

Fish Habitat Restoration Methods Concept Specification

Thinning of Alders (Overhead and Instream)

Purpose:

- To thin alder growth and the growth of other small trees, which are obstructing the stream flow.
- To increase sunlight penetration and increase primary productivity of the stream.

Conditions Where Applicable:

- Instream clearing must be approved by an Adopt-A-Stream Biologist.
- Generally, alders, aquatic plants, or small trees growing on or within the banks of the watercourse should not be removed, as they augment natural fish cover, contribute to food input from terrestrial insects and control erosion.
- In some cases, the growth is obstructing the flow and causing the stream to retain sediments and become shallow and braided. In these cases, the habitat would benefit from alder thinning.
- Occasionally, canopy overgrowth may reduce sunlight penetration and affect the primary productivity of the stream. Thinning the alders should only be attempted if fish habitat productivity is limited and it will not result in significantly increased water temperatures.

Advantages:

- Prevents siltation.
- Returns the flow to a single channel.
- Flushes out accumulated silt.
- Increases primary productivity.

Disadvantages:

- Can reduce important instream cover.

Design Criteria:

- Determine the natural stream width.
- Find the main channel through the alders.

Implementation Steps:

- Selectively clear the instream alders or small tree branches back to the natural stream width following along the main channel.

- The alders can be thinned out so to allow one person to walk in the thalweg (clear branches over the thalweg to a minimum height to allow crew access).
- Maintain the forest canopy.
- All debris that is removed should be disposed of where it will not return to the watercourse.
- Debris can be woven between the alders across braided channels to catch debris and keep the flows in the main channel.

References:

NB Department of Environment and Local Government - Watercourse Alterations Technical Guidelines.

Adapted from Ecological Restoration of Degraded Aquatic Habitat: A Watershed Approach 2006 Published by Fisheries and Oceans Canada Oceans and Science Branch Gulf Region ISBN: 0-662-42818-8 Cat. Number: Fs104-4/2006E

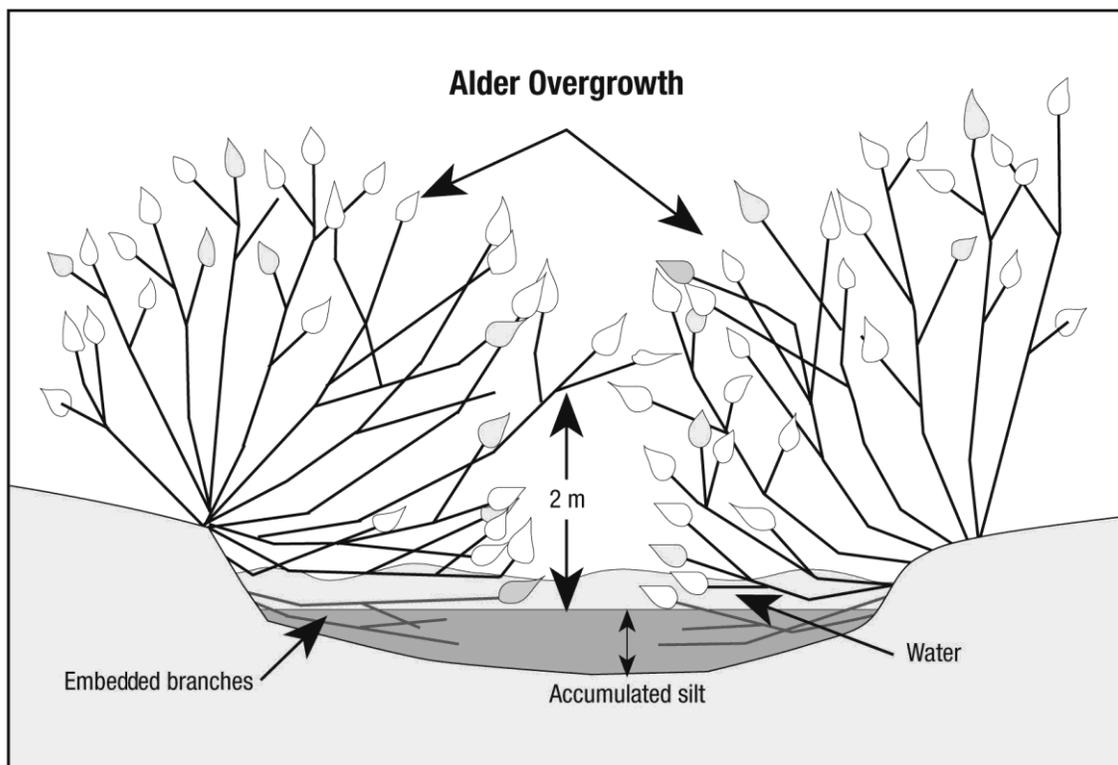


Figure 1. Conceptual drawing on clearing alder overgrowth.