SILVICULTURE FOR SALMON

Restoring salmon habitat in Nootka Sound

PHOTO CREDIT EIKO JONES

Re-Building Vancouver Island Chinook Salmon Stocks

The Nootka Sound Watershed Society, with support from the Coastal Restoration Fund, undertook a project to support the recovery of Chinook salmon stocks in the Nootka-Kyuquot Conservation unit by restoring streamside forests. By using innovative silvicultural treatments, the project sought to accelerate the natural succession of tree species in the forested areas along streams from an immature deciduous forest to a mature coniferous forest. Coniferous tree species, such as western redcedar, Sitka spruce, and western hemlock, support ecosystem functions that are important to salmon, such as improved streambank stability and cohesion, and the creation of critical habitat through an increase in future large woody debris into the stream channels.

PROJECT OVERVIEW:

The purpose of this 3-year long project is to restore salmon populations in Nootka Sound by creating habitat and environmental features that are critical to salmon. This was done using different forestry practices to improve bank stability and salmon habitat by:

- Accelerating natural forest processes by planting and promoting coniferous tree species (western redcedar and Sitka spruce) which create a root network to help stabilize stream banks and provide future large woody debris input into streams
- Creating old forest features that support diverse ecosystem services that contribute to healthy forests and streams.

Hishukishts'awalk
All things are connected

History of the Area

Logging practices in the 1940s removed much of the forests along the banks of various rivers and streams in the area. This reduced the functioning of the streamside forests, a crucial component of healthy salmon habitats. Many of these areas have been slow to recover. Through silvicultural practices, such as tree planting and providing more room for conifers to grow, the riparian forest is accelerated to an old-growth state, supporting ecosystems and habitats that are critical to salmon.

All Things are Connected

Bringing coniferous tree species back to the forested areas along rivers and streams is critical to establishing healthy and productive salmon habitats. In January 2021, 20,000 western red cedar and Sitka spruce seedlings were planted in selected areas. Through tree planting and the removal of competing species, such as red alder and salmonberry, we can accelerate the natural processes that would have otherwise taken hundreds of years. The coniferous trees have strong, interlocking roots that help to stabilize streambanks and support stream ecosystem functioning, which is important to spawning, incubating, and rearing habitat.

In a continuous cycle, salmon feed riparian forests and the forests feed the fish.

PROJECT SUPPORTED AND SPONSORED BY:

Fisheries and Oceans Canada | Pêches et Océans Canada

Western Forest Products Inc. DEFINING A HIGHER STANDARD™

Mowachaht Muchalaht First Nation

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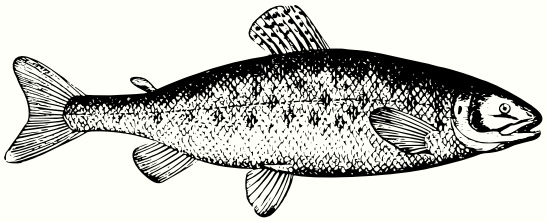
For more information, please visit: www.nootkasound.info

RIVERS BY THE NUMBER

Rivers and Areas Treated

It takes an incredible amount of effort and cost to bring a project from conception and initiation, to finally implementing a treatment that restores the forested area alongside these rivers and streams. Over a span of 3 years, a total of $900,981 was allocated to remediate the riparian forests along 5 rivers in the Nootka-Kyuquot Conservation unit: Sucwoa River, Tahsis River, Leiner/Perry river, Little Zeballos river, and Chum Creek. The funding allocation per river was dependent on size, complexity, and need, with approximately 60% of the total funding targeted towards implementing the restoration work, and 40% for professional services.



Area in hectares (ha) Treated along each River and Cost

5 rivers in the Nootka-Kyuquot Conservation unit had restoration treatments prescribed in the streamside forests in order to improve salmon habitat. The area treated and costs are as follows:

- **Sucwoa River**
  - 46.7 ha

  $189,166
- **Tahsis River**
  - 78.6 ha

  $583,980
- **Leiner/Perry River**
  - 1.5 ha
- **Little Zeballos River**
  - 17 ha

  $127,835
- **Chum Creek**
  - 2 ha

*Note: at the time of publication, the Leiner/Perry River, Little Zeballos River, and Chum Creek had yet to undergo restoration work, and area treated and costs therefore serve as an estimate.

Percent of total area treated