Fraser Salmon & Watersheds Program

PACIFIC SALMON FOUNDATION

Fraser Basin Council

2010/11 FINAL REPORT

FSWP File Number*	FSWP 10 D 107 HWRS

* Please use the FSWP File Number provided in previous FSWP project correspondence.

1. Project Information

1.1. Project Title

Nahatlatch River-Beaver Control Structures to Improve Fisheries Access to Spawning and Rearing

1.2. Proponent's Legal Name

Boothroyd Indian Band

1.3. Project Location

Thompson Region/ Nahatlatch Watershed

1.4. Contact for this report

Name:Lawrence Campbell	Phone:604-867-9211	Email:campbell1031@hotmail.com

1.5 Funding Amount

Original Approved Grant Amount:	Total FSWP Expenditures:	Final Invoice Amount:	Final Non-FSWP leveraging, including cash and in-kind:
48780.	48780.	9756.	8218.

2. Project Summary

Please provide one paragraph describing the results of your project. As this summary may be used in program communications, clearly state the issue(s) that were addressed and avoid overly technical descriptions. Maximum 300 words.

The 2010 Nahatlatch River FSWP project proved to be an overwhelming success as it allowed for a renewal in salmon stock enumeration on critical Coho salmonid populations within the Nahatlatch River watershed. This was accomplished through the re-introduction of a fish fence along a critical Coho spawning and rearing habitat along a side channel previously built DFO side channel and fisheries improvements. The fish fence allowed for an estimate of Coho smolts out migrating from preferred rearing habitat along the river. Data from this assessment was very valuable in determining that outmigration from the channel is at historical lows compared to previous years (2005) when the fish fence was last used. The project also allowed for band members and youth an opportunity to participate in removing fish passage obstructions to critical habitat along a 30km stretch of the Nahatlatch River. This included removing beaver dams during critical fish passage windows both into and out of preferred rearing and spawning areas. More technical fisheries obstruction removal were also completed successfully including the building and installation of a beaver box platform which ensured fish

passage into preferred fish rearing habitat. Overall, the funding from FSWP was critical in ensuring baseline data was captured on smolt out-migration at critical rearing habitat as well as allowing for the removal of fisheries obstructions into key rearing and spawning habitat. The funding also allowed our youth to learn technical skills in fisheries improvements. These skills will allow band members to improve upon fisheries management issues and participate in discussions with government on critical issues.

OPTIONAL: Please give a short statement (up to 100 words) of the most compelling activity or outcome from your project.

The project allowed for improvements to fisheries migration both into and out of critical spawning and rearing habitat areas as well as the enumeration of Coho smolts. The project also allowed for capacity building within the band as technical improvements where learned and shared with the youth who participated in the project.

3. Final Project Results and Effectiveness

3.1 Please evaluate the effectiveness of your project in achieving Project Objectives. Please identify the indicators you have used to measure the effectiveness of your project. Please include any notable successes or challenges.

The effectiveness of our project in achieving the Project Objectives are outlined below including what indicators we used in determining their success;

Objective #1 - To remove beaver dams affecting both the spawners accessing the spawning channel as well as smolts out-migrating from the rearing channels. This objective was achieved successfully as over 23 beaver dams were removed at critical locations throughout the watershed. The total number of beaver dams removed was an indicator as to the overall success in achieving this objective as it allowed for salmonid movement into and out of critical areas.

Objective #2 - To construct beaver dam control structures to prevent barriers to the upstream/downstream migration of fish. This objective was achieved successfully as we built a proper functioning beaver box which removed one large dam and allowed for continued passage of both the upstream and downstream migration of salmonids. The successful indicator for this objective was the construction and proper functioning of the beaver box.

Objective #3 - To ensure spawners and smolts can move freely into the high value spawning/rearing habitat for years to come. Although only a year into the monitoring of our key anti beaver device, we are successful at this point as the beaver box is functioning properly as no beaver activity has

been noted in and around a key location for upstream and downstream movement.

3.2 Copy expected Deliverables from your detailed proposal and insert into this section. Add additional rows as needed. Then please list the final Deliverables (the tangible end products resulting from this work) associated with expected Deliverable.

Expected Deliverables	Final Deliverables
1. As built design drawings showing what structures where constructed and their locations	As built drawings are the same as those technical guidelines and drawings used to construct the beaver box as they were followed exactly as shown - Attached
2. A map showing the effects of beaver control on high value spawning and rearing habitat	Attached
3. A final report outlining what was completed as well as a baseline study presenting the results of our smolt enumeration	To **be completed**

If final Deliverables differ from the original expected Deliverables, please describe why, and the implications for the project.

The final deliverables are still being completed for the project. The implications for the project are minimal as all the fisheries objectives have been completed. The migration into and out of key rearing and spawning habitats have been maintained and are functioning as planned.

3.3 Please describe how the benefits of this project will be sustained and/or be built upon into the future. What are the planned next steps, or recommendations for further work, if applicable?

The project benefits will be sustained through future years as the band now has the known locations (mapped) of critical habitat areas as well as known beaver dam locations. The skills acquired through the project will also allow for the construction of future anti beaver devices. The next steps will be to ensure other critical areas are mapped further up in the watershed as well as the construction of several more beaver boxes. Another future critical assessment for salmonid migration will be an assessment to determine where and what culverts are problematic to both the upstream and downstream migration of fish.

3.4 Please describe the value-added components of your project, such as how you have engaged with First Nations, built capacity, or strengthened relationships.

The value added components of this project include an increase in capacity building for both the Boothroyd Indian Band and the team that was put together in order to construct the anti beaver devices. This project has also fostered relationships between heavy equipment operators in and around the area as well as the band and other key personnel in the community by allowing the group to work together on improving fisheries/environmental health in the community we all live in.

4. Additional Comments

OPTIONAL: Provide any additional comments or recommendations for future efforts and suggestions for helping partners to meet the goals of the Fraser Salmon and Watersheds Program.

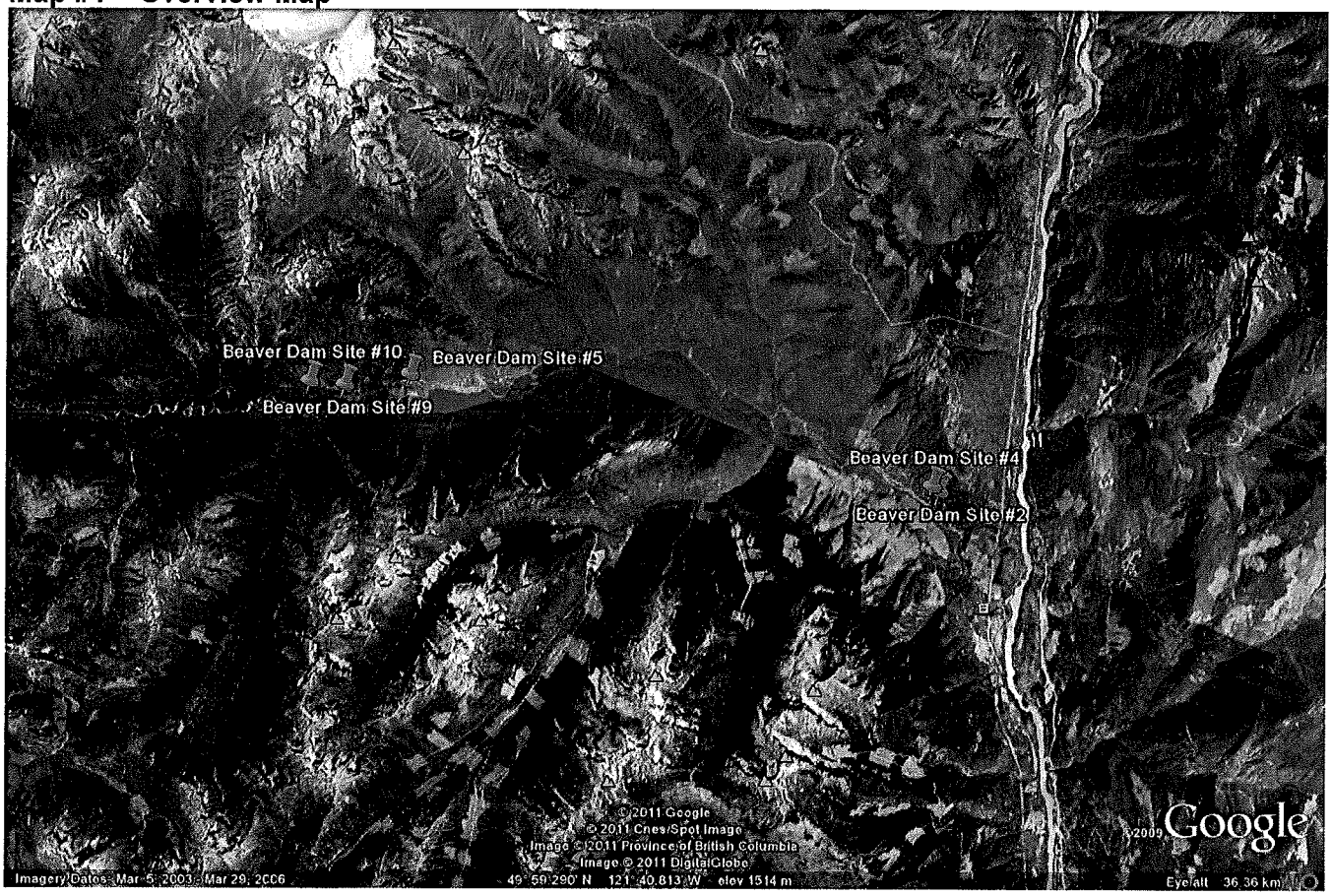
Future works should include an assessment of culverts along the Nahatlatch Forest Service Road and other larger tributaries. The assessment is required as numerous culverts are in disrepair and are limiting the access both into and out of key habitats.

7. Appendices

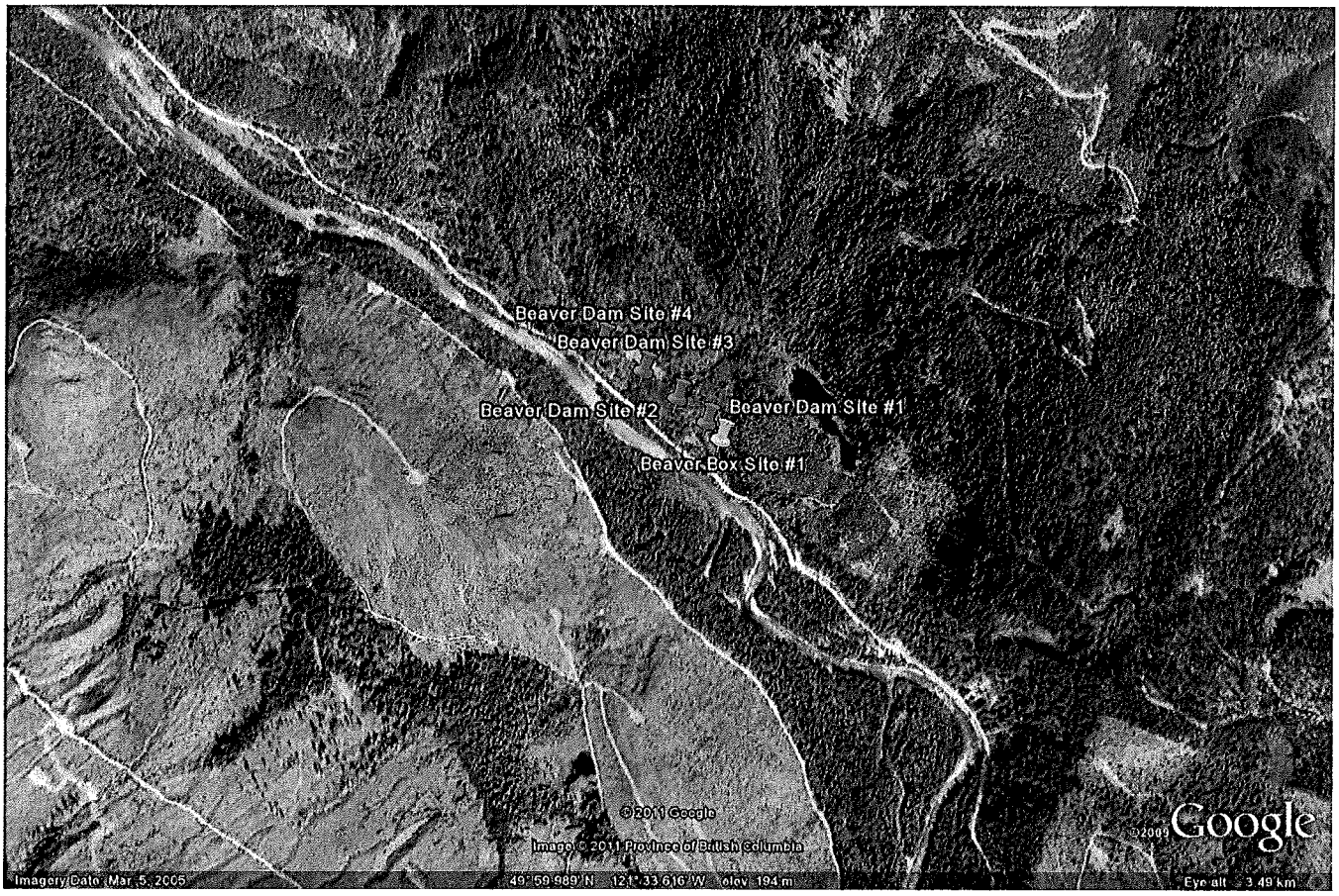
REQUIRED: Please list all DOCUMENTATION of Final Deliverables below, and attach to this report. These may include technical reports, maps, photos, evidence of communications, lists of meeting participants, etc.

1. **Map showing problem beaver areas and associated fish migration issues**

Map #1 – Overview Map



Map #2 – Overview 17-19km Nahatlatch FSR



Map #3 – Overview 37-42km Nahatlatch FSR

2. Typical photographs

Plate 1 – View of beaver box from downstream location

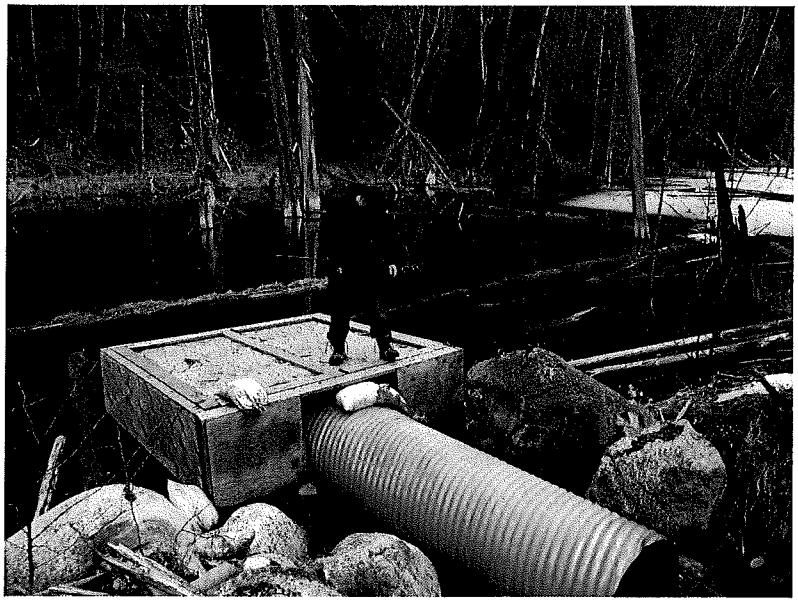


Plate 2 – Close up view of beaver box

3. As built drawings