

# Morice Water Monitoring Trust: Annual Monitoring Plan 2016

Final

March 31, 2016

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## **1.0 Introduction**

The Morice Water Monitoring Trust (MWMT) is directed through its Trust Agreement to be responsible for: monitoring the implementation and effectiveness of British Columbia/Wet'suwet'en government-to-government agreements, and related natural resource management activities, plans, and policies in the Morice Water Management Area (the "Morice Plans"); collecting baseline data on habitat supporting salmon and other fish, including water quality and quantity data, and hydrologic integrity that would fill information gaps or reduce information uncertainty, such that indicators of natural resource sustainability and ecosystem health identified in the Morice Plans can be efficiently and effectively monitored; and provide credible monitoring research and baseline data collection results in support of environmental effects monitoring and assessment to enable continuous improvement of Morice Plans resulting in better management of environmental values in the Morice Water Management Area.

The Morice Water Monitoring Trust: Strategic Direction document outlines core issues in the watershed and includes the Trust scope, purpose, guiding principles, goals, and strategies for managing and implementing the Trust. The Morice Water Monitoring Trust: Monitoring Framework provides operational guidance to trust activities by defining, by category, the anticipated risks/pressures in the watershed and sub-units, goals and objectives specific to the category, and tasks required to successfully address objectives. Both of these documents will assist the Trustees with setting direction and priorities.

The AMP sets out the year's proposed activities and budget which are created from the MWMT Monitoring Framework and is consistent with the MWMT Agreement.

## 2.0 Budget

The Budget for the 2016/17 (Year 2) Annual Monitoring Program consists of funding from both the MWMT Revenue Trust Account as well as in kind support from others. A summary of proposed activities and budgets is included in Table 1 and individual activities are described in greater detail in Section 3.

Table 1. 2016/17 MWMT Annual Monitoring Plan Budget

<b>Task/Activity</b>	<b>Proposed Budget</b>
<b>MWMT Program Management</b>	<b>\$13,900</b>
Trust Project Management	\$6,000
Program Coordination	\$7,000
Administration (12% of Annual Monitoring Program) *Admin Fee previously charged on Operational Seed Funding (\$120,899); will re-establish fee once \$120,899 is spent.	\$0*
BVRC Rent (\$75 per month)	\$900
<b>MWMT Annual Monitoring Program</b>	<b>\$53,000</b>
Agreement Monitoring	\$500
2016/17 – MWMA Stream [and Lake] Water Quality Monitoring	\$50,000
Data management and analysis	\$2000
Annual reporting	\$500
<b>MWMT Communication</b>	<b>\$2000</b>
Website Maintenance	\$500
Communication & Extension	\$1500
<b>Total</b>	<b>\$68,900</b>

1. Monitoring Year is from April 1 to March 31 annually to coincide with Budget Approval.
2. Endowment Trust Year is the Calendar Year.
3. Revenue Trust Account balance on March 31, 2016 is \$100,196.72

## 3.0 Project Synopses for 2016

### Program Coordination

Program coordination activities include those functions that are necessary for the effective delivery of MWMT projects. Tasks include:

- Prepare Trustee Meeting agendas, facilitate meetings and provide minutes
- Communicate with BV Research Centre as necessary
- Prepare and update Trust Management documents as directed by Trustees
- Manage trust expenditures as defined by the Annual Monitoring Plan
- Develop 2016 Annual Monitoring Plan on behalf of the Trustees
  - Provide initial description of projects and cost estimates
  - Facilitate discussion in relation to project selection
- Advise Trustees as necessary on strategic and operational planning
- Coordinate MWMT programs with other programs known to take place in 2016
  - Research grant and partnership opportunities and create working document which tracks process and records grant and partnership contact information
- Contract Management
- Responsible for monitoring activities including: prepare calls for proposals, select contractor(s), prepare and implement contract(s), oversee contracts to ensure quality and timeliness of reporting, and add documents to website.
  - Liaise with contractors to ensure that projects meet goals and objectives
  - Review and edit reports as directed by Trustees
  - Communicate project status to Trustees as necessary.

Budget: \$13,000.00

### ***Administrative support***

The Bulkley Valley Research Centre will provide administrative support in the form of:

#### Project Administration

1. Project initiation and closeout, overhead, and coordination
2. Contract Administration
3. Coordination assistance
4. Financial Management
5. Financial Reporting (monthly, quarterly)
6. Grant fund holding (tracking, and reporting)
7. Communications support (maintain website documents)

#### Equipment/Office

1. Meeting space
2. Physical address
3. Financial record storage (paper) for 7 years
4. Electronic storage of project deliverables, contract documents and final reports
5. Project related photocopy and printing support for small jobs
6. Projector and screen
7. Temporary desk space

#### Services

1. Recognized non-profit society
2. Established registered charity that can facilitate charitable activities
3. Collect mail
4. Pay project related bills
5. Make project related deposits
6. Filing

Budget: 12% of Annual Monitoring Program budget  
\$900 rent (\$75/month for BV Research Centre space)

## Project 2016-1 Agreement Monitoring

One of the purposes of the Morice Water Monitoring Trust is to monitor the implementation and the effectiveness of any British Columbia/Wet'suwet'en government-to-government agreements, and related natural resources management activities, plans, and policies in the Morice Water Management Area (the "Morice Plans").

It is necessary to define relevant agreements based on discussions with the Province, the Wet'suwet'en, and other stakeholders. The Morice LRMP is considered the primary plan that will influence the MWMT activities. However, subsequent to the LRMP process, additional plans, policies, and activities have been initiated and completed. Plans will include, but are not be limited to: Land and Resource Management Plans, Park Management Plans, Recovery Plans, Environmental Assessment Certificate requirements, and Federal, Provincial, or Office of the Wet'suwet'en Policy.

### 2016 Objectives:

- To define the plans within MWMA that are relevant to the activities of the MWMT

### Tasks:

1. Define relevant plans in consultation with the Trustees, provincial employees, Office of Wet'suwet'en members, and persons familiar with Morice Water Management Area resource management activities.

Budget: \$500

### Deliverables:

1. Compilation of identified plans stored on Dropbox [and/or SKT cloud server], and uploaded to MWMT website.

### Schedule:

1. Ongoing – Initial list of plans is complete as of April 1, 2016. The list will be added to whenever new plans within or associated with the MWMA are identified.

## **Project 2016-2: MWMA Baseline Water Quality Monitoring**

### Background:

One of the primary purposes of MWMT is to gather baseline data within the Morice Water Management Area to determine if water quality is sufficient to maintain the well being of the Wet'suwet'en (fish and drinking water). Significant effort was expended in 2007 and 2008 to develop and implement an appropriate Monitoring Program. The result was the creation of the Morice Water Management Area – Multi-Year Operational Plan (Gordon & Associates 2009). The Operational Plan provides a well-structured framework for developing and implementing a water quality monitoring program, and was instrumental in developing the MWMT Monitoring Framework document – a working document that serves as a 5-year plan for Trust activities

Directed through the monitoring framework, a more refined water quality monitoring program was implemented and baseline data collection began at 5 sites in the MWMA in October 2015. Baseline data collection will continue on a monthly basis until March 31, 2018, and will be used to assess stream health.

Continued input into key watershed issues, monitoring program goals and objectives, as well as an adaptive monitoring program that addresses the monitoring objectives is required.

### Water Quality Goals:

- Reliable access to safe drinking water.
- Water quality and quantity to sustain the health and well being of the Wet'suwet'en.
- Water quality that supports aquatic life at reference state.

### Objectives:

1. Maintain water temperature within critical limits for salmonid species on all MWMA water bodies.
2. Maintain water quality (chemistry) at or below Provincial Water Quality guidelines for parameters of importance seasonally.

### Current Management Questions (Gordon and Associates 2009):

- Is the water safe for drinking?
- Is the water and associated habitat capable of sustaining fish?
- Is the water quality getting better or worse?
- Is the water quality changing because of changes in land use or management practices?
- If water quality problems exist, what are the causes of those problems?
- Are regulatory requirements for water quality being met?

### MWMT Water Quality Objectives:

1. Water quality at monitoring locations meets provincial water quality guidelines seasonally.
2. Define long-term water quality reference condition in MWMA assessment units.
3. Develop more detailed Water Quality Objectives for individual assessment units as necessary.



Tasks:

1. Review and update Monitoring Plan and Sampling Protocol  
An initial water quality monitoring plan and sampling protocol was developed for the MWMA in 2014. These documents were refined and implemented as the 2015 baseline water quality data collection program. Based on input from Trustees, these documents will be reviewed and updated to include refined objectives and management questions, key monitoring parameters, and a sample procedure for long-term data collection that is consistent with Provincial standards and is aligned with direction of the Trust Agreement.
  
2. Stream Water Quality Monitoring  
Continue water quality monitoring in streams within the MWMA in consultation with the Office of the Wet'suwet'en and the Province of BC. Long-term stream water sample collection sites will be established and surface water samples collected monthly to address program objectives throughout the MWMA. Continue high intensity monitoring in Year 2 and 3 to establish a baseline and define seasonal water quality variability. This includes 5 samples in 30 days for both freshet and fall rains at one reference and one test site, and monthly sampling at the remainder of the sites.
  
3. Lake Water Quality Monitoring  
Implement water quality monitoring in lakes within the MWMA in consultation with the Office of the Wet'suwet'en, the Province of BC, and DFO. Long-term lake water sample collection sites will be established collected seasonally to address program objectives. In addition to basic water quality parameters, key productivity indicator information will also be collected. Lakes to be monitored include: Atna, South Morice Lake and Centre Morice Lake, Kidprice Lake. Nanika Lake (no sockeye) is reference. Monitoring during ice off and again in late summer at three depths (epilimnion, at thermocline, below thermocline). Lake monitoring in 2016 will be limited to Morice Lake in order to stay within budget boundaries, define the monitoring procedures, and partner with the Provincial long-term lake monitoring program.

Budget:

2016 Water Quality Monitoring budget.

<b>Task</b>	<b>Description</b>	<b>Budget*</b>
Water Quality Monitoring (Stream and Lake)	Review and update monitoring plan and protocol Field program to collect water quality data at stream stations (5 sites sampled monthly; 5-in-30 sampling at spring freshet and fall rains)	\$50,000
Data Summary and Reporting		\$2,500
<b>Total</b>		<b>\$52,500*</b>

\*Direct costs to program. Does not include in-kind contributions provided by Province of BC or other organizations.

Deliverables/Schedule:

Timetable of activities for 2016 WQ Monitoring Program.

<b>Task/Deliverable</b>	<b>Timeline</b>
Review and update monitoring plan and sampling protocol, and finalize budget outputs	May 2016
Field Monitoring Program – Year 2	April 1, 2016 – March 31 2017
Initial review of seasonal data to refine temporal sampling schedule for 2016 based on Year 1 results	December 2016
All data entered into EMS and reviewed by Monitoring Lead.	Quarterly

## **Project 2016-3 Communication**

The role of the MWMT is to collect information related to the goals and objectives for the Morice Water Management Area and communicate this information to the Trustees, decision makers, and others as appropriate. A key role of the MWMT is to collect, summarize, and communicate information in suitable format(s) to governments, the public, and industry to assist them with tracking progress towards goals and objectives and assist these same organizations in making resource management decisions.

### **MWMT Goals/Objectives:**

- To communicate MWMT monitoring results to the appropriate organizations so they may be informed of the Trust available information and data.
- To communicate issues or problems that may lead to ecosystem impacts to the relevant parties in a timely manner.
- To meet communication commitments of the Trust.

### **Tasks/Methods**

1. Develop Communication Strategy (1 – 2 pager) that sets communication expectations for the MWMT as well as documents information management requirements (how to identify and make accessible information/data).
2. Create Annual Trust Summary for Trustees
3. Create MWMT summary for distribution to public and stakeholders
4. Post reports, news and updates regularly on MWMT website (moricetrust.ca)

Budget \$2000

### **Deliverables**

1. Communication Strategy (components for Trust and Contractors)
2. MWMT Annual Monitoring Summary – summarize activities of the Program in 2016 as well as monitoring program results
3. 1-page summary of activities for distribution to key stakeholders

### **Schedule**

1. MWMT Communication Strategy – June 2016
2. MWMT Annual Monitoring Summary (2016) May 2017