

# Fraser Salmon & Watersheds Program



Fraser Basin Council



## 2009/10 FINAL REPORT

<b>FSWP File Number*</b>	<b>07350-35/FSWP 09 D PG 61</b>
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\* Please use the FSWP File Number provided in previous FSWP project correspondence.

### 1. Project Information

#### 1.1. Project Title

Bonaparte River Water Management Project

#### 1.2. Proponent's Legal Name

Bonaparte Watershed Stewardship Society

#### 1.3. Project Location

Bonaparte River Watershed

#### 1.4. Contact for this report

Name: Mike Wallis

Phone: 250-573-7838

Email: mikewallis@hughes.net

#### 1.5 Funding Amount

<b>Original Approved Grant Amount:</b>	<b>Total FSWP Expenditures:</b>	<b>Final Invoice Amount:</b>	<b>Final Non-FSWP leveraging, including cash and in-kind:</b>
34,100.00	34,100.00	6,820.00	50,274.00

### 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.

The main objective of the project was to develop a cooperative approach to water management by assessing demand and reviewing opportunities for improved water management to benefit fish, fish habitat and human use needs. Fish and aquatic values were identified within the context of water demand and supply constraints. Information was assembled for the watershed planning group that can be used to address water supply and fish and fish habitat needs identified as priorities in the watershed planning process of 2007-08. Opportunities for improved use of water supplies to help meet fish, aquatic as well as agricultural supply needs were identified and prioritized.

Over the past 9 years streambank restoration sites have been undertaken on the Bonaparte River lead by the BWSS with over 75 sites now stabilized, and landowner acceptance and willingness to participate growing. Significant areas of severe streambank erosion remain with high risk of further erosion. Streambank restoration

activity is ongoing; however the communities also recognized that water supply issues need to be addressed to accomplish water sustainability goals during recent watershed planning processes. During this WFSP watershed planning process, sponsored in part by the FSWP, a series of watershed scale goals and objectives were generated (see list of 11 watershed sustainability focus areas). Water quality, water supply, fish and fish habitat have been consistently identified as dominant water related issues during the process. Some watershed issues were identified relating to groundwater extraction and minimum flows to protect fish and aquatic values. Various participants have suggested water storage improvements and development of alternative sources to help support fish stocks, secure agricultural supply, and mitigate dramatic highs and low flows that are anticipated from extensive pine bark beetle impact. An information gap regarding Bonaparte Dam function, operation and capacity were identified as blockages to progress. The project has provided information regarding trends and conditions including the Bonaparte Dam that will enable water management improvement alternatives to be addressed.

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

The information assembled and communicated regarding existing water demand and supply options, in particular the design, construction and operation of the Bonaparte dam including its limitations, have helped the group move forward to look beyond the stigma that the Bonaparte dam is a “silver bullet” that can be relied upon to solve all water supply issues, to consider a more comprehensive series of water management practices including conservation, storage, and irrigation efficiency will be more likely to provide the long term benefit needed to fish and agriculture. The next step in a maturing perspective on improved water management planning to meet present and future needs is now possible

### 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
A written summary report of various existing technical information and documents collected during the WFSP planning process organized into a watershed character overview that identifies watershed features, trends, conditions and information gaps in relation to the goals and objectives set out in the WFSP	Technical and annual activity information has been assembled into files and presented in slide shows. The Trends and Conditions “living document” which continues to evolve to its 3 <sup>rd</sup> edition, through annual edits that incorporate new information obtained year by year to fill information gaps, now includes these products.
Field reconnaissance results providing preliminary water temperature, flow and groundwater features in relation to fish and fish habitat	Field reconnaissance information has been incorporated into the Trends and Conditions “living document” which continues to evolve to its 3 <sup>rd</sup> edition, through annual edits that incorporate new information obtained year by year to fill information gaps
A report summarizing the operation and management of the Bonaparte Dam and any other feasible water storage opportunities identified within the watershed	Operation and function of the Bonaparte dam has been reviewed and the results including historical photos, current photos, discharge rule curve, operation updates and a description of function and capacity have been attached to the Trends and Conditions document

A series of GIS watershed base mapping that will enable storage, display, communication and future planning in conjunction with the written results	A public display was made and is used in community events and workshops. In addition, GIS maps and future planning priority workplans are attached to the trends and conditions document.

**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.**

Discussion and community engagement on the issues with water management project and opportunities to improve water management at watershed scale to provide improved fish and riparian habitat, while serving as a common point of interest to unite landowner and public support for secure water supply

Other challenges are found in addressing the equally important aspect of water management of improved water management and in particular a drought management response plan that must go hand in hand with a successful riparian, streambank and instream fish habitat improvement effort. Both are currently being addressed by the BWSS within the watershed plan. Water storage, irrigation efficiency and drought response planning are high on the list of opportunities for improved water management that can now be addressed.

**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.**

- Bonaparte Dam Historical photo set
- Licensed demand document
- Historical information regarding Bonaparte dam construction, function and operation
- Bonaparte Dam Function and Operations summary
- Dam operation updates, 2009-2010
- Updated Trends and Conditions document
- Watershed overview maps
- BWSS Slide show , 2010

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?

- **NB: Text Box below will not accept text input due to formatting? Therefore info provided here in point form for Section 3.4**
- **To move discussion from a review of the potential for the Bonaparte dam to serve fish and irrigation demands, toward more realistic view of a watershed wide collective approach to improved water management**
- **Developing opportunities for improved water management including storage, efficient use and conservation that assumes instream need are part of the water budget**

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?

1. Provide information to address misunderstandings or lack of knowledge that were blocking progress toward water management improvement opportunities.
2. for the community to become proactive in engaging provincial government agencies
3. Consider a broad range of water management improvement measures rather than looking for the unlikely “silver bullet” solution.