

**Pacific Salmon Foundation
Strategic Salmon Recovery Plan
INTERIM or FINAL REPORT
[REDACTED] SQ013 007 CN**

JAN 11 2008

Please submit to:

Alan Kenney
Director – Salmon Programs
Pacific Salmon Foundation
Suite 300 – 1682 West 7th Avenue
Vancouver, BC V6J 4S6

Proponent and Project Background

Squamish Watershed Salmon Recovery Plan (SSRP)

Project Title: Squamish Outreach & Education Project for the Salmon Recovery Plan 2007

Project Activity Type: NET GAIN

Habitat Assessment	Stock Assessment	Education and Awareness ✓
Habitat Rehabilitation	Stock Rehabilitation	Stewardship and Community Planning ✓

Target Species: all salmon species

Project Review and Application Authorization

Has this project been reviewed by relevant government agencies and authorities to ensure compliance with current and emerging policy, to reduce redundancy and duplication of similar works and to create opportunities for leveraging and synergistic cost sharing or scientific data sharing YES

Applicant Information:

Applicant's Legal Name: Squamish River Watershed Society/

Address, Mailing: Box 1791; Squamish, B.C.V8B 0B3

Address, Courier: 41820 Rayburn Road, Brackendale, BC, V0N 1H0

Project Manager: Edith Tobe

Phone 604-898-9171 **Fax** 604-947-0141 **Cell** **Email** srws@shaw.ca

List Subcontractors and contact information:

D.G. Blair-Whitehead, Whitehead Environmental
621 Cates Hill Rd; Bowen Island, BC V0N 1G0

Phone: 604-947-0144
email: dgbwh@telus.net

Doug Swanston, Seacology
3025 Sunnyside Road, North Vancouver, B.C., V7K 2G4
Phone/Fax: 604.987.4675
email: seacology@telus.net

Project Information

Amount Requested from the PSF \$30,491 Total Project Value \$49,571

Is this project a result of a previous PSF/PSEF Project? Yes

Project Start Date 1 January 2007 Project End Date: 31 December 2007

Project Relevance and Significance

Provide a brief overview of the project:

This project is an outcome of the Squamish River Salmon Recovery Plan and the efforts of the Squamish stewardship community. The project has been underway since August 2006 but had been identified as a priority project since 2003 in the SRSRP.

The project goals are to:

1. To increase capacity of stewardship group members, Regional and District staff, First Nations, and others to implement outreach & education activities to increase public understanding of the value of fisheries, impacts of development on fisheries, and the value of restoration of fisheries habitat.
2. To demonstrate a number of outreach and education strategies for increased public understanding of the value of fisheries, impacts of development on fisheries, and the value of restoration of fisheries habitat.

These two goals have been achieved by work completed with both stewardship volunteers and professionals (staff within the community and local schools). Project tasks have been completed in two main areas of work: community workshops and school-based programs called the *Squamish Rivers School Program* and the *Squamish Estuary School Program*.

Describe the specific objectives delivered by the end of this project:

Objective # 1 Design and facilitate community workshop to build capacity and skills in the area of outreach and education.

Objective # 2 Work with the Squamish stewardship community to implement education activities through involvement in the project's school programs.

Objective # 3 Develop and deliver an Intermediate (grade 4-7) Squamish Estuary curriculum and field program and complete an Oceans pilot field day.

Objective # 4 Update and deliver the Primary (K-3) Squamish Rivers curriculum and field program to interested schools in Squamish.

The 2007 project has completed the following project tasks:

- 1) Designed and facilitated a workshop for community members to build capacity and skills in the area of outreach and education as related to their existing stewardship/habitat enhancement projects on March 31, 2007 at the District of Squamish's office with 9 participants representing 8 community organizations;
- 2) Development of an Intermediate (grades 4-7) *Squamish Estuary School Program* in the spring of 2007.
The intermediate program:
 - has a focus on the Squamish River Estuary
 - Key Concepts and curriculum linkages are for grades 4-7
 - The field component is held at the estuary.

Results from the *Squamish Estuary* program include:

- Participation from four local schools (Mamquam, Stawamus, Brackendale, and Valleycliffe elementary schools); It's important to note that the school district provides:
 - school professional development time for teachers to attend meetings and workshops,
 - budget to cover bussing students to and from the field day site;
- Six teachers participated in the program: attending pre & post program meetings, a training workshop, leading in-class activities, participating in a field day, and gathering program evaluation data;
- A 75 page Teachers Guide with nine locally adapted activities on the estuary was developed from resources from Wild BC (in-kind support). The guide includes activity background information, procedures, student materials, and local resources;
- Each teacher completed at least four in-class activities from the guide with their students;
- A total of approximately 155 grade four to six students participated in both in-class and field activities;
- We completed 2 field days at the estuary (each class came for 2 hours) and our only glitch was the postponement of one field day when a grizzly bear was sited in and around the estuary. Once the bear was re-located, we re-scheduled our day at the estuary!
- Other essential participation included: DFO (2 staff), District of Squamish (1 staff), the Squamish River Watershed Society (Edith Tobe, and sedge plants), and one community volunteer.

3) Oceans Field Day

Results from the *Oceans* program include:

- An Oceans field day was held Porteau Cove as a pilot project on June 14, 2007.
 - Five classes from three schools participated (approximately 90 students)
 - Assistance for the day was from Rob Bell-Irving of DFO, and Doug Swanston from Seacology
 - There was further demand but we limited the group size due to budget restrictions.
- 4) The final component for this year's project is year two of the *Squamish Rivers school program*. After the successful inaugural year in the fall of 2006, more teachers are interested in the 2007 program.

Results from the *Squamish Rivers (K-3) 2007* program include:

To date:

- Participation from four local schools (Mamquam, Squamish, Brackendale, and Valleycliffe elementary schools); Again, the school district is providing:
 - school professional development time for teachers to attend meetings and workshops,
 - budget to cover bussing students to and from the field day site;
- Fifteen teachers (up from last year's 10 teachers) are participating in the program. They have:
 - Attended pre program meetings (June/ August),
 - Participated in a training workshop (Sept.)
 - Attended a field site meeting,
 - Completed 4-6 in-class activities from the guide,
 - participated in a field day on October 11, 16-18; or Oct.25 (the Oct 18 afternoon session was postponed due to Tropical Storm Ling, Ling);
 - Participated in a program debrief meeting (Dec.).

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- The 88 page *Squamish Rivers Teachers Guide* has been updated based on feedback from pilot teachers. This guide, with thirteen (13) locally adapted activities on the rivers and streams, was developed in 2006 from resources from Wild BC (in-kind support). The guide includes activity background information, procedures, student materials, and local resources;
- A total of approximately 345 grade kindergarten to grade three students participated in both in-class and field activities;
- We completed field days at the Mamquam River on Oct. 11th; Oct. 16-18, Oct 25, 2007). Students were at the site for 2 hours and rotated between four stations (salmon spawning, aquatic invertebrates, riparian planting, and stream sense/observation).
- We had a total of 12 community volunteers from a variety of stewardship groups participate at the Mamquam River with the students, teachers and parent volunteers.. Other essential participation included: DFO (Rob Bell-Irving will attend all field days, District of Squamish, Quest University and the Squamish River Watershed Society.

What species, life stage does this project target: all salmon species; all life stages;

Describe methods, including environmental protection, timing, site and post project monitoring and reporting plans, triggers and responses for adaptive management:

Communications and education methodology was used. Care has been taken while students were on site to protect sensitive riparian and stream habitat. The project was completed on schedule by the 31 December 2007 timeframe.

Provide design drawings and a description of the techniques and methods being used (if appropriate) N/A

If required, has the design been approved by a Professional Engineer and/or Biologist N/A

Is this project utilizing recognized or emerging technologies? If so please provide supporting argument for its selection: N/A

Will this project require long-term maintenance? If yes, what are the anticipated annual costs? Who will fund it?
No

Performance Expectations

List as described in the Request for Proposal

Measures of Success & Milestones

Describe any specific objective standards, quantifiable criteria and quality control measures that will be used to assess the actual performance of this project against expectations. Provide a monitoring and evaluation plan that is appropriate and achievable for quantifying fish benefits:

This project was carefully monitored and evaluated on an on-going basis. The measures of success are built into the program activities and objectives. (Evaluation will be formative and summative). All activities are designed to meet Environmental Education and Communication Best Practices as described in *Non-Formal Environmental Education Programs: Guidelines for Excellence (2004)* produced by the North American Association for Environmental Education and *Program development and Evaluation: logic model (2002)* from the University of Wisconsin Extension website.

2007 Education and Outreach Milestones and Measures of Success

Objective	Milestone	Timeline	Outcomes	Measure
Community Program				
To meet NGOs and others involved with Salmon Recovery Plan activities to determine their training needs and increase their skills in delivering community outreach and education	Workshop – Training for community volunteers, leaders, and staff	Spring 2007	Continued relationship with stewardship groups & others (capacity building) Skill building Mentoring/Role Modeling	Eight groups/organizations contacted & participated in workshop Nine participants Workshop designed for Squamish Workshop completed on 31 March 2007
Coordination of Outreach and Education for general public	Community Outreach	2007	Range of O&E activities implemented	Three community outreach events completed (Estuary, Ocean, Rivers) Media produced (Leap into Action Program planning guide; newspaper articles (1), school newsletter articles (2), school bulletin boards (4))
School Program				
To increase public knowledge, understanding, and actions for fisheries values, impacts of development on fisheries, and the restoration of fisheries habitat.	Primary program (K-3) Streams & Rivers <ul style="list-style-type: none"> <input type="checkbox"/> updating/revising existing program; <input type="checkbox"/> providing training and support to grade K-3 teachers; <input type="checkbox"/> field day(s) at a local project site; and <input type="checkbox"/> participating in the closing celebrations at schools; 	Summer-Fall 2007	Primary Teachers (K-3) guide updated and finalized Field program implemented Skill building Mentoring/Role Modeling	Four local schools (Mamquam, Squamish, Brackendale, and Valleycliffe elementary schools) 15 teachers; 355 students; 52 parent volunteers; 12 community volunteers 88 page Teachers Guide
	Intermediate (grade 4-7) Estuary curriculum and field program (optional Ocean pilot field day) <ul style="list-style-type: none"> <input type="checkbox"/> development of estuary program; <input type="checkbox"/> providing training and support to grade 4-7 teachers; <input type="checkbox"/> field day(s) at a local project site; and <input type="checkbox"/> participating in the closing celebrations at schools; 	Winter-Spring 2007	Intermediate (4-7) Teachers guide developed Field program implemented Skill building Mentoring/Role Modeling	Four local schools (Mamquam, Stawamus, Brackendale, and Valleycliffe elementary schools) Estuary: Six teachers; 168 students, 4 parent volunteers, 3 community volunteers; 3 community organizations; 75 page Teachers Guide Oceans: Five teachers; 90 students, 10 parent volunteers, 2 community volunteers;

Finally,

- One of the project outcomes is to bring teachers, students, and parents to a different project site in Squamish where the stewardship community has done fisheries and/or habitat restoration leading to new learning outcomes every year – so far we have had field visits by over 500 students in 2007. For some of these students this is the first time they have experienced a river or estuary!
- Another outcome is to teach students and their parents that they too can make a difference. At each field day, they participated in restoration actions such as habitat planting. This is a very powerful lesson in making a difference and is very successful at bringing the message home. This lesson is re-enforced in pre and post field day activities in the classroom.
- We have received comments from several teachers (see support letters for more detail) that this is one of the best programs in which they have participated with their students in over 20 plus years of teaching. They stress the links to community and the importance of having knowledgeable people and a well organized field experience as being critical to program success.

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Labour

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

Service	# of People	Daily Rate	Total # of Days	Total Cost	PSF Contribution	Other Funding or In- Kind
O & E Workshop	1	560	4	3520	2240	1280
Project Coordination / Community O&E activities	1	560	14	9760	7840	1920
Estuary School Program	1		24	20540	12600	7940
Rivers & Streams School Program	1	680	4	8160	2720	5440
Technician	2		4	3620	1120	2500
GST				1591.2	1591.2	
Labour Sub-Total A:				47191.20	28111.0	19080

Materials & Equipment

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

Item	Details	# of Units	Unit Cost	Total Cost	PSF Contribution	Other Funding or In- Kind
	Travel			1200	1200	
	School & Field Mat's			980	980	
	Hall Rental / Misc.			200	200	
Materials & Equipment Sub-Total B				2380	2380	0

Administration and Overhead Costs - None

The cumulative total of administration and overhead costs, including Watershed Recovery Plan Information and Coordination contracts are limited to a maximum by watershed. Please contact PSF for additional information.

Item	# of Units	Unit Cost	Total Cost	PSF Contribution	Other Funding or In- Kind
Administration and Overhead Costs Total C				00.00	00.00

TOTAL EXPENSES TOTALS (A+B+C)	49571.20	30491	19080
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Non--PSF Contributions

The term revenue is defined here to include cash, in-kind and volunteer contributions.

Non-PSF Revenue Sources	Letter of Support Attached	Cash	In-Kind	Volunteer	TOTAL
Professional	yes			10880	10880
NGO	yes			8200	8200
Non-PSF Totals					19080

Certification

I certify that the information provided in this application, including all attachments, is accurate to the best of my knowledge and that I am authorized to sign on behalf of the stated organization.

Signature:



Date: December 31, 2007

Name: _DG Blair Whitehead

Please attach proposal, maps and other relevant document

Whitehead Environmental Consultants Ltd.

R.R. 1 Site CH-11, Bowen Island, B.C., V0N 1G0

Tel: (604) 947-0144 - - Fax: (604) 947-0141

E-mail: dgbwh@telus.net

INVOICE

Squamish River Watershed Society
Box 1791
Squamish, B.C.
V8B 0B3
Attention: Edith Tobe

Date: 04-May-07
Project file: 085-2
Invoice No: 1208

Your Account:

RE: Salmon Recovery Plan - Education & Outreach

For professional services on the above project during February- April 2007

Fees:

<u>Hours</u>	<u>Rate/hr</u>	<u>description of work</u>	
109.3	\$85.00	<i>Preparation & delivery of community workshop; Meetings with Intermediate Teachers Group; Preparation of draft Estuary Teachers Guide; Meetings with E. Tobe; Rob Bell-Irving; DFO & Project team; preparation of maps</i>	9,490.50

G.S.T. on fees (Reg. No. 876036021) 569.43

Disbursements:

Travel, Workshop Materials; School Materials 578.99

BALANCE DUE UPON RECEIPT: \$ 10,638.92
(2% per month interest will be charged on overdue accounts)

With Thanks,



DG Blair- Whitehead, M.Sc.

Whitehead Environmental Consultants Ltd.

R.R. 1 Site CH-11, Bowen Island, B.C., V0N 1G0

Tel: (604) 947-0144 - - Fax: (604) 947-0141

E-mail: dgbwh@telus.net

INVOICE

Squamish River Watershed Society
Box 1791
Squamish, B.C.
V8B 0B3
Attention: Edith Tobe

Date: 08-Jun-07
Project file: 085-2
Invoice No: 1210

Your Account:

RE: Salmon Recovery Plan - Education & Outreach

For professional services on the above project during May-07

Fees:

<u>Hours</u>	<u>Rate/hr</u>	<u>description of work</u>	
43.6	\$85.00	Coordination with Intermediate Teachers Group; Preparation of draft Estuary Teachers Guide; Field days on May 15, 28, June 14 2007 Coordination with project team	3,706.00

G.S.T. on fees (Reg. No. 876036021) 222.36

Disbursements:

Travel, Field day Materials; School Materials	325.34
Seacology subcontract	2,379.70
Maria Whitehead subcontract	406.00

BALANCE DUE UPON RECEIPT: \$7,039.40
(2% per month interest will be charged on overdue accounts)

With Thanks,



DG Blair- Whitehead, M.Sc.

Whitehead Environmental Consultants Ltd.

R.R. 1 Site CH-11, Bowen Island, B.C., V0N 1G0

Tel: (604) 947-0144 - - Fax: (604) 947-0141

E-mail: dgbwh@telus.net

INVOICE

Squamish River Watershed Society
Box 1791
Squamish, B.C.
V8B 0B3
Attention: Edith Tobe

Date: 03-Oct-07

Project file: 085-2

Invoice No: 1248

Your Account:

RE: Salmon Recovery Plan - Education & Outreach

For professional services on the above project during July- September 2007

Fees:

<u>Hours</u>	<u>Rate/hr</u>	<u>description of work</u>	
72.9	\$85.00	Coordination with Rivers (K-3) Teachers Group; Teacher training workshops on Aug.29 & Sept 17 07; Finalize Squamish Rivers Teachers package; Field days preparation; Volunteer coordination	6,192.25

G.S.T. on fees (Reg. No. 876036021) 371.54

Disbursements:

photocopying; materials - teachers binders, workshop supplies,
mileage, and ferries 692.66

BALANCE DUE UPON RECEIPT: 7,256.45
(2% per month interest will be charged on overdue accounts)

With Thanks,



DG Blair- Whitehead, M.Sc.

Whitehead Environmental Consultants Ltd.

R.R. 1 Site CH-11, Bowen Island, B.C., V0N 1G0

Tel: (604) 947-0144 - - Fax: (604) 947-0141

E-mail: dgbwh@telus.net

INVOICE

Squamish River Watershed Society
Box 1791
Squamish, B.C.
V8B 0B3
Attention: Edith Tobe

Date: 27-Nov-07
Project file: 085-2
Invoice No: 1264

Your Account: SSRP

RE: Salmon Recovery Plan - Education and Outreach

For professional services on the above project during Oct.- Dec. 2007

Fees:

<u>Hours</u>	<u>Rate/hr</u>	<u>description of work</u>	
58.5	\$85.00	<i>Coordination with Rivers (K-3) Teachers Group; Field days preparation & delivery; Coor. Of volunteers Final meetings and evaluation with teachers Project Coor and Preparation of Final Report</i>	4,972.50

G.S.T. on fees (Reg. No. 876036021) 298.35

Disbursements: 286.25
*photocopying/printing
mileage, and ferries*

BALANCE DUE UPON RECEIPT: 5,557.10
(2% per month interest will be charged on overdue accounts)

With Thanks,



DG Blair- Whitehead, M.Sc.

PAID DEC 07 2007
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