

Fraser Salmon & Watersheds Program



2008 Final Report Template

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|--------------------------|----------|
| FSWP File Number* | 08-D-104 |
|--------------------------|----------|

*Please use the FSWP File Number provided in previous FSWP 2008 project correspondence

Contact Information

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| Sponsoring Organization's Legal Name |
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| British Columbia Conservation Foundation |
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|---|-----|
| Are you a federally registered Charity, Non-profit organization or Business (Yes /No)? | Yes |
|---|-----|

| | | | |
|---------------------------------------|---|---|-----------------------------------|
| If yes, please indicate which. | <input checked="" type="checkbox"/> Charity | <input checked="" type="checkbox"/> Non-profit organization | <input type="checkbox"/> Business |
|---------------------------------------|---|---|-----------------------------------|

| | | | |
|----------------------------|-----------------|-------------------|-------------------|
| Registration number | 123042822RR0001 | GST number | 12304 2822 RT0001 |
|----------------------------|-----------------|-------------------|-------------------|

| | | | |
|---|-----|------------------------------------|--------|
| Are you a registered Society (Yes / No)? | Yes | Society Registration number | S-8351 |
|---|-----|------------------------------------|--------|

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| Mailing Address |
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| #206 17564, 56a ave, Surrey BC, V3S 1G3 |
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| Street Address (if different from above) |
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Project Manager¹

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| Name: Kerry Baird | Title: Project Manager |
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| Affiliation: | Phone: (604) 576-1433 |
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| Fax: (604) 576-1482 | E-mail: kbaird@bccf.com |
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¹ All correspondence will be directed to the Project Manager.

Alternate Project Contact

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| Name: Kenji Miyazaki | Title: Fisheries/Habitat Technician |
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| Affiliation: | Phone: (604)576-1433 |
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| Fax: (604) 576-1482 | E-mail: kenji@bccf.com |
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Partners / Subcontractors

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| Name: | Affiliation: |
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| Phone: () | E-mail: |
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| Name: | Affiliation: |
| Phone: () | E-mail: |

Project Information

Project Title

South Coast BC; New Habitat Rehabilitation Project Prescriptions

Project Location

South Alouette River, Kanaka Creek, Chehalis River, Cogburn Creek, Big Silver and Hornet Creek, Coquihalla River, Silverhope Creek.

| | | | | | |
|-------------------------|-----------------|----------------------------|--------------------|-----------------------------------|-------------------|
| Amount Requested | \$18,000 | Total Project Value | \$23,906.50 | Non-FSWP funds² | \$5,906.50 |
|-------------------------|-----------------|----------------------------|--------------------|-----------------------------------|-------------------|

² Non-FSWP funds include both cash and in-kind funding. In-kind funding refers to all non-cash contributions such as equipment, supplies, labour, etc. Please refer to Budget Section for further details.

Project Summary

Please provide a single paragraph describing your project, its objective, and the results. As this summary will be used in program communications, clearly state the issue addressed and avoid overly technical descriptions. Do not use more than 300 words.

Habitat restoration prescriptions were completed by the BC Conservation Foundation (BCCF) on high priority salmon and steelhead systems in the Fraser Basin. Review of existing habitat and recommendations for habitat rehabilitation vital to stream rearing salmonids was the aim of the project. Habitat rehabilitation recommendations are primarily in the form of: protecting and developing off-channel refuge areas; increasing spawning habitat capacity, and the removal of juvenile salmonid migratory impediments. Kanaka Creek received a more thorough review as a result of the significantly depressed steelhead population, limited watershed reviews conducted in the past and the keen support by local stakeholders including the Bell Irving Hatchery, Kanaka Education and Environmental Partnership Society (KEEPS) and Metro Vancouver. As well, the Big Silver received a migratory impediment removal review by a BCCF biologist and Northwest Hydraulics Consultants professional engineer. A memo was produced outlining the type of passage structure, locations, and project costs (find document attached). The Chehalis River is being postponed until the lower river reach becomes, naturally, more stable. Currently, excessive lateral shifting is taking place. Each watershed that was considered has been broken down into reach and site levels. A habitat assessment and rehabilitation document is in development and once completed, will outline in detail habitat assessment findings, habitat rehabilitation prescriptions, and budget. Through this project, partnerships with local stakeholders have been developed and will likely accelerate the implementation of the prescribed projects. A late freshet and early heavy winter reduced our chances of assessing all of the proposed systems.

OPTIONAL If your project lends itself to sparking interest through a compelling sound bite (for potential use in FSWP media communications), please tell us what that sound bite would be. Do not use more than 150 words.

| Species and life stage(s) the project targets: please list |
|--|
| Steelhead (<i>Oncorhynchus mykiss</i>) all life stages. Coho Salmon (<i>Oncorhynchus kisutch</i>) all life stages Bull Trout (<i>Salvelinus confluentus</i>) all life stages |
| Watershed(s) the project targets: please list |
| South Alouette River – Watershed Code – 10002670006000 Kanaka Creek – Watershed Code – 10037400 Chehalis River – Watershed Code – 110090200 Big Silver Creek – Watershed Code – 110599000 Coquihalla River – Watershed Code – 100115400 Silverhope Creek –Watershed Code- 100112900 |

| Project Deliverables and Results | |
|--|---|
| <ul style="list-style-type: none"> ▪ Paste in the deliverables outlined in your Detailed Proposal (question #3 under project ‘relevance and significance’ heading) into the table below. Then, please list the results associated with each deliverable. ▪ Please include copies of any relevant communications products (brochures, posters, videos, website addresses etc.) resulting from this project. | |
| Deliverable | Result |
| Conduct Level I and II Fish Habitat Assessment/Rehabilitation Procedures on priority streams; with the goal of determining watershed/habitat deficiencies and fish production constraints. | Level I FHAP’s were not conducted for any of the systems that were reviewed. Instead, existing literature, including previously completed FHAP’s and watershed assessments, were reviewed for specific fish habitat and ecosystem concerns within a watershed. This was in addition to capitalizing on the knowledge from within our organization and from discussions with local stakeholders, who play a key role in the protection and these watersheds. Because a number of specific habitat constraints and issues were obvious at the inception of this project, it was deemed unnecessary to conduct intensive field investigations in the form of a level I FHAP. Level II, habitat rehabilitation prescriptions have been provided for the Silverhope Creek, Kanaka Creek, Coquihalla River, Big Silver Creek, and South Alouette River systems. |
| Prepare documents based on the review findings that will outline: habitat parameters; watershed/habitat constraints and “bottlenecks”; habitat rehabilitation measures (including flagged site locations and conceptual designs of rehabilitation measures); project feasibility; project budget; and priority. | One encompassing document of the multiple systems that were reviewed by BCCF staff will be completed shortly. Once finalized, a copy will be provided to FSWP for your records. |
| Develop partnership with local anglers, stream stewardship groups, First Nations and other fisheries agencies that will lead to greater efficiency and cost leveraging of future project implementation. | The foundation for a project such as this one is built on partnerships and information sharing. Information obtained through stream stewardship groups, first nations, anglers, and government organizations has been vital in the completion of this project. Kanaka Creek is a perfect example of a working partnership. BCCF was able to work hand in hand with Metro Vancouver, KEEPS, and Bell Irving Hatchery through the background information gathering, assessment, and reporting |

stages of the project. In the case of the other systems, besides the Alouette River, the remaining river systems are located in rural/remote settings away from major cities and towns. In semi remote systems local first nation groups and fishing lodges were contacted but very little interest was received. Government organizations were able to assist BCCF staff by offering past fish stock assessment information and areas of interest and project ideas formulated through personal observations.

Project Effectiveness

Please evaluate the effectiveness of the project, using the objective standards, quantifiable criteria and/or quality control measures identified in your Detailed Proposal (under question #1 in the 'performance expectations' heading).

An alternative to conducting a performance evaluation on this project will be to adhere to common government technical reference materials including:

- a) Fish Habitat Assessment Procedures – Level I (Johnston and Slaney, 1996)
- b) Fish Habitat Rehabilitation Procedures – Level II (Slaney and Zaldokas, 1997)
- c) Design guidelines for the re-introduction of wood into Australian streams (Brooks 2006)

Conducting the habitat assessments and restoration prescriptions, and making the documents accessible to the public, will form the major success of this project. If BCCF is able to share thoughts and ideas with other groups and organizations that will ultimately lead to the recovery of river systems and fish stocks that is a success. As long as people and organizations are helping to conserve fish and fish habitats for future generations we have all succeeded.

Long term, measures of success could include: the successful implementation of the prescribed projects to address the identified habitat impairments, protection and conservation of critical/sensitive habitats, improvements in ecosystem functionality and fish production, with effectiveness monitoring of measures implemented.

What are the top three lessons learned from this project that would be important to communicate to others doing similar work throughout the Basin?

1. We have learned that there is a very short window of opportunity to complete this type of project. Trying to review the target system during low flow periods in the summer or the winter was difficult. A late freshet and early heavy winter reduced our chances of assessing all of the proposed systems.
2. Access to a catalogue of past and the latest good quality aerial photography is a valuable tool when trying to assess the stability of a watershed and find problem areas and potential rehabilitation recommendations.
3. Ability to consult with local watershed stewards, first nations, and fisheries biologist gives a technician a head start in most watersheds. These people have an intimate relationship with their watersheds and are able to provide guidance on specific issues.

Project Effectiveness

Please describe how your project has addressed each Priority Activity identified in your Detailed Proposal.

Priority Activity¹

How the Priority Activity has been Addressed

| | |
|---|--|
| Habitat and Water Restoration and Stewardship | The completion of habitat prescription on the proposed systems will aid the BCCF and other conservation organizations in the rehabilitation of river systems within the lower mainland. The restoration of river habitats is expected to help in the recovery of depressed stream rearing salmonid stocks. As well as the development of off channel opportunities on watersheds that have been impacted by human activities (Highway Construction, gas pipeline, etc.). Partnerships with local angling groups, first nations, government, and stream stewardship groups aided in the development of these prescriptions. |
| | |

¹Please paste each priority activity identified in your Detailed Proposal in the space provided.

Further Comments

Please provide any further comments including recommendations for future conservation efforts and suggestions for helping partners to meet the goals of the Fraser Salmon and Watersheds Program. If your project produced a narrative or scientific report or additional project products (e.g. maps, photos), attach them as an appendix.

Submission Instructions

Please send your Final Report electronically to your designated FSWP Staff Contact. If you are uncertain who this person is or how to contact them, please contact Tiffany Pither, FSWP Administrator.

Email: tpither@psf.ca

Phone: (604) 664-7664 Ext 119

Project Expenses

Please provide details of the actual project expenses incurred for the entire project year with FSWP funds and all partner contributions for this project, indicating cash or in-kind¹ where appropriate, using the spreadsheet provided. Please remember to include your final invoice when submitting your Final Report.

A – LABOUR

Please specify if the service is provided by employee, contractor or volunteer.

| Service | # of People | Daily Rate | Total # of Days | FSWP Contribution | Other Funding or In- Kind | Total |
|------------------------------|-----------------------------------|------------|-----------------|-------------------|---------------------------|-----------|
| Fish Technicians | 3 employees | 250.85 | 37.89 | 9505.80 | | 9505.80 |
| | Note daily rate is a blended rate | | | | | |
| BCCC | | | | | 2,106.50 | 2,106.50 |
| | GVRD | | | | 1,000 | |
| | Bell Irving Hatchery Manager | | | | 300 | |
| Biologist | MoE | | | | 2500 | |
| LABOUR SUB-TOTALS (A) | | | | 9,505.80 | 5,906.50 | 15,412.30 |

B – MATERIALS & EQUIPMENT

Items may include site equipment, site materials and supplies, vehicles or other transportation rental or charter, travel, expenses, maintenance, permits, etc.

| Item | Detail | # of Units | Unit Cost | FSWP Contribution | Other Funding or In- Kind | Total |
|---|--|------------|-----------|-------------------|---------------------------|---------|
| Project operating costs | Project operating costs (vehicle rentals, cell/sat phones) | | | 1200.00 | | 1200.00 |
| Biologist | P.Slaney Aquatic Sciences | | | 2422.50 | | 2422.50 |
| | Northwest Hydraulics Consultants | | | 2520.00 | | 2520.00 |
| Travel Costs | Crew per diems, accommodations, mileage | | | 223.07 | | 223.07 |
| GST | ½ gst on purchased materials/supplies/services | | | 127.85 | | 127.85 |
| MATERIALS & EQUIPMENT SUB-TOTALS (B) | | | | 6493.42 | | 6493.42 |

C – ADMINISTRATION & OVERHEAD

The cumulative total of administration and overhead costs.

| Item | Detail | # of Units | Unit Cost | FSWP Contribution | Other Funding or In- Kind | Total |
|-------|------------------------|------------|-----------|-------------------|---------------------------|---------|
| Admin | Project administration | | | 2000.78 | | 2000.78 |
| | | | | | | |
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¹ In-kind contributions may be from the Recipient or individuals or other organizations that contribute to the project as a whole. Examples of in-kind contributions include: office expenses (use of office, equipment, materials, computer support); use of facilities (meeting or training space); use of equipment (boats, cars); TEK or scientific advice; volunteers; community member involvement in workshops (where they make a contribution to the project). Volunteer labour is based on a standard charge out rate for professionals (\$200/day for skilled labour and \$120/day for unskilled).

| | | | |
|---|--------------------------|----------------------------------|------------------|
| ADMINISTRATION & OVERHEAD SUB-TOTALS (C) | 2000.78 | | 2000.78 |
| D – TOTAL EXPENSES | | | |
| Copy sub-total rows (A), (B), and (C) from above to calculate the total project expenses. | | | |
| | FSWP Contribution | Other Funding or In- Kind | Total |
| LABOUR SUB-TOTALS (A) | 9,505.80 | 5,906.50 | 15,412.30 |
| MATERIALS & EQUIPMENT SUB-TOTALS (B) | 6,493.42 | | 6,493.42 |
| ADMINISTRATION & OVERHEAD SUB-TOTALS (C) | 2,000.78 | | 2,000.78 |
| TOTAL EXPENSES (A+B+C) | 18,000.00 | 5,906.50 | 23,906.50 |

| | | | | | |
|--|--|------------------|----------------|------------------|------------------|
| E – Non-FSWP Contributions (Breakdown of In-Kind Funding) | | | | | |
| Non-FSWP Contribution Sources | Letter of Confirmation Attached | Cash | In-Kind | Volunteer | Total |
| Living Rivers – Georgia Basin /Vancouver Island | | 18,391.06 | | | 18,931.06 |
| (note this funding was applied only to the Georgian Basin, not Fraser Basin systems, as per this project) | | | | | |
| BC Conservation Corps | | 2,106.50 | | | 2,106.50 |
| Metro Vancouver | | | 1,000 | | 1,000 |
| Bell Irving Hatchery | | | 300 | | 300 |
| Ministry of Environment | | | 2,500 | | 2,500 |

DECLARATION

Please complete the following declaration:

I, _____, hereby declare that:

- 1) The information provided in this report, including all attachments is accurate to the best of my knowledge and that I am authorized to sign on behalf of the stated proponent organization;
- 2) the information contained in the above financial statement submitted by us to PSF, is accurate in all material respects and is net of any GST Input Tax Credit received or receivable by us and that the funds were used exclusively for the project as originally proposed or as formally amended by PSF;
- 3) Any funds previously paid to the Proponent by the Foundation have been used to fund project expenditures approved by the Foundation and in full compliance with the Regulation on the Use of PSF Grant Funds and Reporting Procedures set out in the Application for Funding submitted by the Proponent to the Foundation;
- 4) The balance of any funds previously paid to the Proponent which were not used as set out in item 3 have been returned to the Foundation;
- 5) Any additional funds paid to the Proponent by the Foundation will be used in this manner.

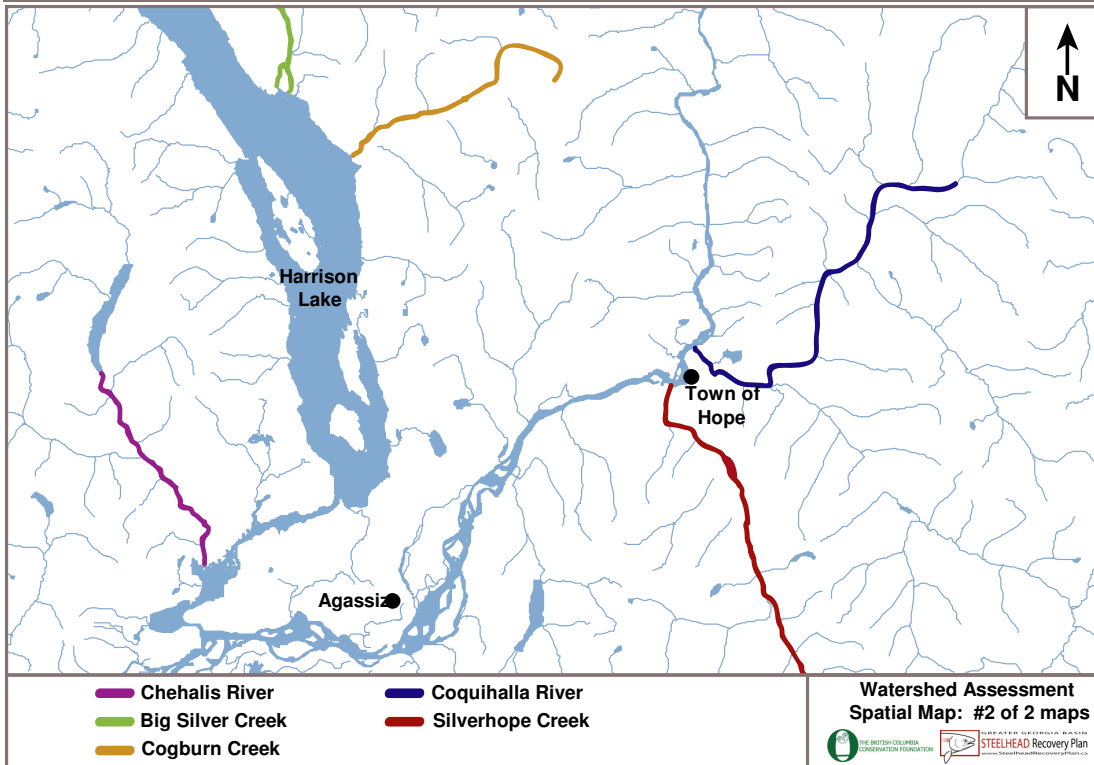
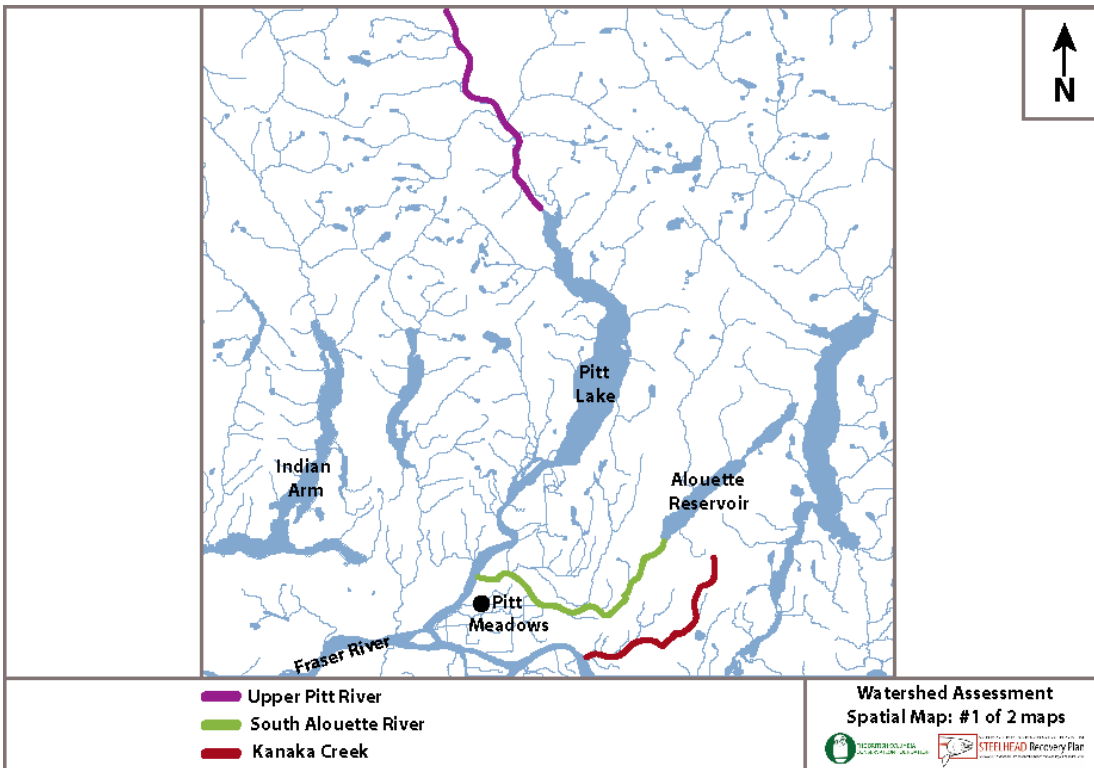
Signature: _____

Date: _____

(Authorized Signatory)

Name: _____
(Print Name)

8) Appendix (Attach reports, maps, photos, etc if applicable)





GVRD and BCCF crew swimming a canyon section on Kanaka Creek



An example of a reach void of habitat on Kanaka Creek.



GVRD and BCCF crew snorkelling Kanaka Creek to assess and inspect fish habitat over the creeks anadromous length.



An example of a large log jam on Kanaka Creek created by a large evulsion.



BCCF technician measuring the height of a tributary culvert on Silverhope Creek.



Spawning platform at the outlet of Silver Lake, with visible redds.



A wide, flat, and shallow Silverhope Creek tributary that could benefit from the addition of habitat units.



Intake location for Lower Silverhope Creek side channel opportunity.



Side channel on Silverhope Creek preched ~ 0.80m above the creek water level.



Example of the habitat found in the Lower Silverhope Creek side channel.



Large beaver dam at the outlet of Karen Creek. The dam is preventing the movement of steelhead up Karen Creek into vital spawning and rearing habitat, ~ 500m lost.



Big Silver Creek obstruction location, this is the prescribed site of a possible fish ladder location.