

# Fraser Salmon & Watersheds Program



Fraser Basin Council



## 2009/10 FINAL REPORT

FSWP File Number\* # 07350-35/FSWP 09 LR 101 HWRS

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

### 1. Project Information

#### 1. Project Title

Hydrological Assessment of the Musqueam Cutthroat Creek Watershed

#### 1. Proponent's Legal Name

Musqueam Ecosystem Conservation Society

#### 1. Project Location

Musqueam Creek Watershed, Vancouver, British Columbia, North Arm Fraser River

#### 1. Contact for this report

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#### .5 Funding Amount

Original Approved Grant Amount:	Total FSWP Expenditures:	Final Invoice Amount:	Final Non-FSWP leveraging, including cash and in-kind:
\$38,280	\$36,771.25	\$21,459.25	\$18,250.00

### 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.

Through our Hydrological Assessment of the Musqueam Cutthroat Creek System our Streamkeepers, consultants and partnership agencies worked together to produce a **State of the Watershed** report. This report compiled and analyzed historic information, hydrological and biological data on the Musqueam Creek watershed. Phase One of this project was initiated in the autumn of 2008 and was completed in March 2009. Phase Two continued this research and analysis, and provided a final report, with recommendations. In summary the report concluded that at a large scale efforts to protect and restore the Musqueam Cutthroat Creek system appear to be working. However, the greatest challenge to this watershed and its aquatic resources is the maintenance of base flows that will reduce the bottle neck to rearing salmonid survival. A solution to this issue should continue to be the focus of efforts in the watershed as its implications impact both aquatic and terrestrial species relying on flowing waters for success.

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

### 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. Publish a detailed State of the Watershed report on the Hydrology and Biological Productivity of Vancouver's Last Wild Salmon Stream and distributed it to our project partners, watershed stakeholders and funders.	Final State of the Watershed Report published and distributed to our project partners, watershed stakeholders and funders for peer review. This report contained a compilation of detailed data on this system, the analysis of that data and extensive recommendations.
2. Publish a detailed outreach map of the Musqueam Creek watershed used to educate the public, engage our partners in our conservation strategy and capture the imagination of our volunteers, funders and supporters.	Final Watershed outreach map completed based on detailed data gathered in the process of developing this report. As an accompaniment to the report and an outreach tool this map is indispensable.
3. Provide a foundation of information from which to build a strategic plan for the restoration of the Musqueam Creek watershed, its stream channels and its salmon runs.	The data gathered in producing this report and the information provided within was thorough and directed towards the immediate needs of this watershed and its ability to produce salmonids. The development of a Strategic Plan for the future protection and restoration of this system would be impossible without this report.

<p>4. Establish a benchmark for which to measure the success of future habitat and stock enhancement projects.</p>	<p>The compilation of stage discharge data and standing stock estimates as well as, the analysis of the watersheds hydrology and riparian habitat will provide an excellent benchmark from which to measure the success of future restoration projects. Further, the purchase and installation of stage recorders, that will continue to function and collect data for years to come, will prove useful in continuing to refine our understanding of this system and thus more accurately plan and design these projects.</p>
<p><b>.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>Our Hydrological Assessment of the Musqueam Cutthroat Creek Watershed accomplished our objectives with efficiency and thoroughness. The effectiveness of this study was measured by the ability of the report to provide a clearer understanding of the factors limiting production in this system and recommendations for its conservation and restoration. The report was thorough in its collected &amp; analyzed of new and comparative hydrological data on the creek, stream channels, and watershed. As well the collection and analysis of biological data was effective in supporting the conclusions draw from the hydrological analysis resulting in the major finding of this report. The report was also affective in providing sufficient evidence for a review of the effectiveness of the Imperial Trail well flow augmentation program. Our work with Musqueam elders in the collection on Traditional Ecological Knowledge and our creation of a GIS map of the watershed proved useful throughout this report. However, referencing this information in the report has been challenging as these components have been embargoed by the Musqueam Indian Band and cannot be released at this time. We are confident that and agreement will be worked out in the near future that will allow for the incorporation of this information.</p>	
<p><b>.2 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>Attachments: 1) State of the Watershed Report</p>	
<p><b>.2 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?</b></p>	
<p>This report will provide a “Roadmap” for MECS and local stakeholder organizations to follow when planning future conservation, restoration, maintenance and development initiatives. It is recommended that this report be formally presented to the leadership and administration of these organizations and that a Watershed Management Plan be developed and a formal Declaration be adopted in support of this initiative to save Vancouver’s last wild salmon stream.</p>	
<p><b>.2 What are the top three lessons learned from this project that could be useful to communicate to others doing similar work in the Basin?</b></p>	
<p>1. Reports are very useful in providing direction for conservation and restoration efforts however, immediate action to stop habitat destruction and pollution are paramount and should not be delayed in favour of research.</p>	

2. Reports provide important direction for conservation and restoration efforts and are essential to the design of a restoration plan. Without such a plan financial and in-kind resources can be misdirected.
3. It is important to provide a clear set of objectives and questions to the research team and follow up throughout the process providing new questions to further focus their research.