks and turf reinforcement mats).

For BMPs that are not to remain in place as a part of final stabilization such as silt fence and other temporary measures, BMPs should be removed when all land disturbing activities have ceased and areas have been permanently stabilized.