

Morice Water Monitoring Trust: Annual Monitoring Plan 2015

Final

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Morice Water Monitoring Trust
c/o Box 4274 Smithers, BC
V0J 2N0 Canada
(250) 847-2827 info@bvcentre.ca

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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 the effectiveness of 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"); collection of baseline data on habitat quality 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 MWMT is currently developing strategic documents to guide the Trust's activities. 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.

This is the first Annual Monitoring Program (AMP) of the Trust and describes proposed monitoring activities during a year when program objectives are being developed. The AMP sets out the year's proposed activities and budget which are created from the MWMT Monitoring Framework (in prep) and is consistent with the MWMT Agreement.

2.0 Budget

The Budget for the 2015 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.

2015 MWMT Annual Monitoring Plan Budget

Task/Activity	Proposed Budget (March 17th Trustee input)
MWMT Program Management	
Trust Project Management	\$6,000
Program Coordination	\$6,100
Administration (12% of Annual Monitoring Program) Admin Fee previously charged on Operational Seed Funding (\$120,899) transferred in 2013-14*	0
Note: BVRC Admin Fee previously charged on Seed Funding from 2013/14)	
Annual Monitoring Activities	
MWMA Agreement Monitoring	
Monitor Agreements and Annual Reporting	\$1,800
Monitoring Projects	
2015 – MWMA Stream and Lake Water Quality Monitoring	\$85,530
MWMT Communication	
MWMT Program Report	0
Communication Expenses	\$4,000
Total	\$103,430

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 value on January 1, 2015 is \$143,728.16

3.0 Project Synopses for 2015

Program Management

Program Management

Program management activities include those functions necessary for the ongoing management of the Trust. During the initial year of the Trust, additional tasks are anticipated as Trust management issues and action items are identified. 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
- Legal Fees for Trust Establishment uncertain (\$1000 budgetted under Establishment Fund).

Budget: \$6000.00

Effort = 1 day per month for 10 months

Program Coordination

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

- Develop 2016 Annual Monitoring Plan on behalf of the Trustees, (3 days effort)
 - provide initial description of projects and cost estimates
 - facilitate discussion in relation to project selection
- Advise Trustees as necessary on strategic and operational planning (1 week overall program coordination in Year 1)
- Coordinate MWMT programs with other programs known to take place in 2015 such as PTP, Forestry, MOE (2 days)
- 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: \$6100.00

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

Project 2015-1 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").

During the initial year of the Trust, 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.

2015 Objectives:

- To define the plans that are relevant to the activities of the MWMT,
- To define components of the plans (management direction, objectives, targets, programs) relevant to the Trust for monitoring and coordination with Trust Activities and incorporate into operating procedures, communication strategies and monitoring activities.

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.
2. In consultation with the Trustees, develop a listing of the relevant components of the Morice plans to be monitored.
3. Develop a monitoring process through either a distinct process or incorporating agreement components into MWMT activities.

Budget: \$1800

3 days for Program Coordinator

Deliverables:

1. Plans identified included as Appendix in Strategic Direction document and uploaded to MWMT website.
2. Future agreement monitoring requirements documented and included in MWMT Operations Procedures.

Schedule:

1. All Agreement scoping activities for Year 1 are to be completed by November 1, 2015 in preparation for developing the Annual Monitoring Plan for 2016.

Project 2015-2: 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 2009). The Operational Plan provides a well-structured framework for developing and implementing a water quality monitoring program. Some monitoring was completed in 2008 and data collection since that time has been sporadic at a variety of monitoring sites and monitoring parameters have been inconsistent.

A more refined water quality monitoring program is required for the Morice Water Management Area. Input into key watershed issues, monitoring program goals and objectives, as well as a well thought out monitoring program that addresses the monitoring objectives is required given the inconsistent sampling that has occurred to date.

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 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. Expert Input into Monitoring Plan
The MWMA Multi-Year Operational Plan (Gordon 2009) provides a good foundation for developing and implementing a water quality monitoring program. At the time, monitoring objectives were not explicitly defined and the approach to data collection was broad. A list of refined MWMT objectives that include water quality for drinking and fish as well as information relevant to productivity (questions that may be asked in future) must be created and an appropriate monitoring strategy developed. Expert input that incorporates standard approaches is recommended to assist the Trustees in developing a long-term program.
2. Revise Monitoring Objectives, Monitoring Plan, and Sampling Protocol
An initial Water Quality monitoring plan and sampling protocol was developed for the MWMA in 2014. Based on input from Trustees, these documents will be updated to include refined objectives and management questions, key monitoring parameters, and a sample procedure for long-term data collection.
3. Stream Water Quality Monitoring
Implement 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 seasonally to address program objectives throughout the MWMA. In 2015 concentrate efforts on Gosnell in area of development where there is limited information. 6 reference sites and 6 impact sites. Recommend high intensity monitoring in year 1 to define seasonal water quality variability. This would include 5 samples in 30 days for both freshet and fall rains at one reference and one test site then monthly sampling at the remainder of the sites.
4. 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). Monitoring in 2015 will be limited to Morice Lake in order to define the monitoring procedures and link with a proposed Provincial program.

Budget:

2015 Water Quality Monitoring budget.

Task	Description	Budget*
Collection of existing information and Expert Review of WQ monitoring program	Gather and summarize existing WQ data in the watershed and identify the different programs in which they were collected Expert review of existing data (as necessary), refine monitoring objectives and develop monitoring program for reference monitoring.	\$3,780*
Water Quality Monitoring (Stream and Lake)	Field program to collect water quality data at stream stations (6 reference sites/6 impact sites) and 3 stations on Morice Lake seasonally	\$73,000
Data Summary and Reporting		\$8,750
Total		\$85,530*

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

Deliverables/Schedule:

Timetable of activities for 2015 Morice WQ Program.

Task/Deliverable	Timeline
Expert input into sampling plan for streams/lakes which will be incorporated into the Monitoring and Assessment Approach developed in Gordon (2009)	May 2015
Refine monitoring objectives and finalize budget Outputs	End of May
Issue RFP and Contract for Monitoring	Mid-May
Revise Water Quality Monitoring Program Plan and Sampling Protocol An updated water quality monitoring plan and sampling protocol to reflect refined objectives, sampling and analysis requirements, and monitoring procedures.	May 30
Field Monitoring Program	June 1 2015– March 31 2016
Initial review of seasonal data to refine temporal sampling schedule for 2016 based on Year 1 results	December 2015
All data entered into EMS and Reviewed by Monitoring Lead.	quarterly

Project 2015–6 Communication

The role of the Morice Water Monitoring Trust is to collect information related to the goals and objectives for the Morice Water Monitoring 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

Budget \$4000

Program Coordinator (4 days)
Communications Person (2 days)

Deliverables

1. Communication Strategy (components for Trust and Contractors)
2. MWMT Annual Monitoring Summary – summarize activities of the Program in 2015 as well as monitoring program results
3. 1 page summary of activities for distribution to key stakeholders

Schedule

1. MWMT Communication Strategy – June 2015
2. MWMT Annual Monitoring Summary (2015) February 2016