

Fraser Salmon & Watersheds Program



Fraser Basin Council



2008 Final Report

Revised Final Report as of
April 16, 2009

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| FSWP File Number* | FSWP 08 HPR D78 |
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| Contact Information | | | |
|--|--|-----------------------------|--------------------------|
| Sponsoring Organization's Legal Name | | | |
| Fraser Valley Regional Watersheds Coalition | | | |
| Are you a federally registered Charity, Non-profit organization or Business (Yes /No)? | | | No |
| If yes, please indicate which. | <input type="checkbox"/> | Charity | <input type="checkbox"/> |
| | <input type="checkbox"/> | Non-profit organization | <input type="checkbox"/> |
| Registration number | | GST number | |
| Are you a registered Society (Yes / No)? | Yes | Society Registration number | S-50094 |
| Mailing Address | | | |
| c/o Fraser Valley Regional District 45950 Cheam Avenue, Chilliwack, BC. V2P 1N6 | | | |
| Street Address (if different from above) | | | |
| | | | |
| Project Manager | | | |
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| Alternate Project Contact | | | |
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| Partners / Subcontractors | | | |
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| Name: Mick Thiessen, Director | Affiliation: Director, Engineering Services, District of Kent | | |
| Phone: (604) 796-4343 | E-mail: mthiessen@district.kent.bc.ca | | |
| Name: Tom Cadieux | Affiliation: Fisheries and Oceans Canada | | |
| Phone: (604) 220-3455 | E-mail: hrtminer@telus.net | | |

Project Information

Project Title

Hammersley Pump Upgrade Phase 1: Assessment and Conceptual Design

Project Location

Agassiz, British Columbia (along Mountain Slough, within the Fraser River watershed within the Fraser Valley)

Amount Requested

\$30,064.91

Total Project Value

\$74,900.00

Non-FSWP funds²

\$44,835.09

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 how your project has satisfied at least one of the FSWP priority activities. 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.

The Mountain Slough, near Agassiz, BC, has been identified as a priority slough by many different levels of government: the Ministry of Environment for its breeding colony of Oregon Spotted Frog; by DFO for the detrimental affects of the existing pumping station (Hammersley Pump); and, by the District of Kent for the inadequate pumping capacity offered by the Hammersley Pumping Station to local residents and farmers. It is an old pumping station that is in need of a substantial upgrade in the near future; however, past conflicts, distrust, and sensitivities are still very much a part of the landscape. The goal of our project was to initiate discussions and partnerships needed for an eventual upgrade of this site, so that when the time is right to pursue upgrades, the local community and stakeholders are more informed, more aware of all of the issues, more trusting of each other, and more willing to work together for a common solution.

To achieve these goals, a collaborative project steering community was formed that included representation from the District of Kent (staff and councillors), Fisheries and Oceans Canada, BC Ministry of Environment, the Fraser Valley Regional Watersheds Coalition, the South Coast Conservation Program, the local drainage committee, and local residents. This group met on a number of occasions to discuss the project, the slough, issues and concerns, and how to move forward. A consultant was hired to do an initial feasibility study on flow volumes and options. These results will be presented to the committee once completed (the meeting has been rescheduled twice already and is currently planned for March 31), after which the committee will be able to identify the most preferred option for this site.

OPTIONAL If your project lends itself to sparking interest through a compelling sound byte, please tell us what that sound byte would be. Do not use more than 150 words.

Species and life stage(s) the project targets: please list

Salmonids:

- Coho salmon (spawning and rearing)
- Chum salmon (spawning and rearing)
- Rainbow trout (adult)
- Cutthroat Trout (adult and rearing)

Species-at-Risk:

- Salish sucker
- Oregon spotted frog
- Oregon forestsnail
- Red legged frog
- Great blue heron
- Vancouver Island beggartick

Watershed(s) the project targets: please list

Fraser River Watershed (lower Fraser River floodplain)
 Mountain Slough drainage area (Agassiz, BC)

Project Deliverables and Results

- 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 |
|---|--|
| Greater understanding of the hydrological conditions and requirements of the Mountain Slough drainage area | Done. We undertook flow monitoring at the outlet of Mountain Slough to determine the actual flows coming out of the system. The hydrographs for the various storm events for the McCallum/Mountain Slough system have been developed. We adopted 2, 10, 25, 50, 100 and 200-year summer and winter storms using the Agassiz rainfall data in HEC HMS (Hydrologic Engineering Centre – Hydrological Modeling System). These storms were developed to determine both peak design flows and inflow volumes. We have adapted the model to look at the existing conditions, as well as a new configuration for the pump station and flood box. |
| Preliminary conceptual designs of various options and upgrades that will address current issues, and a short-list of preferred design options | Drafted (but not completed). Several design options have been drafted based on current information. Once the necessary information is obtained, we will complete our short-list of feasible design options and present to project stakeholders for review. |
| Improved relationships between project partners | Done. This project has helped establish and strengthen social capital between many of the stakeholders involved in an eventual upgrade of the Hammersley Pump, as well as other initiatives that may be pursued in the region. In particular, working relationships were established amongst the District of Kent, the Coalition, MOE, DFO, and the local drainage committees. Of particular importance is the increased trust established between partners and the local drainage committee. This is a group that has had very negative dealings previously with regulatory authorities. We hope that the results of this collaborative project will improve these relationships. |
| Database and survey results of interested local landowners, issues, and stewardship potential | Due to steering committee feedback, the survey of local residents was not carried out as part of this project. Some of the steering committee members were already involved in landowner contact and community outreach within the drainage area, and it was recommended to us that further contact could be both redundant as well as potentially harmful until sufficient trust and social capital is established. |

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).

From our proposal, 5 key project goals, or performance indicators, were identified. The results are evaluated below:

1) Generate preliminary conceptual designs:

- A number of conceptual design options have been formulated based on updated hydraulic modelling for the site. While some additional information is still pending to complete these designs (such as costing and some final site measurements) and will be completed shortly, we have been able to identify capacity requirements of an upgraded pumping station and baseline requirements for the site. By involving stakeholders at an early

stage in this process, we hope that this will bode well for further collaborative efforts at the site.

- 2) Acquire and disseminate important environmental data and knowledge about the ecology and hydrology of the local watershed:
 - The consultants hired for this project were able to update both the hydraulic and hydrological model for the site based on new data collected. These models are essential to determine pumping capacity requirements.
 - The project was able to benefit from the ecological expertise represented on the steering committee – key stakeholders from Pearson Ecological, from the South Coast Conservation Program, and from the BC Ministry of Environment regarding species-at-risk, salmon, and other wildlife values within the drainage area. This information was shared amongst the steering committee, and disseminated to the community through ongoing outreach and stewardship activities.
- 3) Obtain an improved appreciation within the local community for fish habitat:
 - The local community is very familiar with fish and fish habitat requirements for they have had long-term and ongoing disputes with DFO about drainage concerns and ditch maintenance requirements. While many have positive feelings towards salmon, they do not want the needs of fish to take precedence over their needs for drainage and irrigation. This has been the root of much conflict over the years. We naively stepped into this conflict, but by being open, honest, and inclusive, the local community have agreed in principle to trying to find solution that meets their needs as well as those of fish and species-at-risk.
- 4) Encourage local stewardship towards environmental values on their properties:
 - The South Coast Conservation Program has been doing landowner contact within the region regarding the Oregon Spotted Frog, an endangered species found within the Mountain Slough. The SCCP has partnered with us on our Steering Committee, and is sharing their information obtained from this outreach.
- 5) Create strong social capital with project partners:
 - Obviously not easy to quantify, but a total of 4 steering committee meetings held throughout the course of the project helped to better our understanding of each other and the various concerns/issues affecting the watershed. The local farmers and drainage committee, which initially viewed this project as “fish-focussed” (because they were unfamiliar with the work of the Coalition and because of the word “Salmon” in FSWP), and hence distrustful of our intentions and our presence on this project, have come to understand and trust, at least some extent, the role of the Coalition on this project and the value in a collaborative approach.

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. Staff turnover is a reality of all collaborative partnerships. These partnerships require continual efforts and diligence to make sure that project objectives and timelines are being followed at an institutional level as opposed to only at the individual level.
2. Pump station infrastructure throughout the Fraser Basin are aging and are in desperate need of upgrades – given the urgency of the issue and the huge capital expenditure required for each, we need an overall strategy or approach for how to prioritize and coordinate these efforts.
3. Agricultural interests versus “fish” interests have a long history of conflict in many area of overlap – the mistrust and sensitivity around these issues is very real and very pervasive. Overcoming these barriers is a real challenge to undertaking any drainage-related work, and requires substantial trust, inclusion, and a willingness to find creative, mutually-acceptable solutions.

Project Effectiveness

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

| Priority Activity ¹ | How the Priority Activity has been Addressed |
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| Was the project completed within the allotted timeframe? | Although the project got a late start due to staff turnover within a key project partner and specific timelines had to be shifted accordingly, and the consultants have faced some challenges acquired needed information and |

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| | <p>data in the timeline provided to them, much progress has been made to date. A couple more weeks are apparently needed by the consultants to finalize their hydraulic models and complete the different design options. These delays have been unfortunate and have occurred outside of our control, but we remain confident that we remain on the right track and will be concluding shortly.</p> |
| Was the project completed on budget? | The project came in on budget. |
| Were the Terms of Reference followed and met by the consultant? | Rather than a “Terms of Reference”, we decided to have potential consultants submit a proposal outlining their tasks. These tasks were followed by the consultant (although unforeseen delays have resulted in necessary amendments to the timeline). |
| Did the project produce improved information for subsequent decision-making? | One of the key goals of the project was to better understand the system and to identify feasible options for moving forward with a potential upgrade of the pumping station. As a result of this project, an updated hydrological model has been drafted. This model, and the subsequent feasible design options, will greatly aid in decision-making by all stakeholders. |
| Did the project lead to improved relationships and understandings between stakeholders? | In addition to improved information, one of the two primary goals of the project was to establish and improve upon working relationships amongst key stakeholders. As previously described, this project succeeded in achieving this goal, particularly amongst the District of Kent, the Fraser Valley Regional Watersheds Coalition, and the local residents and members of the drainage committee. These relationships are paramount for further initiatives possibly pursued in the region and for addressing other issues/concerns. The Coalition did not previously have a significant footprint in the Agassiz region, but due to this project, this is already changing. Some councillors and previous councillors regularly attend Coalition meetings now, and riparian plantings have already been coordinated for some private properties in the area. |

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

Further Comments (optional)

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 relevant, we encourage you to attach a narrative report or additional project products (e.g. maps, photos) as an appendix.

In part due to this project, there has been a recognized need for coordinating and prioritizing pump station upgrades all along the Fraser. While this is absolutely a worthwhile exercise, and FSWP should be suitably acknowledged for their support of such a process, the local community cannot be left out of these decisions. They are the ones most significantly affected by these pumping stations, and their opinions and voices cannot be omitted from this process. Many significant areas of conflict exist between drainage interests, fish interests, and species-at-risk interests. These conflicts are deeply ingrained and strongly felt. Only by working together on joint win-win solutions will these issues be resolved and trust be established.