

2010/11 FINAL REPORT

FSWP File Number*	10 XX 70 SIFM
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* Please use the FSWP File Number provided in previous FSWP project correspondence.

1. Project Information

1.1. Project Title

System-wide DIDSON estimation of sockeye escapement in the Quesnel River system

1.2. Proponent's Legal Name

Upper Fraser Fisheries Conservation Alliance (UFFCA)

1.3. Project Location

Cariboo-Chilcotin. Near Likely, BC and the UNBC Dr. Max Blouw Quesnel River Research Centre

1.4. Contact for this report

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1.5 Funding Amount

Original Approved Grant Amount:	Total FSWP Expenditures:	Final Invoice Amount:	Final Non-FSWP leveraging, including cash and in-kind:
\$102,094.92	\$102,094.92	\$19,094.92	\$317,963.19

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 Quesnel River DIDSON project assessed the feasibility of using DIDSON technology in the Quesnel River to enumerate the total sockeye escapement to the Quesnel Lake system in 2010. The objectives included: Replicating the DIDSON enumeration conducted in 2009 in the Quesnel River, installation/operation of two DIDSON systems at the project site throughout the sockeye migration period, generation of a sockeye escapement estimate from the project with comparison to upstream spawning ground escapement estimation, support for upstream enumeration projects, and the utilization of a collaborative capacity building/transfer relationship between project partners (NSTC, DFO and UFFCA). The Quesnel DIDSON project estimated 281,084 ± 10,345 (± 3.89%) sockeye migrated past the site, compared to the *DFO Near Final Estimate* of 246,586 sockeye escapement to the Quesnel Lake area. As a feasibility study all project objectives were met, and the project partners considered the project a success.

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

As a second year feasibility study, the Quesnel River DIDSON project met all Project Objectives, and was built on (and improved) an existing collaborative partnership between the UFFCA, NSTC and DFO from an administrative and operational perspective. Perhaps the most compelling outcome of the collaborative partnership was the ability to overcome equipment failures and personnel changes during an eventful and challenging field season.

3. Final Project Results and Effectiveness

3.1 Please copy THE EXPECTED DELIVERABLES from your detailed proposal and insert into this table. Add additional rows as needed. Then describe the FINAL DELIVERABLES (the tangible end products resulting from this work) associated with each expected Deliverable.

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

EXPECTED DELIVERABLES	FINAL DELIVERABLES
1. To generate a precise and accurate estimate of total escapement for the Quesnel Lake sockeye Conservation Unit, and compare to upstream spawning ground enumeration estimates (Mitchell River, Quesnel Lake and Horsefly River).	The Project met this Outcome. The final DIDSON estimated sockeye escapement to the Quesnel Lake CU was 281,084 ± 10,345 (± 3.89%). This is comparable to a DFO <i>Near Final Estimate</i> of 246,586 sockeye escapement to the Quesnel Lake area.
2. To generate a precise estimate of total sockeye escapement for the Mitchell River system, an estimate which will be used as a comparison component for the Quesnel River DIDSON estimate.	This deliverable was met. DFO completed a Mark & Recapture project on the Mitchell River. The <i>Near Final Estimate</i> for Mitchell River is 75,029 ± 11,316 adult sockeye.
3. To generate a final report detailing the project's technical results, and description of the multi-partner capacity building and sharing framework, lessons learned and recommendations.	The Project met this Outcome. A final report describing all technical results and discussion of Project Objectives was submitted with this template report.
4. Establishment of a multi-partner technical DIDSON team experienced in all aspects of DIDSON operations in order to complete the above objectives.	The Project met this Outcome. NSTC fisheries technicians and the UFFCA Co-management Facilitator worked with the DFO Project Supervisor throughout the Quesnel DIDSON field operations. UFFCA and DFO Biologists completed site set-up and operational support. NSTC technicians worked with DFO throughout the Horsefly DIDSON project. The UFFCA completed the technical analysis for the project with DFO input.

3.2 Please evaluate the EFFECTIVENESS of your project in achieving Project Objectives. Identify the indicators you have used to measure the effectiveness of your project. Please include any notable successes or challenges.

In general the 2010 Quesnel River DIDSON project was very effective in achieving the Project Objectives. The indicators used to measure the effectiveness were the Project Objectives as outlined in the final report.

1. Installation and operation of 2 Quesnel River DIDSON units (at the refined and 2009 tested field site) for the entire sockeye migration period, including on-site visual counts.
2. Installation and operation of a single Mitchell River DIDSON unit (at the refined and 2009 DFO tested field site) for the entire sockeye migration period, including on-site visual counts. Note: This objective was met by implementation of a DFO lead Mark & Recapture on the Mitchell River rather than implementation of a DIDSON enumeration.
3. Generation of a total 2010 Quesnel Lake system (Quesnel Lake sockeye Conservation Unit) sockeye escapement estimate, and comparison to the upstream estimates of spawning escapement.
4. Utilization of the collaborative relationship between the UFFCA, NSTC and DFO: providing opportunities for complete co-operative project management between all project partners.

All Project Objectives were achieved, although Objective 2 changed to reflect the decision to complete a high precision Mark & Recapture project on the Mitchell River. The overall result for the 2010 Quesnel DIDSON project is an improvement compared to 2009 in that high-precision escapement estimates were completed in Mitchell and Horsefly Rivers, with a low-precision escapement estimate completed for the Quesnel miscellaneous component of the Quesnel Lake sockeye population. Another improvement to the 2010 project, related to Objective 4 was the establishment of a Collaborative Management Agreement between the UFFCA and DFO for transfer of funding related to project expenditures.

3.4 IF applicable, please describe how your project has achieved one or more of the following supported processes (Section 2.2 of RFP; section 7 of detailed proposal template). If results differ from those originally anticipated, please describe.

Engagement of First Nations. Please specify who, and in what capacity.	The UFFCA was the lead on this project, a First Nations directed organization dedicated to First Nations collaboration, capacity utilization and building. The project will provided direct and hands-on experience for NSTC First Nations technicians throughout the project, including the Horsefly DIDSON project completed by DFO.
Active partnerships with one or more organizations.	The UFFCA, Northern Shuswap Tribal Council and DFO were Project Partners. The Dr. Max Blouw Quesnel River Research Centre allowed site access, equipment storage and a dedicated power source for the field office and Left Bank DIDSON. Also: the Quesnel DIDSON project leased one DIDSON unit from the Nicola Tribal Association and provided set-up and operations training for the NTA technician as part of the lease agreement.
Engagement and participation of diverse and under-represented groups.	See above.
Relationship building, as a foundation for sustainable, enduring activities.	An excellent collaborative relationship between the Project Partners was the only reason why the project was successful. Successful troubleshooting by all involved in the 2010 project was the reason the project succeeded. Without the strong relationship, this would have been possible.
Capacity building, including mentorship models, leadership	This project provided ample opportunity for capacity building amongst all Project Partners through hands-on training and skills development throughout the project.

training and skills development.	
Recognition and support of champions and their initiatives.	N/A
Opportunities to influence policy and decision making,	It is hoped the successful completion of the second year of this project will provide a new option for stock assessment in the Quesnel system and improved sockeye management in the Fraser.
3.5 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?	
The 2010 project results, including the success of the 2009 project indicate the Quesnel River DIDSON site has the potential for providing a precise, accurate and cost-effective method for providing an overall sockeye salmon escapement estimate for the Quesnel Lake Conservation Unit. It is recommended the Project Partners review the 2009 and 2010 project results and discuss the application of DIDSON as an official sockeye enumeration tool in the Quesnel system.	
3.6. What are the top three lessons learned from this project that could be useful to communicate to others doing similar work in the Basin?	
<ol style="list-style-type: none"> 1. A mechanism for transfer of funding between Project Partners, such as the Collaborative Management Agreement implemented with the UFFCA and DFO was a dramatic improvement in project administration compared to 2009. 2. Good working relationships between Project Partners are fundamental for complex projects such as this one. 3. Project success stems from a “can do” attitude and open lines of communication between project partners. This is particularly evident from the challenges experienced in 2010. 	
REQUIRED: Attach all DOCUMENTATION of Final Deliverables, and LIST attachments in Section 7. These may include technical reports, maps, photos, evidence of communications, lists of meeting participants, etc.	

4. Outreach and Communications

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

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

Project activities have been reported at UFFCA meetings throughout this fiscal year. The UFFCA will develop a project presentation with the intent of presenting the results and experiences of both the 2009 and 2010 projects at the FRAFS Visions conference in 2011, the May UFFCA general meeting as well as the next Fraser Watershed Joint Technical Forum (date to be announced). Were possible the UFFCA Stock Management Biologist will present the project results to Fraser watershed First Nations Fisheries Organizations in the upcoming year.