

Fraser Salmon & Watersheds Program



Fraser Basin Council



2009/10 FINAL REPORT

FSWP File Number*	FSWP 09 58
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* Please use the FSWP File Number provided in previous FSWP project correspondence.

1. Project Information

1.1. Project Title

Community salmon education program

1.2. Proponent's Legal Name

Stewardship Pemberton Society

1.3. Project Location

Pemberton ,BC

1.4. Contact for this report

Name: Valeinna Bradbury
Dimma

Phone:604-894-5201

Email:vdimma@live.ca

1.5 Funding Amount

Original Approved Grant Amount:	Total FSWP Expenditures:	Final Invoice Amount:	Final Non-FSWP leveraging, including cash and in-kind:
\$23,547.00	\$22,096.11	\$2354.70	\$12,700.00

2. Project Summary

Please provide a single paragraph describing your project, its objectives, and the results. 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.

Our community salmon education program aimed to increase the education and awareness of salmon, their habitat and role in the ecosystem for people of all ages in the Pemberton Region. We completed our Summer Salmon Day education program at One Mile Lake which was run weekly through the months of July and August. The program was very successful, 100 children attended the summer camp. We developed vibrant salmon and watershed themed banners for the village of Pemberton and were installed in August. Raising awareness about ongoing Stewardship Pemberton activities and providing opportunities for participation and volunteering was a huge success. We were able to raise awareness on our activities through written articles in the local newspaper and participating in local events e.g. Canada Day Celebration. We also had volunteers participate in the Chinook walk on the Birkenhead River with the Lilwat first nations. We hosted our second annual BC Rivers Day celebration on September 20th. The day was very successful with over 100 participants attending the celebration. We have secured the additional funding required to build the One Mile Lake Nature Centre, this is a very exciting project for us and we are scheduled to be up and running in October of 2010.

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

After pursuing our vision of the One Mile Lake Nature Centre for six years (Formerly known as the Pemberton Eco Interpretive Centre) we are so thrilled this is now a reality. We have received funding for the development of the nature centre which will have a small hatchery and a classroom with a wet lab. Here we can run all our watershed-based programs promoting the ideas of interconnectedness and biodiversity based around a keystone species, the Pacific Salmon. Our ultimate goal is to foster a deep connection to nature that inspires ecologically sustainable behavior transferrable into daily life actions.

3. Final Project Results and Effectiveness

3.1 Copy EXPECTED OUTCOMES from your detailed proposal and insert into this section. Add additional rows as needed. Then please list the FINAL OUTCOMES (the tangible end products resulting from this work) associated with expected outcome.

If FINAL OUTCOMES differ from the original EXPECTED OUTCOMES please describe why, and the implications for the project.

EXPECTED OUTCOMES	FINAL OUTCOMES
1. Reach up to 160 children with innovative education programming through the summer camps	We had 100 children participate in our weekly summer salmon camp at One Mile Lake. These children completed our camp with a new found knowledge of pacific salmon and their role in our ecosystem and the importance of a healthy watershed. Through our hands on programming the participants developed respect and interest for the natural environment and all species that depend on it.
2. Plant 200 cedar trees along salmon habitat by children participating both in the Salmonids-in-the-Classroom Program, the summer camp programming and BC Rivers Day.	A new salmon habitat restoration project was completed this summer at One Mile Lake, we had volunteers participating in planting cedar seedlings along the banks of the new water out flow. Children also participated in planting along salmon habitat during our BC Rivers Day Celebration.
3. Produce banners to be displayed through the downtown core of the Village of Pemberton, raising awareness for watershed issues.	and are a great attraction to watershed awareness We had a local artist design Watershed themed banners for the downtown core of Pemberton. The banners are

	filled with vibrant spawning salmon. The banners will be put up each fall in celebration of Palmerton's spawning salmon. The banners can be viewed at www.thinksalmon.com
4. In addition to maintaining a presence at community festivals, host a second BC Rivers Day event	Stewardship Pemberton Society took part in Pemberton's Canada Day Celebration. With activities and displays for adults and children we were able to raise awareness for our natural environment and watershed issues. Our second BC Rivers Day event was a huge success, tripling the number of participants from the previous year we expect our event to continue to grow and be successful in raising awareness for our rivers.
5. Raise funds and donations to add to the build the Pemberton Valley Eco-Interpretive Centre	Stewardship Pemberton has received funding for the development of the One Mile Lake Nature Centre (formerly known as the Pemberton Valley Eco-Interpretive Centre) The building will be up and running in October 2010.

3.2 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.

We had many returning children attend our summer camp that had attended the year before. Our popular program filled up the same day it was advertised in our community leisure guide. The program was very successful; children had the opportunity to engage in fun and interactive days; learning about salmon and their place in the ecosystem as a whole while fostering a sense of stewardship. Watershed based programs were also taught along with aquatic invertebrate days which were a very popular hands on activity for engaging the children.

Our second BC Rivers Day was a huge success, we had over 100 people attend our celebration . The celebration was a great opportunity to raise awareness on watershed issues and engaging the public. We were able to attract many volunteers and raise money for the development of the One Mile Lake Nature Centre through our silent auction.

Through public engagement we were very successful in raising Stewardship Palmerton's profile, this sparked new interests in our work and projects which resulted in many interested volunteers and community support. After 6 challenging years of pursuing our vision of the One Mile Lake Nature Centre it is now a reality. Through perseverance, networking and community support we have secured funding and the building will be up and running in October 2010.

3.3 Please attach all DOCUMENTATION of Final Outcomes, and LIST attachments here. These may include technical reports, maps, photos, evidence of communications, lists of meeting participants, etc.

Snap magazine article - BC Rivers Day in Pemberton
Whistler Question article - Coho coming back to local creeks
Whistler Question article - Pemberton waterway in the spotlight
Whistler Question article - Interpretive Centre earns funding
Whistler Question article – Arn canal fish habitat study launched

3.4 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?

With the development on the One Mile Lake Nature Centre we plan to continue our environmental education programs. The construction of the One Mile Lake Nature Centre will serve as the focal point for disseminating information regarding the importance of the natural environment our watersheds and all that depend on them . The Centre will house displays and information to be used for workshops and other educational activities.

Benefits to the community are expected to continue as well. In fact, the benefits should grow and expand over time. As more and more use is made of the facility, the educational components will develop with new initiatives and new opportunities for research and teaching. A variety of workshops, seminars and activities will utilize the Facility to promote environmental education . These activities will focus on teachers and school children. However, ample opportunities exist to expand the educational programs to the adult community and visitors . The audience this project will reach is wide and diverse.

Funding to continue operations will come from a variety of sources. These include direct contributions, support from NGOs and private donors, various fee producing activities and potential revenues generated by tourism. The Centre will be organized to provide secure and dependable funding for the programs planned. The long term impact of this project will be significant. The facility will continue to attract attention and interest. School groups will make frequent and regular use of the Centre for field trips and educational activities. As a unique location, this Centre will become the prime site for environmental education in Pemberton . Ongoing education will have lasting beneficial impacts on the community.

3.5 What are the top three lessons learned from this project that could be useful to communicate to others doing similar work in the Basin?

1. Community involvement and communication is key in developing support.
2. We found that teaching our programs in a natural environment with hands on learning was the best approach. Hands on learning allows the children to remember material better, feel a sense on accomplishment, and be able to transfer that experience easier to other learning situations.
3. Networking was a great opportunity to gain and contribute resources while building relationships.

Arn fish habitat study launched

Stewardship Pemberton directors' research supported by Epcor



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APRIL 22, 2009

MEGAN GRITTANI-LIVINGSTON MLIVINGSTON@WHISTLERQUESTION.COM

Directors of the Stewardship Pemberton Society are setting out to create a detailed habitat plan for the Arn Canal, with the support of the company that operates the Miller Creek run-of-river hydroelectric power station.

The ultimate goal of the planning work is to develop a menu of options for physical work in the canal to improve fish and riparian habitats and spawning potential, while potentially addressing drainage issues, Stewardship Pemberton's Veronica Woodruff said.

Epcor, the company that owns and operates the 33-megawatt Miller Creek run-of-river project, is kicking in \$8,000 for the habitat planning work, during which the researchers will seek to gain a comprehensive understanding of how the system acts, Woodruff said. That kind of background research is key for fisheries work, she added.

"There's some real opportunities to do some meaningful work," Woodruff said. The Arn Canal has some of the best water quality in the area, she said, and fish identified in its waters include coho salmon, cutthroat trout, brown bullhead and other species, according to an Epcor statement.

After a September 2007 malfunction at the hydroelectric station caused water levels in Miller Creek to dip quite low for about three hours, Epcor officials have held meetings with local residents and interested parties such as Woodruff to discuss their concerns, and the corrective improvements Epcor has made to the plant.

Woodruff said that group, with Pemberton Valley Dyking District (PVDD) representatives, has worked to brainstorm ideas for restoration projects. Miller Creek is a difficult site for long-term projects due to challenges such as its constraints with dykes on both sides, Woodruff said, so the group agreed that "the value might be better spent on the Arn Canal."

She said the Arn Canal is "a really interesting system" in the same watershed as Miller Creek, and the work "is going to be incredibly beneficial."

Woodruff commended Epcor's investment, since "it's quite difficult to get funding for planning." She said the company has fostered open lines of communication with the community and valuable upgrades to the plant and creek.

Jeff Westlake, operations manager for the PVDD, said the district is completing its hydraulic assessment of the Arn Canal and had a survey done last year, both of which will "identify where we're deficient" and help support future work to improve drainage, which could include habitat components.

Westlake and Woodruff said the sharing of information will be a bonus for both the PVDD and Stewardship Pemberton, with each supporting the other's planning and options for action.



Epcor is also offering access to the fisheries expertise of its consultants, Ecofish Research Ltd., and Woodruff said officials have loosely committed to contributing further funding for the project once the planning work is done.

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BC Rivers Day in Pemberton

On Sunday, September 20th, approximately 140 Pembertonians supported BC Rivers Day at One Mile Lake Park. BC Rivers Day is a province wide event to help raise awareness of salmon and watershed issues. Organizers and volunteers from the Stewardship Pemberton Society included: Julie-Ann Chapman, Dawn Johnson, Veronica Woodruff, and Valienna Dimma. The sun was shining and kids were playing, swimming, eating hotdogs, and getting their faces painted, while families were learning about salmon and fisheries. Combined sponsors made BC Rivers Day in Pemberton a huge success. Thank you to Stewardship Pemberton and funding from the Fraser Salmon Watershed Program, as well as to Fisheries and Oceans Canada and Wild Salmon Circle for their education program. In addition, a big thank you to the many local businesses in Pemberton who donated some of their products to help out in the silent auction that raised money for the new Pemberton Eco Interpretive Center. Come on out and support this great event again next year!

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Coho coming back to local creeks

Decline in area still cause for concern, but some efforts helping



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Valeinna Dimma/Special to The Question

The Dimma sisters ? Drea, 4 (left) and Zahra, 2 ? keep their eyes peeled on the lookout for coho salmon at One Mile Lake on Tuesday (Nov. 10).

NOVEMBER 11, 2009

MEGAN GRITTANI-LIVINGSTON MLIVINGSTON@WHISTLERQUESTION.COM

To some people, Pemberton's Arn Canal might not look like much. But though some might see "just a ditch," Veronica Woodruff of the Stewardship Pemberton Society says she is filled with excitement over seeing coho salmon spawning in the waterway.

"It's really exciting, especially because it's the Arn Canal," Woodruff said on Monday (Nov. 9). "There's so many fish in there right now."

'Tis the season for coho salmon to spawn in local creeks, and Woodruff reports that she has seen a number of them in the Birkenhead River as usual, as well as in Pemberton Creek and the Arn Canal. The numbers of coho have been steadily declining in this area for many years, Woodruff said, causing concerns for local observers.

Now is a great time to catch glimpses of the fast, active fish — October and November are the main months to see coho, and there's a January run as well, Woodruff said. The recent weather has been beneficial for the coho, she said.

"This is perfect weather for coho, a couple of days of no rain and then a massive storm which really brings the water levels up, and that's when they really start moving," she said.

Some habitat restoration projects created in years past by locals such as Hugh Naylor, former technician for the Department of Fisheries and Oceans Canada (DFO), and volunteers with the Pemberton Wildlife Association (PWA) are among the places where coho are being seen, Woodruff said.

About 15 years ago, Naylor and the PWA placed gravel in a small section of the upper Arn Canal, and Woodruff said some fish go right back to that gravel, as she recently saw four or five fish there.

Woodruff said some habitat restoration work done on Pemberton Creek has led to fish being spotted there, as has gravel put in by the habitat improvement team about 10 years ago at a groundwater spring in One Mile Lake by the park. She and Naylor hope that the recent fisheries improvements completed around One Mile Lake will produce results too, though perhaps not this year because the work is so new.

Naylor said there are definite concerns over the coho returns in local waters, and the numbers don't seem to be what they were when he started working in the area about 20 years ago.

“They definitely are not as strong as they were at one time,” especially in Pemberton Creek, he said.

Woodruff said Lil’wat Nation fisheries staff do regular coho habitat walks throughout the season, and they keep detailed coho records. Those figures could not be obtained by press time.

“It’s really hard to tell if it’s going to be a good year or not,” Woodruff said. Last year was OK, she added, but the two years before that were definitely down.

The life cycle of Pacific salmon is so varied, ranging over time and space, that Woodruff said it’s difficult to pinpoint one specific reason for their decline. There’s “thousands of challenges” along the way in their journey, she said, and what’s happening to them seems to be “death by a thousand cuts.”

Among the litany of threats to all salmon, Woodruff said, are warm ocean currents, such as those faced by salmon at sea in 2005-’06, which can affect food sources and bring in exotic predators; pressures from all levels of fishing; and, above all, habitat destruction alteration both in fresh and saltwater.

In the face of these challenges, Woodruff said a way to help is to “really focus on what you can do.” That’s why she’ll keep putting gravel in spots that might help four fish lay eggs, she said — one female coho has up to 2,500 eggs.

Stewardship Pemberton’s annual general meeting is scheduled for Wednesday (Nov. 18) from 7 to 8:30 p.m. at the Pemberton Community Centre.

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Pemberton waterways in the spotlight

B.C. Rivers Day events, habitat project planned at One Mile Lake Park



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SEPTEMBER 16, 2009

MEGAN GRITTANI-LIVINGSTON MLIVINGSTON@WHISTLERQUESTION.COM

Pemberton's waterways will be getting a lot of attention and TLC over the next week, as B.C. Rivers Day celebrations will put waters and salmon centre stage on Sunday (Sept. 20), and a Stewardship Pemberton habitat restoration project on One Mile Lake is set to start Monday (Sept. 21).

Sponsored by Stewardship Pemberton, the B.C. Rivers Day festivities scheduled at One Mile Lake Park will offer a fun way to learn about waterways and the salmon that depend on our healthy watersheds and river systems, organizer Valeinna Dimma said.

"It's great to have community support just to come out and learn about our watersheds," Dimma said.

Running from 11 a.m. to 3 p.m., the list of entertaining activities includes interactive events for adults and children, such as setting fish traps to see what lives in the lake and a "swamp monsters" search for critters. Other activities include educational displays, face painting and a 50-foot inflatable fish for kids, a silent auction to raise money for the planned Pemberton Eco-Interpretive Centre, and a barbecue by donation.

When the party's over, habitat restoration work will begin at the north side of One Mile Lake Park. The work aims to undo the work of beavers in support of coho salmon.

Channels were built in the 1990s to direct water into One Mile Lake to make it cooler, fresher and appropriate for coho. They had been working "very very well," Veronica Woodruff said, until beaver trapping ceased about three years ago. A healthy beaver population has since begun blocking the lake's intake and outlet.

Woodruff, a director of Stewardship Pemberton, said next week's work will involve building alternate intakes of water and an outflow channel. The \$30,000 project, which is being funded by the Pacific Salmon Foundation and Fisheries and Oceans Canada, will also include the installation of three "beaver boxes" to discourage building of dams in the flowing water.

"In the overall picture of coho, coho have had a number of really bad years of returns... In the past, One Mile was a really great producer of coho," Woodruff said, adding that even marginal habitats for salmon are important at this stage.

The project is expected to take five days to complete, she said, and access to the north side of the park might be restricted while machines are working. The beaver boxes will become part of the trails in the area, acting as bridges over the new intakes, she added.

Anyone interested in helping with the project should contact Woodruff at veronicarobin@yahoo.ca or (604) 966-8229, or sign up at B.C. Rivers Day. Prospective volunteers for Sunday's event should write to vdimma@live.ca.



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Interpretive centre earns funding

Salmon Foundation grants \$150,000 to Pemberton project



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MARCH 3, 2010

MEGAN GRITTANI-LIVINGSTON MLIVINGSTON@WHISTLERQUESTION.COM

Stewardship Pemberton has received a solid shot in the arm for its key project, the development of the long-awaited Pemberton Eco-Interpretive Centre in One Mile Lake Park, thanks to the Pacific Salmon Foundation.

The foundation is contributing more than \$150,000 toward the construction of the environmental centre, which is expected to be alive with activities and educational opportunities when it takes shape on the shores of One Mile Lake.

Veronica Woodruff of Stewardship Pemberton said the society has been striving to bring this project to life since the 2003 flood damaged the Birkenhead Hatchery, and they hope to have the centre ready before the salmon spawn this fall.

The centre “will bring together community stewardship, education, habitat restoration and protection, resource sharing, watershed planning, celebration days and volunteer enhancement activities,” Woodruff said in a statement.

The plans for the centre include a classroom-style learning area, space for lab and multimedia gear, and a hatchery for coho salmon. That hatchery will support the Salmonids in the Classroom incubation program, which reaches more than 275 students in Pemberton, Mount Currie, D’Arcy and Whistler schools.

The Salmonids in the Classroom program connects kids with salmon and their life cycles to help foster a sense of understanding of ecosystems and how people are linked with them, as well as the desire to respect and protect them.

Stewardship Pemberton will be able to run its own popular summer programs in the centre, and offer extended opportunities to learn about and connect with the surrounding environment and habitats, such as a range of workshops and nature tours.

Woodruff said the building is expected to be about 600 square feet, plus the outdoor area, and it will be constructed in One Mile Lake Park across the new bridge behind the Peaks townhomes.

The initial vision for the Eco-Interpretive Centre called for an “educational experience” supporting a sense of interconnection and biodiversity, one that fosters “a deep connection to nature that inspires ecologically sustainable behaviour transferrable into daily life actions,” according to Stewardship Pemberton’s website.

Stewardship Pemberton is looking for community participation and input about the centre. To get involved, come to the new Pemberton Community Centre on Wednesday, March 10, at 6 p.m., or contact Woodruff at (604) 966-8229 or veronicarobin@yahoo.ca.



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