

PRIMARY USE: Minimize bank erosion.

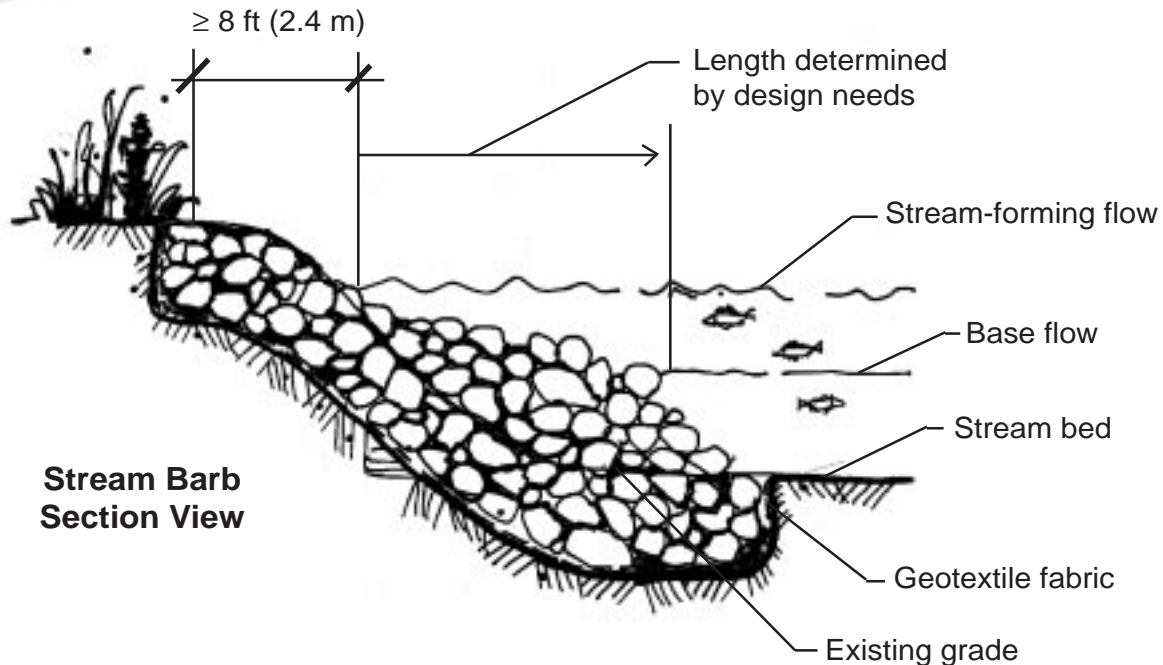
ADDITIONAL USES: Improve habitat for aquatic plants and animals when vegetated.

STREAM BARBS

What is it? Stream barbs are low rock sills which project out from a streambank and across the stream's thalweg to redirect streamflow away from an eroding bank. Flow passing over the barb is redirected so that the flow leaving the barb is perpendicular to the barb centerline.

Purpose

This is an effective technique to control bank erosion on small streams which require minimal stream disturbance.



**Stream Barb
Section View**

Limitations

Heavy equipment is required for installation. A geomorphic analysis of the site conditions by qualified personnel should be required prior to design and installation.

Materials

Large angular to subangular rock.

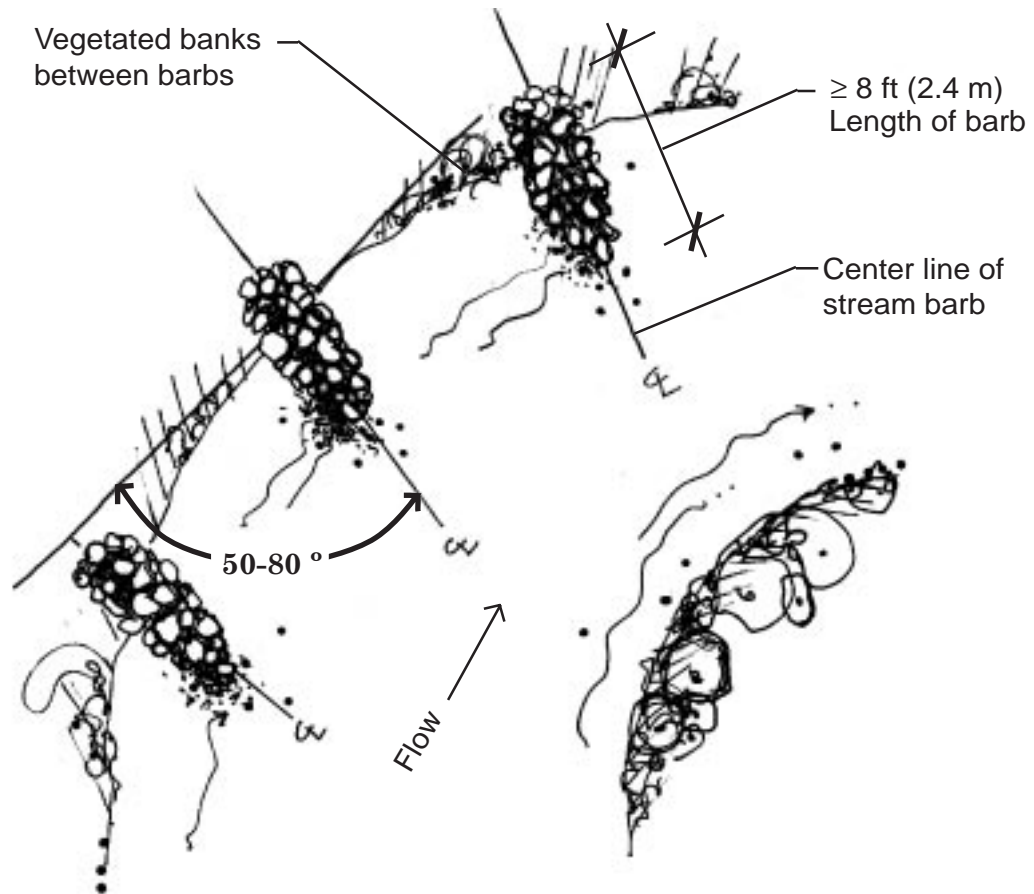
Installation

Minimize disturbance to the stream and adjoining areas by scheduling the work when it will interrupt aquatic plants and animals the least. Construct the barb to a height of generally not over 2 ft (0.6 m). The width should be at least equal to three times the rock size, but not less than a typical construction equipment width of 8 to 10 ft (2.4 to 3.0 m). Construction of barbs can begin at the streambank and proceed stream-ward using the barb to support construction equipment. The barb is aligned so that the flow of the barb is directed toward the center of the stream or away from the bank. The angle between the barb and the upstream bank typically ranges from 50 to 80 degrees. The barb must be long enough to cross the stream low flow thalweg. Space the barbs apart from 4 to 5 times the barb's length. The specific spacing is dependent on finding the point at which the stream flow leaving the barb intersects with the bank.

Source: Engineering Field Handbook, NRCS.

STREAM BARBS

Additional Drawing:



**Stream Barb Details
Plan View**