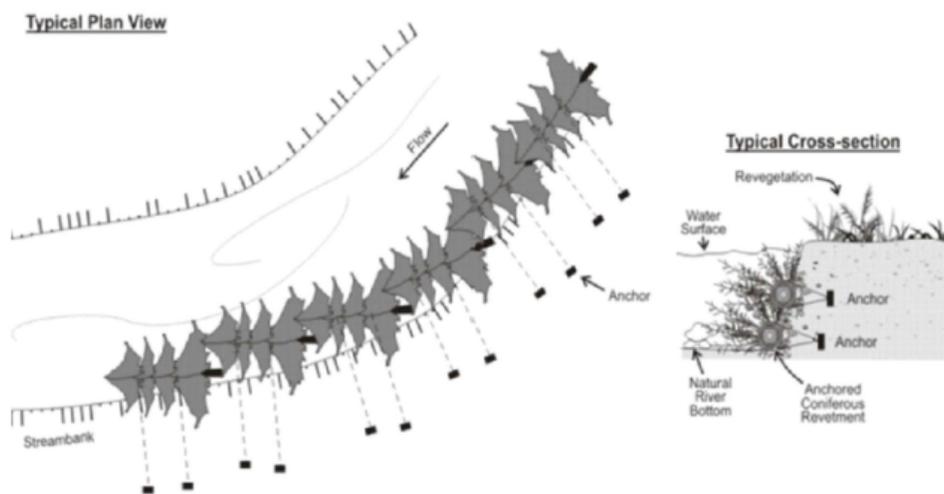


Tree Revetment Installation

Tree revetments are a bioengineering technique that decreases erosion along stream banks. Revetments are a row of anchored trees along a stream bank to reduce flow velocity along eroding banks. The trees trap fine sediments along the bank and within the tree branches. Over time, deposited materials form a seed bed for new riparian vegetation. The resulting vegetation spreads roots throughout the revetment and stream bank. By the time the revetment decays, the bank is stabilized by new, established vegetation.

Typical design:



SOURCE: CAPP ET AL. 2012

TREE REVETMENT DETAIL
N.T.S.

Prior to the installation:

- ❑ Work with your area TUC Biologist to identify safety, design and regulatory requirements (e.g. chainsaw/handsaw use, site-specific plans, Restricted Activity Periods, Water Act, etc.).
- ❑ Source earth anchors and installation tools. The size of anchors and length of cable will depend on project specifications. Trout Unlimited Canada has installation tools that you may borrow.
- ❑ Check with local utility providers (e.g. Alberta One-Call 1-800-242-3447) to ensure there are no buried lines in the area of proposed work.

Required Supplies:

- Earth anchors (at least two to four per tree to be installed, depending on the size of the tree)
- Chainsaw or handsaw (refer to TUC Biologist for OHS requirements)
- Insertion tools
- Cable cutters
- Cable crimpers
- Cable swages/crimps
- Mallet
- Personal Protective Equipment (e.g. gloves, footwear)
- Coniferous tree(s)
- Flagging tape

Instructions:

1. Select trees that fit the design specifications and cut to size. Ensure minimal damage to the branches.
2. Trees will be placed horizontally along the bank with the tops facing downstream, so the tops of the upstream branches cover the base of the downstream trees. Flag anchor locations as necessary.
3. At desired anchor placement, drive the anchors to depth using a mallet and insertion tool, then drive the anchors to depth.



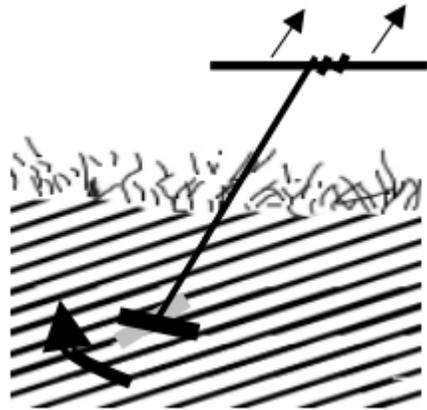
4. Slide the swage onto the cable (be careful not to let the swage/crimp slide into the hole in the ground).
5. Wrap the cable around the tree several times and slide the tag end of the cable through the open hole of the swage sleeve. Tighten the cable by driving the anchor in further.
6. Set the anchors below grade – setting the anchors below grade is simple and easy after the anchor is driven to depth. Using the insertion tool, place it through the loop of the

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exposed cable and pull up. Pull up on the cable to rotate the anchor into the locked position.



7. Place tree at desired location and using swage and crimper secure the tree to earth anchor.
8. Cut cable to length.

Earth anchor instructions from Simcoe Environmental.