

# Fraser Salmon & Watersheds Program



## 2009/10 FINAL REPORT

FSWP File Number\* FSWP 09 13

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

### 1. Project Information

#### 1.1. Project Title

Protecting Salmon Habitat From Aliens

#### 1.2. Proponent's Legal Name

Invasive Plant Council of BC

#### 1.3. Project Location

Multiple locations across BC

#### 1.4. Contact for this report

Name: Gail Wallin

Phone: 250-392-1400

Email: [info@invasiveplantcouncilbc.ca](mailto:info@invasiveplantcouncilbc.ca)

#### 1.5 Funding Amount

Original Approved Grant Amount:	Total FSWP Expenditures:	Final Invoice Amount:	Final Non-FSWP leveraging, including cash and in-kind:
\$35,000	\$35,000	\$7,000	\$54,280.29

### 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.

The "Protecting Salmon and Habitat from Aliens" project aimed to reduce the impacts of aquatic invasive plants on salmon habitat in key watersheds in BC as has been separated into two phases: Phase 1 – information gathering and resource development (completed) and Phase 2 – on-the-ground delivery (pending funding). The overall objectives of this project are to improve the health of watersheds important to salmon through increased awareness and stewardship actions. The IPCBC Aquatic Advisory Committee "Think Tank" provided key guidance in the development of this project. The current phase of this initiative is to identify high priority communities and sites that can be targeted for education (workshops and distribution of educational materials) and restoration activities (including inventories or hand pulls). With guidance from the Aquatic Advisory Committee, IPCBC staff completed the following steps for Phase 1 of "Protecting Salmon Habitat from Aliens":

- 1) Identified which aquatic invasive plants impact salmon habitat based on the species included in the draft Aquatic Invasive Plant Action Plan. Additional species were included, as required.

- 2) Determined a process for selecting priority communities and sites that can be targeted for education activities (questionnaire development).
- 3) Solicited input from regional invasive plant coordinators via questionnaire (available upon request), and jointly identified areas around the Province for future stewardship and/or education activities.

**Results of Phase 1 are presented in "Salmon&Aliens\_questionnaire\_10March2010.xls".**

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

The most compelling outcome from this project was working with the Aquatics Advisory Committee and regional invasive plant committees to identify priority awareness and stewardship actions across the province. This information is invaluable and will be extremely helpful in forming the foundation of future targeted aquatic invasive plant initiatives.

### 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
<p>1. Host a "Think Tank Forum" with field experts and strike an Aquatics Advisory Committee to aid the development of the Aquatic Invasive Protection Plan.</p>	<p><b>Background:</b> Prior to this project's approval and with support from Environment Canada's Invasive Alien Species Partnership Program, IPCBC struck an Aquatics Advisory Committee and hosted an Aquatics "Think-tank" session in the spring of 2009. This resulted in the development of the Aquatics Invasive Plant Action Plan, which is a living document that is updated as new information arises, such as the results from this exiting initiative. These actions served as the foundation for "Protecting Salmon Habitat from Aliens".</p> <ol style="list-style-type: none"> <li>1. Hosted an international forum titled "Unique Habitats, Unique Challenges" in Richmond, BC on January 19<sup>th</sup> and 20<sup>th</sup>, 2010, with over 160 experts, professionals, land managers, First Nations, and other concerned individuals from BC, Canada, the United States, and Australia.</li> <li>2. Held a special forum, January 19<sup>th</sup> solely on aquatic invasive plants with presentations from Dr. Mark Sytsma, Portland State University (A Regional Approach to Aquatic Weed Management in the Pacific Northwest); Jenifer Parsons, Washington State Dept. of Ecology (Aquatic Weed Monitoring and Management in Washington); Vasiliki Karpouzi, BC Ministry of Environment (Aquatic Invasive Species in BC: work to date and future steps); Dr. Thomas</li> </ol>

	<p>Therriault, Dept. of Fisheries and Oceans (The Development of a Rapid Response Framework for Aquatic Invaders); and Tom Woolf, Idaho Dept. of Agriculture (Invasive Aquatic Species Issues in Idaho).</p> <p>3. Provided a network opportunity for participants to discuss issues, which was supplemented by posters and displays.</p>
<p>2. An Aquatic Invasive Protection Plan that identifies: 1) species and locations of aquatic invasive plants threatening critical salmon habitat in BC; 2) stewardship actions to undertake; and 3) top community priorities.</p>	<ol style="list-style-type: none"> <li>1. Determined a process for selecting priority communities and sites that can be targeted for future (Phase 2) education, inventory, and restoration activities (see Questionnaire).</li> <li>2. Identified priority salmon<sup>1</sup> habitat locations (communities and water bodies) across the Province.</li> <li>3. Identified invasive plants that are known to exist and have the potential to impact salmon habitat within priority communities and sites.</li> <li>4. Identified target pathways of invasion for community priorities.</li> <li>5. Identified priority stewardship actions, such as inventory and restoration, to undertake in communities across BC.</li> </ol> <p>Results are presented in "Salmon&amp;Aliens_questionnaire_26Jan201.xls", which is an appendix in the IPCBC's Aquatic Invasive Plants Action Plan<sup>2</sup> (2009-11) version February 2010 (attached).</p>
<p>3. Develop and deliver orientation workshops to key audiences to educate participants on the impending threat of aquatic invasives to salmon habitat and methods for control and eradication.</p>	<ol style="list-style-type: none"> <li>1. Developed an Aquatics orientation workshop to complement work by the BC Agriculture Council (Agriculture, Environment and Wildlife Fund) and Environment Canada (Invasive Alien Species Partnership Program) under the existing Spotter's Network initiative (<a href="http://www.invasiveplantcouncilbc.ca/news-and-events/234-sign-up-for-spotters-network-workshops">http://www.invasiveplantcouncilbc.ca/news-and-events/234-sign-up-for-spotters-network-workshops</a>).</li> <li>2. Delivered 3 pilot orientation workshops in January and February in Kelowna, Prince Rupert, and Victoria to gather feedback. Workshops were well received and generated much interest among regional coordinators and the public. This module was updated and will be distributed to all interested via the Council's website.</li> </ol>

<sup>1</sup> For the purposes of this project, salmon species include Chinook, Chum, Coho, Kokanee (freshwater), Sockeye, and Pink.

<sup>2</sup> The Aquatic Invasive Plant Action Plan was developed in place of the Aquatic Invasive Protection Plan.

<p>4. Host stewardship events with participation of First Nations and others to restore targeted sites that involve removal/management of aquatic invasive plants.</p>	<p><i>This is an expected outcome of Phase 2 of this project, which is pending funding.</i></p>
<p>5. Create information resources (i.e., fact sheet, field guide, carabineers, etc) for easy identification of aquatic invasive plants and prevention tools; distribute resources; and deliver a yearly progress report.</p>	<ol style="list-style-type: none"> <li>1. Developed resources including Targeted Invasive Plant Solutions (T.I.P.S.) for the aquarium trade and recreationists (anglers and hunters), floating key chains, and aquatic invasive plant identification and information carabineers.</li> <li>2. Resources available for use with Spotters workshops and for regional invasive plant committee coordinators.</li> </ol>
<p><b>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.</b></p>	
<p>Based on feedback received from regional coordinators, Aquatic Advisory Committee members, and others, we can conclude that “Protecting Salmon Habitat from Aliens” was successful in meeting Phase 1 project objectives. Evaluations from the “Unique Habitats, Unique Challenges” and Spotter’s orientation workshops provided thoughtful input into program/event improvements, which will be incorporated as appropriate, and indicated that both the forum and workshops were timely, well organized, and helpful in raising awareness on the impacts of aquatic invasive plants on salmon habitat and unique aquatic ecosystems as well as economies and human health and safety. In addition, there have already been requests for the Aquatics Action Plan which will help guide future activities in BC.</p> <p><b>Successes:</b> A notable success of “Protecting Salmon Habitat from Aliens” was the ability to continue raising awareness of the issue of aquatic invasive plants, and developing much needed BC specific outreach materials. The IPCBC’s Board of Directors, regional coordinators, and others have identified the need for increased awareness on this issue for some time now. Funding provided by FSWP assisted in addressing this need by supporting “Unique Habitats, Unique Challenges”, which enabled aquatic invasive plant specialists and others to share successes, challenges, and lessons learned.</p> <p><b>Challenges:</b> One of the greatest challenges was determining the most effective approach to identifying priority aquatic invasive plants, communities, and stewardship actions. Several different options were explored including GIS-based analysis; however, given the lack of digital information, it was agreed by committee members that the best approach was to contact those with local knowledge on these issues as well as community priorities—regional invasive plant committee coordinators. Thus, the questionnaire was developed and coordinators were interviewed by phone individually. This activity resulted in a comprehensive spreadsheet that identifies priority invasive plants and stewardship sites/communities, specific stewardship actions (including inventories), and target pathways of invasive plants. This compendium of information will guide the development and implementation of Phase 2 of this project (field implementation), which is pending funding.</p>	
<p><b>3.3 REQUIRED: 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.</b></p>	
<p>Documents supporting final outcomes include:</p> <ol style="list-style-type: none"> <li>1. Aquatic Invasive Plant Action Plan (Aquatic Invasive Plants Action Plan (Feb 28 2010).pdf)</li> <li>2. Salmon Questionnaire and Results (Salmon_Questionnaire_FNL.doc; “Salmon&amp;Aliens_questionnaire_10March2010.xls”)</li> </ol>	

3. "Unique Habitats, Unique Challenges" forum summary *\*Current draft provided, this will be finalized and made available on the Council website in April*
4. Spotter's Network (Aquatics Module) speaking and background notes (presentation available upon request)
5. Outreach Materials including Aquatic TIPS (2), floating key chain (draft proof, will be finalized shortly), and carabineers (proof available shortly) *\*Hardcopies available upon request*

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?

A conceptual proposal of Phase 2 "Protecting Salmon Habitat from Aliens" has been developed, and will involve implementation of stewardship (inventory and restoration) and education priorities identified in Phase 1. Proposed next steps, which will build upon the benefits of this project, include:

- **Implementation** of orientation **workshops** developed in Phase 1 to educate participants on the impending threat of aquatic and riparian invasive plant species to BC's fresh and marine water systems including salmon habitat, and outline methods for prevention, control and eradication. These workshops will also provide identification and reporting tools that will assist participants in detecting new "unwanted" invaders before they establish.
- **Delivery of restoration** (invasive plant removal, desirable plant revegetation and seeding) and **inventory** activities on priority sites to protect salmon habitat.
- **Dissemination of Aquatic Invasive Plant Action Plan (Protection Plan) information** (Protection Plan) and **outreach materials** (Factsheets, Signage, Display, Carabineers) to key audiences.
- **Assessment** of project outcomes and documentation future action items.

The implementation of Phase 2 will depend on available funds, which have not been secured to date.

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. Invasive aquatic plants impact freshwater, riparian and marine ecosystems throughout BC yet little is currently known about their locations and impacts. Local knowledge is critical.

2. Salmon restoration projects should consider and incorporate practices to avoid the spread of invasive aquatic plants for optimal effectiveness.

3. Multi-agency communication and collaboration is required for effective aquatic invasive plant management since it falls across jurisdictions and boundaries.

## 4. Project Expenditures

In Part A, please list all line-items from your original proposal, and add any additional line-items for costs that were not originally budgeted. Please include more specific descriptions of services or items where possible, (e.g. the name of the company or individual contracted), and actual rates, unit costs, and total expenditures. In Part B, report the original amount budgeted per line item from the detailed proposal, and the actual FSWP and non-FSWP amounts spent. Please NOTE that FSWP does not expect actual expenditures to necessarily align with the original budget.

Part A: Actual units, rates, costs per unit, and total project expenditures to date					Part B: Original FSWP budget and breakout of actual project expenditures			
<b>Labour</b>								
Service	# of People	Daily Rate	Total # of Days	Total Project Expenditures	Original FSWP Budget (from detailed proposal)	Total FSWP Expenditures	Total Non FSWP Contribution	
							Cash	In-Kind
Research, facilitation and writing	2	300	45.43	13,630.00	18000	18,916.38	1,913.62	0.00
	1	400	18.00	7,200.00				
Graphic design and layout	1	350	29.33	10,266.67	1000	1,000.00	9,266.67	0.00
Technical direction and advice (provincial specialists, USDA experts, regional coordinators) & Aquatics Advisory Committee	39	400	2	31,200.00	0	0.00	0.00	31,200.00
<b>Labour Sub-Total</b>				<b>62,296.67</b>	<b>19,000.00</b>	<b>19,916.38</b>	<b>11,180.29</b>	<b>31,200.00</b>
<b>Materials, Supplies &amp; Equipment</b>								
Item	# of Units	Unit Cost	Total Project Expenditures	Original FSWP Budget (from detailed proposal)	Total FSWP Expenditures	Total Non FSWP Contribution		
						Cash	In-Kind	
Aquatic outreach materials - carabineers	4683	1.57	7,351.92					
Aquatic outreach materials - floating key chains	2500	1.49	3,731.70	12,000.00	11,083.62	0.00	0.00	
"Unique Habitats, Unique Challenges" aquatic invasive species speakers	4	NA	2,094.81	3,000.00	2,094.81	0.00	0.00	
Factsheet, resources (Aquatic TIPS)	7000	0.36	2,500.00	0.00	0.00	0.00	0.00	
						2,500.00	0.00	
<b>Materials, Supplies &amp; Equipment Sub-Total</b>			<b>15,678.43</b>	<b>15,000.00</b>	<b>13,178.43</b>	<b>2,500.00</b>	<b>0.00</b>	
<b>Administration &amp; Overhead</b>								
Item	# of Units	Unit Cost	Total Project Expenditures	Original FSWP Budget (from detailed proposal)	Total FSWP Expenditures	Total Non FSWP Contribution		
						Cash	In-Kind	
Coordination	12	400	4,800.00			4,800.00		
Administration and overhead support	28	200	5,600.00	1,000.00	1,905.19	2,600.00	2,000.00	
<b>Administration &amp; Overhead Sub-Total</b>			<b>10,400.00</b>	<b>1,000.00</b>	<b>1,905.19</b>	<b>7,400.00</b>	<b>2,000.00</b>	
<b>FUNDING SUMMARY - DO NOT FILL - FSWP STAFF USE ONLY</b>								
<b>Total Originally Budgeted FSWP Contribution</b>					<b>35,000.00</b>			
<b>Total Project Expenditures</b>					<b>88,375.10</b>			
<b>Total FSWP Expenditures</b>					<b>35,000.00</b>			
<b>Total Non FSWP Contributions</b>						<b>54,280.29</b>		

4.1 If you have had any significant differences in spending in comparison to your original budget, please provide an explanation. Significant differences could include costs that exceed 20% of a line-item or budget category (labour, materials, administration), and new items or services that were not originally budgeted, exceeding 10% of total FSWP contribution.

None.

4.2 Please describe all non-FSWP project contributions, cash and in-kind:

Non-FSWP Contribution Sources	Letter of Confirmation Attached (Y/N)	Cash (\$)	In-Kind(\$)	Total(\$)
Agriculture Environment and Wildlife Fund	Available upon request	\$1,913.62 \$4,800.00	0	\$6,713.62
Invasive Alien Species Partnership Program	Available upon request	\$2,500.00	0	\$2,500.00
Provincial Government, Aquatics Advisory Committee members, Regional Invasive Plant Coordinators	No	0	\$31,200.00	\$31,200.00
Western Economic Diversification Canada	Available upon request	\$2,600.00 \$9,266.67	0	\$11,866.67
Invasive Plant Council of BC	Available upon request	0	\$2,000	\$2,000

## 5. Project Promotion

Please describe how you have communicated project activities and results within local and basin-wide communities, across organizations or to decision makers.

Please include copies of (or links to) any communications materials from these efforts that you have not previously submitted.

“Unique Habitats, Unique Challenges” was advertised via IPCBC email contact list and website. Forum details and invitations were sent to key decision makers including Doug Konkin, Deputy Minister of Environment and Robert McLean, Environment Canada as well as all forum speakers. Pre- and post-forum news releases were prepared and circulated to media contacts (<http://www.invasiveplantcouncilbc.ca/news-and-events/news-releases>).

The Aquatics Spotter’s Network workshop module will be made available March 31<sup>st</sup> on the Council’s website. See <http://www.invasiveplantcouncilbc.ca/news-and-events/234-sign-up-for-spotters-network-workshops> for details.

Overall project activities and results were shared with regional committees and the IPCBC Board of Directors. Aquatics Advisory Committee project updates were also provided in member correspondences via news releases and the December 2009 E-Bulletin (available from the IPCBC's website).

## 6. Further Comments

Please provide any further comments including recommendations for future efforts and suggestions for helping partners to meet the goals of the Fraser Salmon and Watersheds Program.

Providing opportunities to apply for multi-year funding would be very beneficial in enabling fund recipients achieve overall project outcomes. For example, securing funds in for both Phase 1 (planning) and 2 (implementation) would ensure that the overall project is delivered and completed. This would foster greater community and proponent buy-in, and may also assist in leveraging additional funds. Currently, since we did not successfully receive Phase 2 funding, we have the project planned but few funds to implement it. Additional efforts will be made to recruit funds to address this as there is a growing desire across BC to minimize the damage of invasives to critical habitat.

## 7. DECLARATION

Please complete the following declaration:

I, Gail Wallin, 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: Gail Wallin  
(Print Name)



## 8. Appendices

**REQUIRED:** attach all DOCUMENTATION of Final Outcomes, listed above in section 3.3. These may include technical reports, maps, photos, evidence of communications, lists of meeting participants, etc.

1. Aquatic Invasive Plant Action Plan (Aquatic Invasive Plants Action Plan (Feb 28 2010).pdf)
2. Salmon Questionnaire and Results (Salmon\_Questionnaire\_FNL.doc; "Salmon&Aliens\_questionnaire\_10March2010.xls")
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