



Babine Watershed Monitoring Trust

2010 Annual Monitoring Plan

FINAL

Babine Watershed Monitoring Trust
1090 Main Street
Smithers, BC V0J 2N0

www.babinetrust.ca

Approved: February 23, 2010

Table of Contents

Table of Contents.....	2
1. Introduction.....	3
2. Budget.....	3
3. Monitoring Priorities.....	4
4. Approved Monitoring Projects for 2010.....	5
4.1 Ongoing Projects from Previous Years.....	5
4.2 New Projects.....	6
5. 2010 New Project Synopses.....	7
Project 2009-1: Rare Ecosystems Phase I and II.....	7
Project 2010-1: Industrial Activity Timing.....	8
Project 2010-2: Recreation Opportunity Spectrum.....	9
Project 2010-A3: Data Management.....	10
6. Ongoing Project Synopses.....	11
Combined Project 2008-1 and 2008-2: Update Knowledge Base and Monitoring Priority Tables and Framework Manual and Extension.....	11
Project 2009-2: Human/grizzly Bear Interactions and Education: Baseline Data.....	12
Project 2009-3: Grizzly Bear Habitat.....	13
Project 2008-5: Visual Quality in Babine River Corridor.....	14
Project 2005-4 / 2006-3: Wilderness Value of Babine River Corridor.....	15
7. Administration.....	16
Project 2010-A1: Technical support.....	16
Project 2010-A2: Administrative Support.....	17
Project 2009-A3: Funding Solicitation.....	18
Appendix 1: Decision Tables.....	19
Appendix 2: Completed monitoring projects.....	24
Appendix 3: Abbreviations.....	25

1. Introduction

The Babine Watershed Monitoring Trust (BWMT) is directed through its Trust Agreement Document to be responsible for “*planning, prioritising, directing, facilitating and funding impartial monitoring research of the implementation and effectiveness of public land use plans and related natural resources management activities in the Babine Watershed*”; and “*providing credible monitoring research results as part of a formal rigorous adaptive management process that enables continuous improvement of public land use plans resulting in better management of environmental values in the Babine Watershed.*”

This document constitutes the 2010 Annual Monitoring Plan (AMP) for the Babine Watershed Monitoring Trust, which the Trustees are required to produce under Section 10.2 and Schedule C of the BWMT Agreement. The first Annual Monitoring Plan was approved by the BWMT in July of 2005. Since then, AMPs have been completed annually. Each year, some planned projects have not been completed and have carried over to subsequent years for a variety of reasons. These projects remain a priority of the BWMT, and appear in subsequent AMPs.

The 2010 AMP sets out the year’s budget, lists high-priority monitoring projects, describes projects approved for direct funding, and identifies topics requiring additional funding. The plan provides a synopsis and rationale for each approved project. The BWMT allocates funds to monitoring projects using the process for determining priorities and costs prescribed in the BWMT Agreement and described in the Babine Watershed Monitoring Framework (see www.babinetrust.ca).

2. Budget

The funds available from the Babine Watershed Monitoring Trust Revenue Trust Account (BWMT Agreement, Section 3.1.3) are set out in Table 1. The BWMT will receive one major and one smaller private donation by March 2010 with a total value of \$36,054.13. These funds are available to directly support the 2010 AMP. There is no matching funding available from the provincial government this year. There are also funds carried over from 2009—unallocated or project surpluses—that are available for 2010.

Table 1. Budget for 2010.

	Contributed	Available under the 2:1 private/public ratio rule	Funds Available to be Distributed	Banked for 2011
Revenue Trust Account				
Private donations expected 2010	\$35,000.00	\$35,000.00		
Donation 2009	\$1,054.13	\$1,054.13		
Levered funds: 2009	\$0.00	\$0.00		
BC gov't – remaining funds	\$0.00	\$0.00		
Revenue Trust Account Funds Available		\$36,054.13	\$36,054.13	
Other Funds				
Banked Funds from 2009			\$1,185.14	
Interest Income 2009			\$201.80	
Cancelled projects (2009-4, 2006-2)			\$15,250.00	
Other Funds Available			\$16,636.94	
Total Funds Available			\$52,691.07	
Expenses				
Administrative & Technical Support			\$20,375	
New Projects 2010 (3 projects)			\$16,400	
Total Expenses			\$36,775	
Funds Available minus Expenses			\$15,916.07	\$15,916.07

3. Monitoring Priorities

The Trust supports monitoring projects, maintains the Babine Watershed Monitoring Framework and administers the monitoring program.

The Monitoring Priority Tables generated by the Monitoring Framework show priorities and associated costs for the following types of monitoring:

1. collecting indicator data (implementation monitoring),
2. monitoring to improve knowledge and reduce uncertainty (validation monitoring/research),
3. monitoring to detect negative consequences (effectiveness monitoring).

The Priority Tables also note objectives that cannot be monitored because targets are lacking.

Appendix 1 summarises funding decisions for high-priority monitoring topics in each of the three types. The order within each list indicates relative priority assigned by the Monitoring Framework as updated in 2010. The tables also provide a brief rationale for each funding decision. Not all topics can be funded. Higher-priority topics will usually be funded preferentially. When a lower-priority topic is selected for funding, a rationale is provided as to why the higher-priority topics were not chosen. All non-funded topics lower on ranked lists are not funded because of insufficient funds.

4. Approved Monitoring Projects for 2010

4.1 Ongoing Projects from Previous Years

Two projects will be essentially completed by March 31, 2010, and are awaiting final reports and/or presentations and invoicing (Table 2). Three further projects have been held over to 2010/2011 (Table 2). One project has been deferred from previous years (Table 2). The *Wilderness Value of Babine River Corridor* project will be deferred until the BC Parks Management Plan for Babine River Corridor is completed and implemented in 2010. After implementing the plan, BC Parks is interested in collaborating with the BWMT to monitor wilderness value. Deferring this project presents benefits in terms of in-kind funding and synergies.

Table 2. Ongoing projects from previous years (values to nearest \$).

Project Number	Title	Status	Funding Committed
2006-3	Wilderness Value of Babine River Corridor	Deferred until completion of BC Parks Management Plan in 2010	\$15,000
2008-1, 2008-2	Update Knowledge Base and Framework Manual and Extension	Will be completed by March 31, 2010, except for workshop and inclusion of objectives from Park Management Plan	\$14,606
2008-5	Visual Quality of Babine River Corridor	Will be completed by March 31, 2010.	\$5,125
2009-1	Rare Ecosystems (Phase I)	Timeline extended to March 31, 2011 to include Phase II	\$3,075
2009-2	Human/Grizzly Bear Interactions and Education: Baseline Data	Contract pending	\$10,250
2009-3	Grizzly Bear Habitat	Will be completed by March 31, 2010.	\$10,250
2009-A3	Fundraising	Deferred to 2010	\$3,425
Total			\$61,731

4.2 New Projects

The allocation of available funds for this year is shown in Table 3. Three new monitoring projects are approved for full funding by the BWMT in 2010. Phase II of the Rare Ecosystems project will be combined with Phase I (Project 2009-1 has been updated to include both phases). Other projects will investigate the timing of industrial activities and recreation opportunities. Funds are also approved for a new data management project as well as ongoing administrative and technical support.

Table 3. Approved projects for 2010. “A” designates administrative and technical support.

Activity	Project Number	Title	Funding	% of Total
New projects	2009-1	Rare Ecosystems Phase II	\$7,175	20
	2010-1	Industrial Activities Timing	\$4,100	11
	2010-2	Recreation Opportunities Spectrum	\$5,125	14
Project support	2010-A1	Technical Support	\$9,225	25
	2010-A2	Administrative Support	\$5,000	14
	2010-A3	Data Management	\$6,150	17
Total			\$36,775	

Project support costs form a large portion of this year’s projects, in part because of the new data management project, in part because the lack of government funds has reduced the total budget, and in part because trustees decided to use this year to focus on completing ongoing projects. Considering active ongoing monitoring projects in addition to new projects, administration costs form less than 25% of expected expenditures for 2010.

New and ongoing projects are described in the following synopses. Synopses for completed projects are included in Appendix 2 until the results have been incorporated into the Knowledge Base and included in other processes (e.g. BWMT Plan Amendment Process and Criteria). at which point the project summaries are included in a BWMT Project Summary document. Subsections listing consequences for the Knowledge Base and consequences for management summarise actions precipitated by each project.

5. 2010 New Project Synopses

Project 2009-1: Rare Ecosystems Phase I and II

Abstract:

This project will collect implementation data to allow an assessment of the risk and uncertainty associated with rare ecosystems. It will examine the percent of rare ecosystems that are in an appropriate seral stage to include the plant communities for which they are designated. Two independent sources of data are available. First, Sybille Haeussler identified rare ecosystems polygons in the Bulkley and Kispiox several years ago (some of this information was included in the Bulkley State of the Forest report). Second, predictive ecosystem mapping (PEM) will be available in 2010. Comparing the two approaches will be useful for determining monitoring methodology: PEM will likely be able to define rare ecosystems only for large polygons plus very wet or very dry ecosystems; Sybille's analysis is more intensive, but may not cover the entire Babine.

Phase I will investigate available information in hard and digital formats and assess the need for further work, including a comparison of the two methods. Phase II will complete analyses and compare the two approaches as recommended.

Status: Phase I initiated in 2009. Phase II initiated in 2010 and combined for efficiency.

Geographic scope: Babine watershed.

Objectives listed in land-use plans: The Kispiox SRMP and Bulkley LUPs include objectives for maintaining rare ecosystems.

Type of monitoring: Collecting implementation data

Contractors: Patrick Williston and Paula Bartemucci

Potential partners: Allen Banner, Sybille Haeussler, MoFR

Funding: \$3,075 in 2009; \$7,175 in 2010

Consequence for knowledge base: This project will collect indicator data on rare ecosystems to facilitate risk analysis and will reduce uncertainty about the best data for future monitoring.

Consequence for management: This project will enable better management decisions to be made, through appropriate processes which are separate from the BWMT, by showing the level of risk and uncertainty associated with current protection and seral stage distribution of rare ecosystems. It may increase confidence in current activities, suggest further monitoring projects or lead to initiation of a plan-amendment process.

Project 2010-1: Industrial Activity Timing

Abstract:

This project will collect information on the timing of industrial activities in relation to mountain goats, grizzly bears and recreation. Industrial activities investigated will include all stages of forest management, including road building, harvesting and silviculture, as well as mining and exploration.

For mountain goats, the project will determine the proportion of industrial activities within 200 m and 500 m of goat habitat during the natal period (April 15 – July 15). It will also determine activities in this zone during winter (October to March), because Project 2008-3 noted that winter activity should also be an indicator. For minimising disruption to grizzly bears, hibernation is the timing variable of interest. Because bears are active throughout October, the project will determine the proportion of industrial activity in mapped grizzly bear zones from November to March. For wilderness value, the project will determine the proportion of industrial activity within the Babine River Special Management Zone from November to March (winter) and from August to October (peak tourism period).

This project will query existing databases (e.g. RESULTS), and interview knowledgeable people as necessary.

Status: Initiated in 2010.

Geographic scope: Babine watershed.

Objectives listed in land-use plans: The Bulkley LUPs have a strategy to avoid harvesting near mountain goat habitat during the natal period. The Kispiox SRMP and Babine LUP have strategies to harvest during winter in various zones to minimise disruption to grizzly bears and to maintain wilderness value in Babine River Corridor Park. Bulkley LUPs have strategies to harvest in winter to protect connectivity in landscape riparian corridors.

Type of monitoring: Collecting implementation data.

Potential Contractors: To be determined through EoI process.

Potential partners: PIR may be able to provide in-kind assistance.

Funding: \$4,100

Consequence for knowledge base: This project will collect implementation data to allow for risk assessment.

Consequence for management: This project will enable better management decisions to be made, through appropriate processes which are separate from the BWMT, by showing the level of risk and uncertainty associated with current timing of industrial activities. It may increase confidence in current activities, suggest further monitoring projects or lead to initiation of a plan-amendment process.

Project 2010-2: Recreation Opportunity Spectrum

Abstract:

This project will collect indicator data on recreation opportunities in the Babine watershed. High priority information includes backcountry opportunities (primitive and semi-primitive condition) and maintaining access to identified recreation destinations. Describing the recreational opportunities of the entire watershed, however, will provide a more complete picture at little extra cost.

The project will use current databases, and will follow standard methodology to characterise remoteness based on distance from roads (and other relevant factors). It will assess access to identified destinations through interviewing knowledgeable people (i.e. people associated with recreation organisations and/or people familiar with access following industrial activities).

Status: Initiated in 2010.

Geographic scope: Babine watershed.

Objectives listed in land-use plans: The Kispiox LRMP includes an objective to maintain primitive recreation opportunities. The SRMP and Nilkitkwa LUP specify areas intended to provide backcountry recreation opportunities. The Babine LUP and Kispiox LRM include an objective to maintain access to recreation destinations.

Type of monitoring: Collecting implementation data

Potential Contractors: To be determined through EoI process.

Potential partners: MoFR might offer assistance with analysis. Keven Eskelin (MOTCA) is a potential partner.

Funding: \$5,125

Consequence for knowledge base: This project will collect indicator data on recreation opportunities to facilitate risk analysis.

Consequence for management: This project will enable better management decisions to be made, through appropriate processes which are separate from the BWMT, by showing the level of risk and uncertainty associated with current backcountry and accessible recreation opportunities. It may increase confidence in current activities, suggest further monitoring projects or lead to initiation of a plan-amendment process.

Project 2010-A3: Data Management

Abstract:

This project will develop and implement a process to gather, maintain and access spatial information. Funding covers hardware and fees for a Data Administrator to complete the following tasks:

- provide the necessary hardware,
- develop an appropriate data management model,
- document standards for GIS data for use with BWMT projects,
- locate and load existing BWMT data from previous years, and
- load data from projects completed this year.

The project is based on the description of Phase I presented to the BWMT, as requested, by Johanna Pfalz in October, 2009.

Status: Initiated in 2010.

Geographic scope: Babine watershed.

Objectives listed in land-use plans: Not applicable

Type of monitoring: All

Contractor: Johanna Pfalz

Potential partners: Consideration of partners will occur in future Phases.

Funding: \$2,757.20 for set-up and loading existing data. A maximum of \$3,392.80 further will be available for ongoing administration over the year (it is anticipated that this cost will be lower than projected). Total budget: \$6,150.

Consequence for knowledge base: This project will track spatial data for BWMT projects, increasing efficiency for future projects and facilitating updates.

Consequence for management: Not applicable.

6. Ongoing Project Synopses

Combined Project 2008-1 and 2008-2: Update Knowledge Base and Monitoring Priority Tables and Framework Manual and Extension

Abstract: The first part of this project will update the Knowledge Base by including information gathered from all completed BWMT projects to date, adding objectives and strategies from the Park Management Plan, investigating and incorporating existing information on landslides¹, timber salvage and fish passage² and consulting experts as necessary for new research and missing model variables. It will also re-analyse risk and revise project priority tables.

The companion part of this project aims to increase the number of people able to use the monitoring framework. It has three components: a short promotional description of the framework for use in fundraising, a plain-language manual to complement the framework and a training workshop. BWMT trustees will provide contractors with a list of relevant information for inclusion in the Framework Guidebook.

Status: Initiated in 2008 (first update since 2004). Most components of the project will be completed by March 31, 2010. Exceptions are inclusion of strategies from the Park Management Plan (as the plan will not be completed until after March 2010) and the training workshop which has been deferred to take advantage of synergies with other projects.

Geographic scope: Babine watershed

Objectives listed in land-use plans: All objectives and strategies.

Type of monitoring: All types of monitoring.

Project team: Karen Price, Dave Daust, Liz Osborn, Megan D'Arcy, Jeff Anderson

Funding: \$12,000 (2008-1) + \$5,000 (2008-2) for a total of \$17,000

Consequence for knowledge base: This project will update the knowledge base and priority tables. It will facilitate monitoring decisions for 2010 and beyond. Training under this project will increase the pool of trained technical advisors and improve the trustees' ability to work with the Trust's technical advisors. A plain-language manual will assist communication with potential funding sources.

Consequence for management: This project feeds back information into the Knowledge Base and highlights information to be passed on to bodies responsible for management decisions through appropriate processes.

¹ This information was to come from Jim Schwab. As he has recently retired, it will be necessary to consult with his replacement.

² Based on information from a Forest Practices Board report on fish passage.

Project 2009-2: Human/grizzly Bear Interactions and Education: Baseline Data

Abstract:

This project will collect information on human/grizzly bear interactions as a baseline for monitoring the effectiveness of education. After BC Parks' Management Plan and Bear-Human Management Plan are implemented, actions to educate park visitors at the park entrance will increase. This baseline study will provide an excellent opportunity for well-designed monitoring in the form of a before-after study of people's knowledge.

Within the Babine Watershed, the highest risk to people and bears exists around the Babine River Bridge and DFO weir area. This study will hence focus on this area. Priorities for other user groups, in order, include seasonal and permanent residents, hunter, natural resource works and finally, other user groups recreating in the area.

The study will collect survey data from people using the park. To improve the existing information on bear-human interactions, the study will also ask about previous experiences, as well as compile information from Park Rangers and MoE records. Because of people's concerns that their use of the area may be impacted, it will be crucial to invest in a constructive, sensitive and well-directed survey design. Surveys in other areas (e.g. Kluane Park) will be very useful to help with the detailed design of this project.

Status: Initiated in 2009. Contract signed by March 2010. Timeline extended to March 2011 to allow completion of questionnaire during the summer/fall months.

Geographic scope: Babine River Corridor Park entrance (i.e. BC Parks Upper Babine study area from the DFO weir to Nichyeskwa Creek).

Objectives listed in land-use plans: The entire plan area has objectives to minimise bear/human conflict. The Kispiox SRMP has a strategy for increased public awareness, and the Babine River Corridor MDS has a strategy to develop information and guidelines.

Type of monitoring: Collecting baseline data for effectiveness monitoring

Contractor: Debbie Wellwood.

Partners: BC Parks will provide time and in-kind activities to assist with the project: Scott MacMillan and Brandin Schulz. Bear biologists will be involved through participation in the development of a cumulative effects model led by Debbie Wellwood.

Funding: \$10,250

Consequence for knowledge base: This project will collect baseline data to examine the effectiveness of education on reducing human/grizzly bear interactions.

Consequence for management: This project will enable better management decisions to be made, through appropriate processes which are separate from the BWMT, by providing baseline data for effectiveness monitoring of education. It may increase confidence in current activities, suggest further monitoring projects or lead to initiation of a plan-amendment process.

Project 2009-3: Grizzly Bear Habitat

Abstract:

This project will reduce uncertainty about maintenance of grizzly bear habitat due to the variety of different strategies applied in different management areas. The project will develop a database about grizzly bear habitat that is relevant to resource managers in Babine Watershed, analogous to the database for mountain goats created in 2008/9. The database will include grizzly bear management areas, high-value habitat, critical habitat, other habitat classes, harvested areas, forest cover, strategies implemented within and adjacent to habitat. This database will build on the access database created during project 2007-1 (Human/ Bear Interaction and Open Road Density) this year.

The project will also initiate development of effectiveness indicators looking at grizzly bear use of habitat. The variety of strategies implemented presents an excellent opportunity for an experiment: this project will consider potential designs for such a project (funding is beyond the scope of the BWMT).

Status: Initiated in 2009. Will be completed by March 31, 2010.

Geographic scope: Babine watershed.

Objectives listed in land-use plans: All land-use documents include objectives to maintain grizzly bear habitat.

Type of monitoring: Collecting implementation data

Contractors: Johanna Pfalz, Debbie Wellwood.

Partners: Bear biologists through the cumulative effects modelling process led by Debbie Wellwood and funded through other means.

Funding: \$10,250

Consequence for knowledge base: This project will collect indicator data on grizzly bear habitat to facilitate risk analysis.

Consequence for management: This project will enable better management decisions to be made, through appropriate processes which are separate from the BWMT, by showing the level of risk and uncertainty associated with current protection of grizzly bear habitat. It may increase confidence in current activities, suggest further monitoring projects or lead to initiation of a plan-amendment process.

Project 2008-5: Visual Quality in Babine River Corridor

Abstract: This project investigates visual quality in the Babine River Corridor in collaboration with Glen Buhr, Ministry of Forests and Range. MoFR is planning on implementing and testing a new field protocol (established by FREP) for assessing current visual quality condition to determine if established visual quality objectives are being achieved. Tasks include assessing current visual quality condition using the new protocol and comparing against established visual quality objectives; conducting user surveys to determine if wilderness values are currently met from a public perspective; and professionally evaluating the protocol itself, providing a suite of comments and recommendation to be supplied to FREP program coordinators. Division of tasks between BWMT and MoFR will be decided in collaboration with Glen Buhr.

Status: Initiated in 2008. Deferred to 2009 because of frozen funding from MoFR partner. Will be completed by March 31, 2010.

Geographic scope: Babine River Corridor.

Objectives listed in land-use plans: Both the Kispiox and Bulkley LRMPs include objectives for visual quality as well as objectives to maintain the visual elements of wilderness value along the Babine River Corridor.

Type of monitoring: Reducing uncertainty and detecting negative consequences.

Contractors: Ralph Kossman, Megan D'Arcy

Partner: Glen Buhr, Ministry of Forests and Range provided matching funds.

Funding: \$5,000

Consequence for knowledge base: This project will reduce uncertainty and detect negative consequences in relation to perceptions of visual quality as an element of wilderness value in Babine River Corridor. It will also test new protocols for monitoring visual quality to allow standardisation of measurements over time.

Consequence for management: This project will enable better management decisions to be made, through appropriate processes which are separate from the BWMT, by showing the level of risk and uncertainty associated with current visual quality. It may increase confidence in current activities, suggest further monitoring projects or lead to initiation of a plan-amendment process.

Project 2005-4 / 2006-3: Wilderness Value of Babine River Corridor

Abstract: This project has been deferred until completion of the BC Parks Management Plan for Babine River Corridor. At that time, a non-biased methodology to investigate perceptions of wilderness value in the Babine River Corridor will be designed in collaboration with BC Parks. A background to potential methodologies exists from work completed in 2005.

The project will implement the methodology to consider socially acceptable levels of sustainable use, with particular focus on the Natural Environment Zone of the Park. It will also investigate perceptions of auditory disturbance throughout the Park, and sustainable use in the Wilderness Recreation Zone.

Status: Initial methodology designed in 2005/2006. Funding deferred to allow completion and implementation of the Babine River Corridor Management Plan by BC Parks, of the Quality Waters Strategy and Angling Management Plan and a subsequent risk analysis of new strategies.

Geographic scope: Babine River Corridor Park

Objectives listed in land-use plans: The Babine River Corridor Park Management Direction Statement includes an objective to maintain a wilderness experience in the corridor, including a sustainable level of recreation. The Kispiox SRMP includes an objective to maintain the aesthetic quality (visual and auditory) of the Babine River Corridor.

Type of monitoring: Detecting negative consequences (sustainable use); reducing uncertainty (auditory disturbance).

Contractor: John Shultis, University of Northern BC (2005); to be determined for current phase.

Partners: Real Estate Foundation Partnering Fund (provided matching funds; 2005), ILMB (provided logistic support); BC Parks (Brandin Schultz and Scott MacMillan) current phase.

Potential partners: The Ministry of Environment has begun a Quality Waters Strategy and aims to develop a Babine River Angling Management Plan by March 2009.

Funding: \$5,000 in 2005; \$15,000 budgeted in 2006, deferred to 2010.

Consequence for knowledge base: This project constitutes the first step in detecting negative consequences to sustainable use and wilderness value of the Babine River Corridor.

Consequence for management: This project will monitor targets developed through the processes that will be undertaken by the Ministry of the Environment. These targets will be developed by the end of 2009.

7. Administration

Project 2010-A1: Technical support

Abstract: Continuity of technical support is necessary for effective and efficient management of the monitoring framework, and the BWMT in general. Karen Price will provide technical support to the BV Research Centre and the BWMT as needed. Tasks include

- advise BWMT as necessary on Monitoring Framework
- prepare agenda, facilitate meetings and provide minutes
- communicate with BV Research Centre
- present monitoring priorities (as resulting from Monitoring Framework) to BWMT
 - provide initial description of projects and cost estimates
 - facilitate discussion in relation to project selection
- write draft AMP and revise based on BWMT comments
- liaise with contractors to ensure that projects meet needs of framework and BWMT
 - meet to confirm project design
 - discuss project as necessary
 - review and edit report
 - supervise summary of study to ensure that it allows Knowledge Base to be updated, and describes consequences for the Knowledge Base, for management and for future monitoring
- communicate project status to BWMT as necessary

Status: Initiated in 2007; division between administration and technical support revised in 2009 and 2010. Administered by BV Centre.

Geographic scope: Not applicable

Objectives listed in land-use plans: Not applicable

Type of monitoring: Not applicable

Contractor: Karen Price

Potential partners: BV Research Centre

Funding: \$9,225

Consequence for knowledge base: Not applicable

Consequence for management: Not applicable

Project 2010-A2: Administrative Support

Abstract: The BV Research Centre provides administrative support in the form of contract management, meeting facilities and support, website maintenance, and communications. Tasks include

- maintain independent financial records
- manage contracts
 - prepare calls for proposals
 - select contractor
 - prepare and implement contract
 - oversee contracts to ensure quality and timeliness of reporting
- add documents to website.

Please see contract schedules for further information.

Status: Ongoing since 2005; division between technical support and administration revised 2009 and 2010.

Geographic scope: Not applicable

Objectives listed in land-use plans: Not applicable

Type of monitoring: Not applicable

Contractor: BV Research Centre

Funding: \$5,000

Consequence for knowledge base: Not applicable

Consequence for management: Not applicable

Project 2009-A3: Funding Solicitation

Abstract: The BWMT needs to broaden its funding base, especially if existing sources of private and government funds decline. In partnership with the BV Research Centre, this project explores options for long-term funding for monitoring. Options for partnering with appropriate government ministries also will be investigated.

Status: Initiated 2008.

Geographic scope: Not applicable

Objectives listed in land-use plans: Not applicable

Type of monitoring: Not applicable

Contractor: To be determined in consultation with BV Research Centre

Potential partners: BV Research Centre, Government ministries (particularly MoFR and MoE)

Funding: \$2,000 (2009); \$1,425 (2008)

Consequence for knowledge base: Not applicable

Consequence for management: Not applicable

Appendix 1: Decision Tables

Appendix 1 summarises funding decisions for high-priority topics in three types of monitoring:

- Table A1 (p. 19) **Collect Indicator Data** (Implementation Monitoring)
- Table A2 (p. 21) **Improve Knowledge and Reduce Uncertainty** (Validation Monitoring/Research)
- Table A3 (p. 22) **Detect Negative Consequences** (Effectiveness Monitoring).

Table A 1 Collect Indicator Data (Implementation Monitoring).

Funding decisions for high priority topics for collecting indicator data. Topics for the next 5 years are ordered by relative priority as determined by Monitoring Framework⁴. Shaded projects are completed, ongoing or planned for 2010.

Objective	Indicator	History	Project #	Project name	Funding	Project length	2010 Status	Rationale
Fish habitat	% of natural riparian habitat	Funded 2005	2005-1	Riparian ecosystems	\$15,000	1 year	Complete for Nichyeskwa.	Low priority in other watersheds
Riparian biodiversity	% of natural riparian habitat	Funded 2005	2005-1	Riparian ecosystems	as above	1 year	Complete for Nichyeskwa.	As above
Rare ecosystems	% of natural	Funded 2009, 2010	2009-1	Rare ecosystems: phase I and II	\$10,250	2 years	Initiated 2009	
Steelhead	Repeated capture	Not funded	—	—	—	—	—	Too expensive to do well
Human/bear interaction	Screening	Not funded	—	—	—	—	—	Will be assessed during cumulative effects model.
Human/bear interaction	Education	Funded 2009	2009-2	Human/grizzly bear interaction and education: baseline data	\$10,250	1 year for baseline	Initiated 2009	
Water quality	Stream crossing: Kispiox	Not funded	—	—	—	—	—	Complete in Bulkley. Little harvesting in Kispiox, so currently low priority.
Water quality	Landslides	Investigation	2008-1	Update Knowledge	\$250	—	Needs further	Wait for Ministry

⁴ Ordered by secondary score (all topics have high priority for data collection; see Monitoring Framework for methods www.babinetrust.ca).

Appendix 1: Decision tables

Objective	Indicator	History	Project #	Project name	Funding	Project length	2010 Status	Rationale
Deciduous stands	% of natural	funded 2008 Not funded	(part) —	Base —	—	—	work —	summary Wait for VRI update
Water quantity	ECA Kispiox	Not funded	—	—	—	—	—	Wait for VRI update
Connectivity	Winter logging	Funded 2010	2010-1	Industrial Activity Timing	\$4,100	1 year	Initiated 2010	
Mountain goats	harvest during natal period	Funded 2010	2010-1	Industrial Activity Timing	as above	1 year	Initiated 2010	
Timber salvage	% salvaged	Not funded	—	—	—	—	—	Wait for VRI update
Backcountry recreation	Amount primitive	Funded 2010	2010-2	Recreation Opportunity Spectrum	\$5,125	1 year	Initiated 2010	
Gunanoot Lake	Visual quality	Not funded	—	—	—	—	—	
Grizzly bears	harvesting in bear units	Funded 2009	2009-3	Grizzly Bear Habitat	\$10,250	1 year	Initiated 2009	Ongoing
Pine mushroom habitat	% mature sites	Not funded	—	—	—	—	—	Wait for discussion with Gitx̱san Houses
Huckleberries	% sunlight in cutblocks	Not funded	—	—	—	—	—	Wait for discussion with Gitx̱san Houses
Huckleberries	% soil disturbance	Not funded	—	—	—	—	—	Wait for discussion with Gitx̱san Houses
Timber growth	% old stands	Not funded	—	—	—	—	—	Wait for VRI update
Access to recreation	Inaccessible destinations	Funded 2010	2010-2	Recreation Opportunity Spectrum	as above	1 year	Initiated 2010	

Appendix 1: Decision tables

Table A 2. Improve Knowledge and Reduce Uncertainty (Validation Monitoring/Research).

Funding decisions for high-priority topics for monitoring to improve knowledge and reduce uncertainty. Topics are ordered by relative priority as determined by Monitoring Framework⁶. Shaded projects are completed, ongoing or planned for 2010.

Objective	Indicator	History	Project #	Project name	Funding	Project length	2009 Status	Rationale
Human/bear interaction	open road density Hanawald and Shedin	Indicator data funded 2007	—	—	—	—	—	Wait for cumulative effects model
Tree species	% of natural	—	—	—	—	—	—	Wait for VRI
Connectivity	% of mature and old in corridors	—	—	—	—	—	—	Wait for VRI
Grizzly habitat	% high-value	Funded 2009	2009-3	Grizzly bear habitat	\$10,250	1 year	Initiated 2009	
Goat habitat	% unmodified nearby (Gail Ck)	Indicator data funded 2008	—	—	—	—	—	
Goat habitat	Harvest during natal period	Funded 2010	2010-1	Industrial Activity Timing	\$4,100	1 year	Initiated 2010	
Wilderness value of BRC	Auditory disturbance	Funded 2005; funded 2007; project deferred	2005-4, 2006-3	Wilderness value of BRC	\$5,000 in 2005, \$15,000 deferred	2 – 3 years	Deferred	Deferred to allow collaboration with BC Parks after completion of Management Plan
Wilderness value of BRC	Visual quality	Funded 2008	2008-5	Visual quality of Babine River	\$5,000	1 year	Initiated 2008	Collaboration with MoFR in assessing new protocols

⁶ Ordered by priority to reduce uncertainty and then by secondary score (see Monitoring Framework for methods www.babinetrust.ca).

Appendix 1: Decision tables

Table A 3. Detect Negative Consequences (Effectiveness Monitoring).

Funding decisions for high-priority topics for monitoring to detect negative consequences. Topics are ordered by relative priority as determined by Monitoring Framework⁷. Shaded projects are completed, ongoing or planned for 2010.

Objective	Indicator	History	Project #	Project name	Funding	Project length	2009 Status	Rationale
Sustainable use	Encounters in Natural Environment Zone	Funded 2005, 2007; project deferred	2005-4 2006-3	Wilderness value of BRC	\$5,000 in 2005, \$15,000 deferred	2 – 3 years	Deferred	Deferred to allow collaboration with BC Parks after completion of Management Plan
Stand structure	% retention; % various structures (Nichyeskwa)	Indicator data funded 2007	—	—	—	—	—	Wait for VRI
Tree species	% of natural	Not funded	—	—	—	—	—	Wait for VRI
Human/bear interaction	road density Hanawald, Shedin	Not funded	—	—	—	—	—	Will be assessed in cumulative effects model
Timber salvage	% controlled	Not funded	—	—	—	—	—	Wait for VRI
Goat habitat	% unmodified nearby (Gail)	Indicator data funded 2008	—	—	—	—	—	
Goat habitat	Harvest during natal period	Funded 2010	2010-1	Industrial Activity Timing	\$4,100	1 year	Initiated 2010	
Timber salvage	% susceptible	Investigation funded 2008	2008-1 (part)	Update Knowledge Base	\$1,105	1 year	Needs further work	Wait for VRI
Connectivity	% mature and old in corridors	Not funded	—	—	—	—	—	Wait for VRI
Wilderness value of BRC	Auditory disturbance	Funded 2005; 2007; project deferred	2005-4 2006-3	Wilderness value of BRC	See Table 5	2 – 3 years	Deferred	Deferred to allow collaboration with BC Parks after completion of Management Plan
Sustainable	Floatcraft	Funded 2005;	2005-4	Wilderness	See Table 5	2 – 3	Deferred	Deferred to allow

⁷ Ordered by priority to detect consequences and then by secondary score (see Monitoring Framework for methods www.babinetrust.ca).

Appendix 1: Decision tables

use	encounters	2007; project deferred	2006-3	value of BRC		years		collaboration with BC Parks after completion of Management Plan
Wilderness value of BRC	Visual quality	Funded 2008	2008-5	Visual quality of BRC	\$5,000	1 year	Initiated in 2008	Collaborate with MoFR

Appendix 2. Completed monitoring projects

Synopses of completed monitoring projects are included in the Annual Monitoring Plan until the results are incorporated into the Knowledge Base and included in other processes as appropriate (e.g. BWMT Plan Amendment Process and Criteria). Subsections listing consequences for the Knowledge Base, consequences for management and recommendations for monitoring summarise actions precipitated by each project.

The 2010 Annual Monitoring Plan does not include synopses as all completed projects have been incorporated into the Knowledge Base. Synopses are collated into the 5-year Activity Report and Project Summaries document that is available at www.babinetrust.ca.

Appendix 3: Abbreviations

BRC.....	Babine River Corridor
BWMT	Babine Watershed Monitoring Trust
CFS	Canadian Forest Service
DFO.....	Department of Fisheries and Oceans
ECA.....	Equivalent Clearcut Area
ETD.....	Enhanced Timber Development Zones
FREP	Forest Resources Evaluation Program
FRPA.....	The British Columbia Forest and Range Practices Act
FSP	Forest Sciences Program
GIS	Geographic Information System
LRMP.....	Land and Resource Management Plan
LUP.....	Landscape Unit Plan
MoE.....	Ministry of Environment
MoFR	Ministry of Forests and Range
MDS	Management Direction Statement
PEM	Predictive Ecosystem Mapping
SFM Network.....	Sustainable Forest Management Network
SRMP	Sustainable Resource Management Plan