

Fish Habitat Restoration Methods Concept Specification Combination of Riprap and Vegetation

Purpose:

- To stabilize banks and further improve habitat by providing shade, cover, and leaf

fall. Conditions Where Applicable:

- Instream location and sizing must be approved by an Adopt-A-Stream Biologist.
- Where erosive forces are too strong for vegetative methods alone.
- Many eroding banks will naturally recover if ice scouring is eliminated by instream restoration techniques. If this will happen at the site it is preferred to undertaking other bank stabilization methods.

Advantages:

- Improves bank protection by forming a root mat under the rock.
- Increases deposition of sediments.
- Little maintenance.
- Improved

aesthetics. Disadvantages:

- Cuttings can be damaged by the rock placement.
- Cuttings have to be driven well into the

soil. Design Criteria:

- Design the bank as described in the riprap bank stabilization fact sheet.
- Plant live stakes of shrubs in the soil under the rocks so that the stake protrudes between the rocks.
- Planting can be done during or after placing riprap on the banks.
- Fascines can be planted in the rock work as it is being built.
- Care must be taken to avoid damaging the plants when placing the rock.
- The toe of the bank can be covered with riprap up to the ordinary high water level and vegetative methods can be used on the bank above the rock.
- These methods can be adapted for use with any of the constructed bank stabilization methods.

Implementation Steps:

- Implement the work as outlined on bank stabilization fact sheet for riprap.
- Construct the toe of the riprap to the low water mark.
- Plant shrubs, stakes, and fascines in the soil and riprap around them.
- If the layer of riprap is not too thick, it is possible to drive the stakes or live posts between the rocks and well into the soil.

References:

Federal Interagency Stream Restoration Working Group (FISRWG). 1998. Stream Corridor Restoration: Principles, Processes and Practices.

British Columbia Ministry of Environment, Lands, and Parks and Ministry of Forestry. 1997. Fish Habitat Rehabilitation Procedures, Watershed Restoration Technical Bulletin No. 9.

Schiechl, Hugo. 1980. Bioengineering for Land Reclamation and Conservation. University of Alberta Press.

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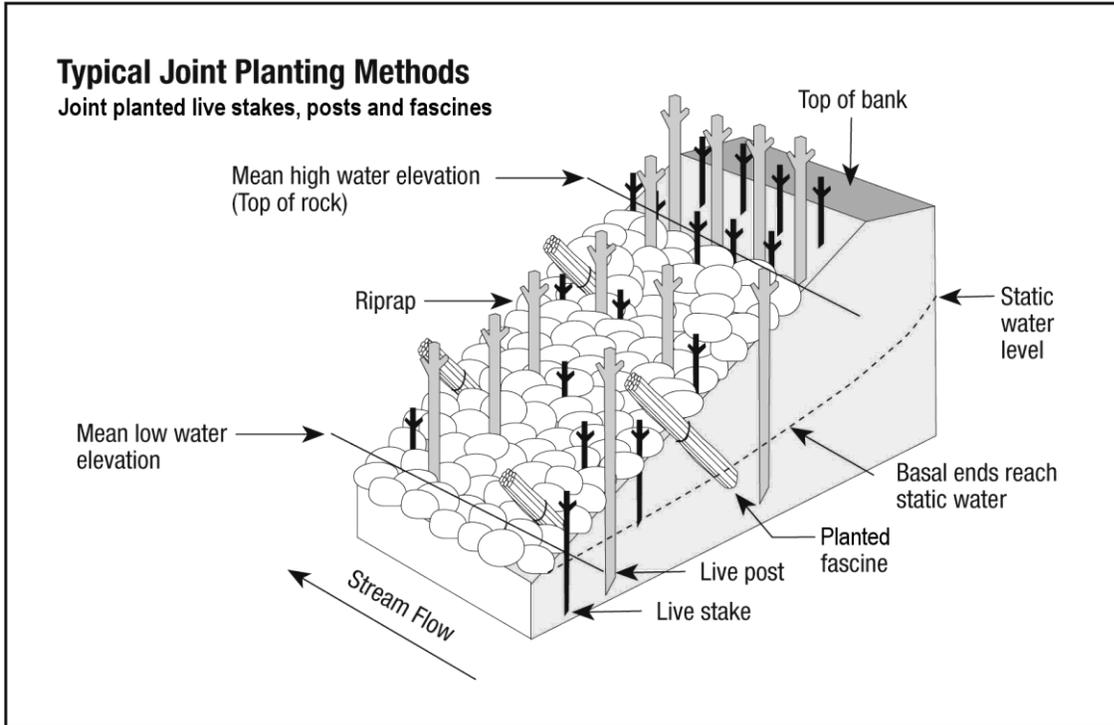


Figure 1. Conceptual drawing of joint plantings to reduce stream bank erosion (B.C. Ministry of Environment, Lands, and Parks and Ministry of Forestry, 1997).