



**Ministry of
Sustainable
Resource
Management**

Xsu gwin lik'inswx: West Babine Sustainable Resource Management Plan



**March 2004
Amended February 2012**

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Errata Sheet February 2012

Note that the following changes have been made to the plan:

p.29:

- Reference to footnote 23 has been changed to reference 27;

p.33:

- Table 9, Target/Measure and Management Considerations changed to make reference to Table 10, pg. 34, rather than to Table 5, pg. 20.

Map 1:

- Modified to display data layers that were previously hidden.

Map 7:

- Errors corrected in high value grizzly bear habitat around Thomlinson and Shegistic Rivers

Definition of Grizzly bear critical habitat - modified for willow swamps and willow-sedge wetlands (reference Babine Local Resource Use Plan, Appendix 5):

SBSmc and ICH:

- Polygons with > 50% willow-sedge wetland (WS)
- WS complexed with spruce-devil's club lower slope (SD)
- WS complexed with spruce-horsetail flat (SH)
- WS complexed with black spruce bog (BS)
- WS complexed with devil's club-oak fern (DO)
- WS complexed with horsetail swamp (HO)
- Willow swamp (WI)

ESSFmc:

- Polygons with >50% WS complexed with black huckleberry-five-leaved bramble (BB) and black huckleberry-bunchberry mesic (HB)

Order to Establish the West Babine Landscape Unit and Objectives and to vary the Atna/Shelagyote and Babine River Special Management Zone Boundaries.

ESTABLISH LANDSCAPE UNIT

Pursuant to Section 4 (1) of the *Forest Practices Code of British Columbia Act*, the West Babine Landscape Unit in the West Babine Sustainable Resource Management Plan (Skeena MSRM Region), as indicated on Map 1, is established as a landscape unit.

This order replaces the provincial order establishing landscape units for the area within the West Babine Landscape Unit.

OBJECTIVES FOR THE WEST BABINE SRMP

Pursuant to Section 4 (2) of the *Forest Practices Code of British Columbia Act*, objectives, indicators and targets as contained in the West Babine Sustainable Resource Management Plan are established as landscape unit objectives.

This order replaces the provincial order establishing old growth objectives for the area within the West Babine Landscape Unit.

ATNA/SHELAGYOTE AND BABINE RIVER SPECIAL MANAGEMENT ZONE

The Xsu qwin lik'l'inswx: West Babine Sustainable Resource Management Plan proposes amending the boundaries of the Atna/Shelagyote and the Babine River Special Management Zones to reflect more detailed assessments undertaken for this plan. This order establishes new objectives that apply within the special management zones, but do not change the boundaries themselves. It is anticipated that a separate order, by the Minister or designate, will be prepared which amends the special management zone boundaries.

TRANSITION

Pursuant to Section 10 (1) (d) (ii) of the *Forest Practices Code of British Columbia Act*, for forest development plans and Section 16(2) of the *Forest and Range Practices Act* for forest stewardship plans, operational plans submitted for approval on or following the effective date of the order are to be consistent with the objectives of this order.

EFFECTIVE DATE OF ORDER

This Order takes effect on August 1st, 2004.

FUTURE AMENDMENTS

I understand that the Cultural Heritage Resources chapter is incomplete. Should First Nations within the plan area undertake cooperative planning with government around cultural heritage resources, I am prepared to amend this plan to include this new information. The amendment process would require appropriate consultation with the public and stakeholders.

Future monitoring results may identify indicators and targets that are insufficient in meeting plan objectives. Plan amendments to incorporate this information will follow provincial policy, the SRMP amendment provisions and the Kispiox LRMP amendment provisions.



Kevin Kriese, R.P.F., MRM
Regional Director
Skeena Region
Ministry of Sustainable Resource Management

09/03/23

Date

Executive Summary

The West Babine Sustainable Resource Management Plan (SRMP) has been developed to recognize the many unique and important environmental, social cultural and economic values of the lower Babine watershed and to manage these values in a sustainable manner. The plan provides for economic opportunities while sustaining ecological integrity. Consultation has occurred with First Nations and stakeholders to ensure that the Ministry of Sustainable Resource Management (MSRM) understood the interests of the different groups and was able to accurately reflect their interests in the plan.

The West Babine plan area has great significance to the Gitx̄san and Lake Babine First Nations, within whose territories all or part of the plan area lies. The Babine River is a unique river, standing out amongst the other rivers in the Skeena River drainage. Fish values in the Babine watershed are extraordinarily high and the river is world-renowned for its angling opportunities. Wildlife values are very high, with large concentrations of grizzly bears drawn to the area during spawning time. Nature-based tourism operations associated with the Babine draw in clientele from around the world and local residents prize the river for its fishing and river-based recreation. Tourism potential for additional wilderness type activities, especially centred around First Nations cultural heritage is high. Timber values are significant in portions of the watershed and there is moderate to high potential for mineral and energy development. In addition, opportunities for hunting, trapping, berry picking and mushroom collecting exist within the plan area.

A brief summary of the key management direction within the plan is as follows:

Area to which Management Direction Applies (see Map 1, Page iv)	Values Managed For	Overview of Management Direction
Atna Shelagyote Special Management Zone ¹	Ecological Backcountry tourism	No commercial logging or road building.
Core Ecosystems	Biodiversity: old forest	No logging or road building
Landscape Riparian Corridors	Biodiversity: connectivity	Logging restricted, no road building.
Babine River Special Management Zone ²	Wildlife (Moose, grizzly bear) Wilderness	No permanent motorized access, winter harvest only, openings < 15 ha in size.

¹ The Atna Shelagyote SMZ was created by the Kispiox LRMP. The West Babine SRMP modified boundaries of the SMZ to more accurately reflect the values the SMZ was intended to manage for. As a result of the high ecological values, commercial timber harvesting will be precluded from the SMZ. This replaces the temporary deferral from the Kispiox LRMP. This is primarily to maintain the integrity of the large wetland complexes and wildlife habitat. An assessment of timber values has shown that the timber values in the SMZ are low and that the economic impacts of designating the area as no logging are minimal.

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Area to which Management Direction Applies (see Map 1, Page iv)	Values Managed For	Overview of Management Direction
Shelagyote/Babine Tourism Node	Tourism Visual Quality High Value Grizzly Bear Habitat	No logging. Access control for road.
High Value Grizzly Bear Habitat	Grizzly Bear Habitat	Restricted logging and road building adjacent to critical habitats.
Shenismike Corridor	Wildlife (Goat, grizzly bear) (Grizzly Drop)	No roads.
Berry Management Areas	Botanical Forest Products: berries	Harvest and silviculture practices that promote berry growth.
Pine Mushroom Habitat	Botanical Forest Products: pine mushrooms	Maintaining 60% of habitat > 80 years old.
Visual Quality Objective: Retention	Tourism: visual aesthetics	Alterations due to logging are not visually apparent.
Visual Quality Objective: Partial Retention	Tourism: visual aesthetics	Alterations due to logging remain visually subordinate to the characteristic landscape and blend with the dominant landscape elements.
Visual Quality Objective: Modification	Tourism: visual aesthetics	Alterations due to logging borrow from the natural line and form and are comparable to natural occurrences.
Integrated Management Area	All	Resource development must follow management direction from the <i>Forest and Range Practices Act</i> and from the Biodiversity Seral Stage, Patch Size objectives and water quality.

In addition to the above management zones, general management occurs across the landscape to sustain water quality, biodiversity, bull trout habitat, and cultural heritage resources. This plan clearly defines the parameters for forestry operations, provides greater certainty for licensees, minimizes conflicts with other resource values and provides a framework for adaptive management.

² The Babine River SMZ was created by the Kispiox LRMP. The West Babine SRMP modified boundaries of the SMZ to more accurately reflect the values the SMZ was intended to manage for.

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Four access management zones and seven access control points have been identified to manage for grizzly bears and wilderness values (**Map 12, page 77**). One of the major factors causing decline in grizzly bear populations are negative human-bear interactions that result in bear mortality. Scientific evidence shows that mortality risk increases with increasing road density.

The Babine River area is of very high importance to local residents. Currently, the majority of local residents access the river at the weir close to Nilkitkwa Lake. Access management in the West Babine plan area does not restrict or impact current access patterns.

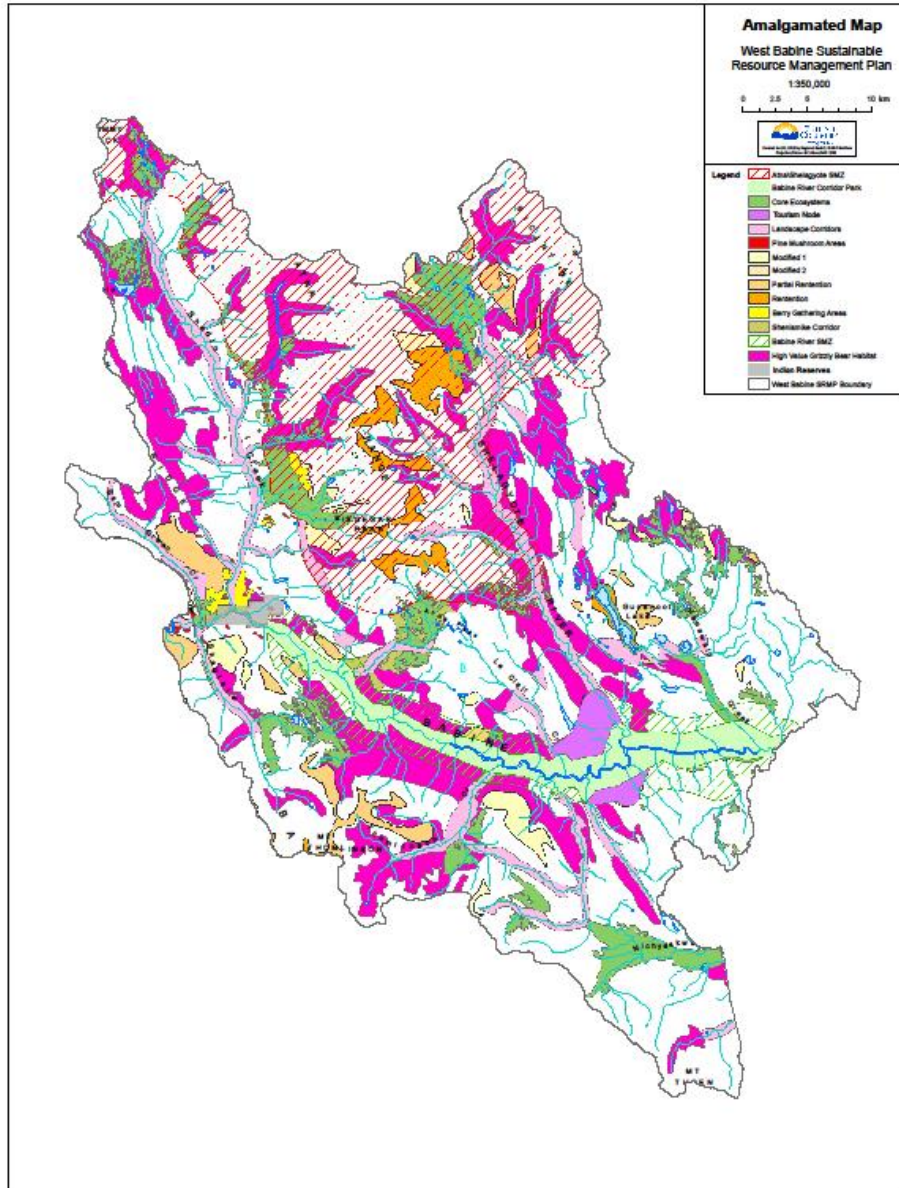
Brief descriptions of the access measures are as follows.

One zone (Sperry/Rosenthal) and an associated access control point has been identified to protect significant grizzly bear habitat, especially in rich, avalanche chute areas. Two zones (Shenismike-West and Big Slide) and associated access control points have been identified to manage for significant grizzly bear habitat in addition to maintaining the wilderness values of the Babine River Corridor Park and the associated Babine River Special Management Zone and access to grizzly drop. The fourth zone (Shenismike-Shelagyote) has an access control point at the Shelagyote River bridge crossing. This zone prevents motorized access from impacting the wilderness experience on the river in the vicinity of the Shelagyote and maintains the single access point into the Babine River Corridor Park. Two access control points (Thomlinson Road and Shelagyote) have been established to maintain the integrity of the Babine River Special Management Zone (no permanent roads permitted in SMZ) and hence the park. The seventh access control point is located on the Nichyeskwa Connector to prevent the establishment of a circle route which will increase traffic to the north side of the river, having a detrimental impact on grizzly bear populations.

The West Babine SRMP is an ecosystem-based management plan and will be implemented through adaptive management. Best available knowledge was used to create this plan and as more information or better inventories become available, this plan may be modified as required. The plan is intended to implement the objectives of the Kispiox Land and Resource Management Plan and the Babine Interim Local Resource Use Plan within the area of the Kispiox Timber Supply Area. The West Babine SRMP is a guide to land and resource use and provides long-term sustainability of natural resources, jobs, and communities in the West Babine area.

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Map 1: Amalgamated Map (amended 2012)



Foreword

The purpose of the West Babine Sustainable Resource Management Plan is to guide land and resource use within the plan area to provide long-term sustainability of natural resources, jobs, and communities in the West Babine area. This plan is intended to implement the objectives of the Kispiox Land and Resource Management Plan (LRMP) and the Babine Local Resource Use Plan (LRUP) within the Kispiox Timber Supply Area. In keeping with the Governance *Principles for Sustainable Resource Management* being drafted by the provincial government, the plan provides the following:

- ✧ *Certainty*, by providing clear management direction to resource users;
- ✧ *Efficiency* in the allocation, development and use of natural resources, by clarifying the timing and nature of activities that can occur in the area;
- ✧ *Flexibility*, by presenting results-based standards that will allow resource users to use their innovation and professional skills in developing implementation strategies;
- ✧ *Transparency*, by creating the plan in a spirit of openness of information and in consultation with First Nations, stakeholders, and the general public;
- ✧ *Accountability*, by setting measurable objectives and indicators that can be tracked over time; and
- ✧ *Efficacy*, by incorporating monitoring and adaptive management to ensure that the desired outcome is achieved.

The West Babine SRMP has been developed through consultation with stakeholders and with the Gitksan First Nation. The plan is intended to provide a balance of social, cultural, economic and environmental values that consider the values of all those who have an interest for the area.

The plan will establish one landscape unit: the West Babine Landscape Unit and will establish landscape objectives for this landscape unit. The plan will also amend the Atna Shelagyote and Babine River Special Management Zones established by the Kispiox LRMP. The Babine River Special Management Zone within the Bulkley TSA remains unchanged.

A copy of the West Babine SRMP may be obtained as follows:

- ✧ on the MSRM website at <http://srmwww.gov.bc.ca/ske/srmp/index.htm>; or
- ✧ upon request from the Ministry of Sustainable Resource Management. Please contact:

Ministry of Sustainable Resource Management, Skeena Region
Bag 5000
Smithers, BC, V0J 2N0
Ph: 250-847-7260

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Stakeholders

New Skeena
Kispiox Forest Products
BC Timber Sales
Babine River Foundation

Ministry of Water, Land and Air Protection

Ministry of Forests

Table of Contents

EXECUTIVE SUMMARY	I
FOREWORD	V
ACKNOWLEDGEMENTS	VI
TABLE OF CONTENTS	VII
LIST OF TABLES	VIII
LIST OF MAPS	IX
LIST OF FIGURES	IX
1.0 INTRODUCTION.....	1
1.1 PLAN SCOPE AND GOALS	1
1.1.1 <i>Current Policy Framework for SRMPs</i>	1
1.1.2 <i>Plan Goals</i>	3
1.1.2.1 <i>Ecosystem-Based Management</i>	3
1.1.3 <i>Scope of the Plan</i>	5
1.1.4 <i>Direction from Other Plans</i>	5
1.1.4.1 <i>Babine Local Resource Use Plan</i>	5
1.1.4.2 <i>Kispiox Land and Resource Management Plan</i>	6
1.1.4.3 <i>Access management planning</i>	6
1.1.4.4 <i>Planning for adjacent areas</i>	6
1.1.4.5 <i>Plan Process</i>	7
2.0 PLAN AREA OVERVIEW	8
2.1 RESOURCE VALUES	8
2.2 FIRST NATIONS CULTURE AND RESOURCE STEWARDSHIP	9
2.2.1 <i>Gitysan First Nation</i>	9
2.2.2 <i>Lake Babine First Nation</i>	11
3.0 MANAGEMENT DIRECTION.....	12
3.1 ECOLOGICAL VALUES.....	12
3.1.1 <i>Biodiversity</i>	12
3.1.2 <i>Wildlife and Fish Habitat</i>	21
3.1.2.1 <i>Grizzly bears</i>	22
3.1.2.2 <i>Management direction for grizzly bear habitat</i>	25
3.1.2.3 <i>Ungulate Winter Range</i>	30
3.1.2.4 <i>Furbearers</i>	31
3.1.2.5 <i>Bull trout</i>	32
3.1.3 <i>Water Quality and Hydrology</i>	32
3.2 SOCIAL AND CULTURAL HERITAGE VALUES	34
3.2.1 <i>Cultural Heritage Resources</i>	34
3.2.2 <i>Visual Quality</i>	35
3.2.3 <i>Special Management Zones</i>	38
3.2.3.1 <i>Babine River Valley SMZ</i>	38
3.2.3.2 <i>Atna-Shelagyote SMZ</i>	40
3.2.4 <i>Babine River Corridor Wilderness Protected Area</i>	41
3.3 SUSTAINABLE ECONOMIC DEVELOPMENT	42
3.3.1 <i>Summary of Economic Development Opportunities in the West Babine</i>	42
3.3.2 <i>Tourism</i>	43
3.3.3 <i>Forestry</i>	50
3.3.4 <i>Mineral and Energy Resources</i>	53
3.3.5 <i>Fisheries</i>	54
3.3.6 <i>Botanical Forest Products</i>	56
3.3.6.1 <i>Mushrooms</i>	57
3.3.6.2 <i>Berries</i>	58

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

3.3.7	Trapping	61
3.4	ACCESS MANAGEMENT SUMMARY	61
4.0	PLAN IMPLEMENTATION, MONITORING AND AMENDMENT	63
4.1	IMPLEMENTATION	63
4.2	MONITORING	65
4.3	ADAPTIVE MANAGEMENT	65
4.4	PLAN AMENDMENT	66
MAPS	67	
REFERENCES	78
APPENDIX 1 - LIST OF ACRONYMS USED	81
APPENDIX 2 - GLOSSARY	82
APPENDIX 3 - MATURE STAND STRUCTURE	87
APPENDIX 4 - SRMP CONSULTATION PROCESS	88
APPENDIX 5 - SRMP CONSULTATION SUMMARY	90
PUBLIC REVIEW	90	
GITXSAN CONSULTATION	99	
GITXSAN COMMENT	110	
LAKE BABINE NATION CONSULTATION	116	
APPENDIX 6 - LINKAGES BETWEEN THE BABINE LRUP AND THE WEST BABINE SRMP OBJECTIVES	117

List of Tables

Table 1:	Conservation Data Centre (CDC) Blue-Listed Plant Communities	14
Table 2:	Management Direction for Biodiversity	15
Table 3:	Percent of Forested Area Logged in each 10 yr Period	19
Table 4:	Decision Matrix for Timber Harvesting within Landscape Riparian Corridors	19
Table 5:	Wildlife Tree Patch Retention Targets	20
Table 6:	Grizzly Bear Population Estimates	24
Table 7:	Management Direction for Grizzly Bears	26
Table 8:	Management Direction for Bull Trout	32
Table 9:	Management Direction for Water Quality	33
Table 10:	Recommended Equivalent Clearcut Areas (ECAs) by Watershed	34
Table 11:	Management Direction for Visual Quality	36
Table 12:	Management Direction in the Babine River Special Management Zone	39
Table 13:	Management Direction in the Atna/Shelagytote Special Management Zone	41
Table 14:	Management Direction for Tourism	48
Table 15:	Management Direction for Timber	52
Table 16:	Management Direction for Mineral and Energy Resources	54
Table 17:	Management Direction for Pine Mushrooms	58
Table 18:	Management Direction for Berries	60
Table 19:	Summary of Access Management	62
Table 20:	Additional Factors and Information to be Considered in Developing a Forest Stewardship Plan	63

List of Maps

Map 1: Amalgamated Map	iv
Map 2: Plan Area	67
Map 3: First Nation's Statement of Intent Boundary	68
Map 4: Selected Gitxsan Ecology and History in the Babine Watershed.....	69
Map 5: Biogeoclimatic Zones and Watershed Boundaries	70
Map 6: Biodiversity	71
Map 7: High Value Grizzly Bear Habitat	72
Map 8: Tourism Features and Facilities, Visual Quality Objectives	73
Map 9: Stand Quality	74
Map 10: Mineral and Energy Potential.....	75
Map 11: Botanical Forest Products.....	76
Map 12: Access.....	77

List of Figures

Figure 1: Population estimates for the plan area under different scenarios	24
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Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

1.0 Introduction

The Babine River is unique in the Skeena River drainage. Fish values in the Babine watershed are extraordinarily high and the river is world-renowned for its angling opportunities. Wildlife values are also very high, with large concentrations of grizzly bears drawn to the area during spawning time. The area has great significance to the Gitksan and Lake Babine First Nations, within whose territories all or part of the plan area lies. The river has been central to the Gitksan culture since time immemorial and a number of very important village sites such as Kisgegas, traditional trails, and other cultural heritage features are located there. The closest village location of the Lake Babine Nation is the village of Wu'dat, commonly called Fort Babine, which is located outside of the plan area, at the outflow end of Nilkitkwa Lake.

Nature-based tourism operations associated with the Babine draw clientele from around the world and local residents prize the river for its river-based recreation and fishing opportunities. As a reflection of its many high values, the Babine has been designated a provincial park as well as both a Class 1 Angling River and a BC Heritage River. Timber values are also significant in portions of the watershed and there is a moderate to high potential for mineral and energy development.

The West Babine SRMP has been developed to recognize the many unique and important environmental, social, cultural and economic values of the lower Babine River watershed and to manage these values in a sustainable manner. A balance between economic opportunities and sustaining ecological integrity is a key component to the plan. Ministry of Sustainable Resource Management (MSRM) has consulted with First Nations and stakeholders to ensure that their values in the West Babine are addressed in the plan.

The SRMP brings together planning direction from the Babine Interim Local Resource Use Plan (LRUP) and the Kispiox Land and Resource Management Plan (LRMP), into one document. The plan is written to be results-based i.e., to clearly describe the desired future condition of the landbase, allowing users of the land to apply best practices and professional knowledge to achieve the desired results. The management direction for the West Babine incorporates the best data, information, and analytical technology available at this time. A summary of the information used in developing the plan is available in the accompanying technical report. The plan has been written with the intent that management direction can be updated as better information becomes available.

1.1 Plan Scope and Goals

1.1.1 Current Policy Framework for SRMPs

The Ministry of Sustainable Resource Management (MSRM) was created to provide provincial leadership for sustainable economic development of public lands, water and other resources. MSRM prepares strategic management plans at two scales: a) sub-regional or regional plans (LRMPs), which occur over very large areas (over 1 million hectares); and b) local, or Sustainable Resource Management Plans (SRMPs). SRMPs build on the direction provided in

LRMPs, providing more detail at a local scale. The West Babine SRMP builds on, and is consistent with, the Kispiox LRMP, which was completed in 1996 and amended in 2001.

SRMPs address the range of resource values in a watershed with consideration for both economic interests and environmental stewardship. Foresters, tourism operators, land agents and other users of Crown land must look to SRMPs to know the kinds of activities that can occur in a particular area and how those activities should be carried out. The West Babine SRMP is designed to provide a comprehensive summary of all strategic management direction for users of Crown lands and resources in the West Babine portion of the Babine watershed. The SRMP does not replace or supersede the LRMP objectives, but rather it refines the broad objectives of the LRMP.

MSRM has drafted a set of sustainability principles,³ to guide planning and management of Crown land and resources. These principles fall within the themes of providing certainty in decision-making, shared stewardship, and accountable and responsive government. The West Babine SRMP has been developed to be consistent with the draft sustainability principles.

This document also recognizes the government-to-government relationship that exists between the Province of British Columbia and the Gitx̄san and Lake Babine First Nations, in whose asserted traditional territories the West Babine area lies. The plan has been developed within the following principles:

- ✧ The Crown and its licensees have an obligation to consider aboriginal rights in decision-making processes that could lead to impacts on those rights; and
- ✧ consultation with First Nations will be guided by provincial policy, and local consultation agreements (where they exist). For the Gitx̄san First Nation, the province and the Gitx̄san negotiated a consultation protocol between 1999 and 2002.⁴ This protocol for consultation and accommodation of Gitx̄san interests is part of the process that MSRM has agreed to engage in for the West Babine SRMP, and includes:
 - ◆ MSRM works directly with the *Huwilp* and *Simgiigyet* to assess the nature of “*prima facie*” aboriginal rights and title in the area;
 - ◆ MSRM works with the Gitx̄san Treaty Office (GTO) to coordinate information sharing and meeting arrangements;
 - ◆ MSRM involves the *Simgiigyet* early in the process; and
 - ◆ MSRM will meet with the *Simoogyet* and *Huwilp* members before making a decision in recognition and respect of the Gitx̄san decision making process used by the *Huwilp*, and will provide a written summary of the decision.

³ A Framework for Sustainability Principles in Sustainable Resource Management Planning, DRAFT, March 26, 2003.

⁴ Gitx̄san-British Columbia Consultation Procedures-General Provisions. Draft: February 2002. Although the protocol was never signed, it is the most up-to-date and comprehensive effort to negotiate a mutually agreeable consultation framework between the Province and the Gitx̄san.

1.1.2 Plan Goals

The overall goal for the West Babine SRMP is to recognize and maintain the unique and abundant resource values in the West Babine, including those associated with the Babine River, consistent with the Kispiox Land and Resource Management Plan.

Additional goals to be achieved by the management objectives are to:

- ✧ provide long-term sustainability of ecological resources, including grizzly bears;
- ✧ maintain the wilderness values of the Babine River and Babine River Corridor Park;
- ✧ seek accommodation of First Nations interests within the West Babine SRMP; and
- ✧ provide long-term sustainability of economic interests, including resolution of differences between timber and tourism interests;

MSRM Skeena will assess the plan against these goals during scheduled reviews using information collected around both implementation and effectiveness monitoring. This evaluation may be completed as part of a Babine River watershed coordinated monitoring group which is proposed to be developed with interested partners, potentially including First Nations, the Kispiox and Bulkley LRMP Monitoring Committees and stakeholders in the Babine (see **Section 4.0: Plan Implementation, Monitoring and Amendment, page 63**).

This plan has been developed with the following intent:

- ✧ to provide clear direction, using the best available knowledge, data, and analysis, to ensure the long-term sustainability of natural resources and the environment. This includes ensuring clean and safe water, land and air, and natural biodiversity;
- ✧ to provide certainty to resource developers, so that they can reasonable and responsibly access resources within the guidelines set out in the plan;
- ✧ to optimize the efficiency of development and use of natural resources while minimizing conflict among resource users;
- ✧ to provide flexibility so that the plan can be implemented in the most effective and efficient manner possible; and
- ✧ to create accountability by setting measurable standards for the management of resources.

1.1.2.1 Ecosystem-Based Management

Based on early consultation with the Gitx̱san First Nation, the Regional Director of the Ministry of Sustainable Resource Management requested that the West Babine SRMP adopt principles of ecosystem-based management and have a strategic goal of maintaining ecological integrity within the West Babine plan area. This direction was taken in recognition that First Nations interests reflect a holistic view of the ecosystems and the land, and that sustaining the integrity of the land itself is central to sustaining First Nations culture. In addition, the Kispiox LRMP, although not explicitly stated, generally uses a framework of ecosystem-based management.

Ecosystem-based management is an adaptive approach to managing human activities that seeks to ensure the coexistence of healthy, fully functioning ecosystems and human communities

(Coast Information Team, 2003). Management of all values on the land is considered, but the overarching goal is to protect ecological integrity. Ecosystem-based management should also maintain ecosystem and social resilience against catastrophes in biological, economic or political systems, and should foster development of diversified economic systems (Holt, 2001).

In the West Babine SRMP, the following steps were taken during plan development to be consistent with the principles of ecosystem-based management:

- ✧ all values in the plan area were identified, including economic, social and environmental values;
- ✧ management direction for general biodiversity uses a “coarse filter approach” which assumes that the habitat needs of most species will be addressed by managing habitats in a way that maintains structural features and reflects natural disturbance processes (see **Section 3.1.1, page 12**);
- ✧ recognizing that not all species habitat requirements will be met by general biodiversity objectives, additional objectives were identified for species that required special management guidelines to maintain healthy, sustainable populations (e.g., grizzly bears, bull trout);
- ✧ comprehensive risk assessment for grizzly bears was completed that included forecasting the long-term risk to bears from development;⁵
- ✧ rare plant communities will be protected at an operational level;
- ✧ forest botanicals (berries, mushrooms) will be maintained, over their historic range of natural variability, in recognition of the importance of these values to local communities; and
- ✧ planners worked with stakeholders and used analysis to explicitly consider the trade-offs between environmental and economic values and to create a sustainable balance of these values in the long-term.

Ecosystem-based management includes adaptive management because current knowledge is far from complete. As more is learned about ecosystems, new knowledge will be evaluated and management objectives modified, if required. Ecological baselines for analysis and interpretation of monitoring results must be established so that ongoing monitoring can identify whether the objectives and targets of the plan are being achieved. If they are not being achieved, monitoring data will assist managers in adapting management direction and/or practices so that the intent of the plan will be met. Monitoring data can include, but is not limited to data collected by licensees through the normal course of operations; Gitx̱san or third party monitoring data; or data collected for research projects.

⁵ This comprehensive analysis, which used the best available science, was undertaken for grizzly bears partly because of the importance of grizzly population in the West Babine and also since bears are considered an “umbrella” species whose health symbolizes or represents the health of ecosystems themselves.

1.1.3 Scope of the Plan

The West Babine SRMP was created to safeguard the public interests in the conservation and management of values and resources in the plan area, and to direct management of the range of resource-based activities occurring in the plan area. The plan may be amended from time to time to address additional resource values as new issues arise.

The values and issues addressed in the West Babine SRMP were identified by:

- ✧ Gitksan hereditary chiefs with house territories in the West Babine;
- ✧ stakeholders with an interest in the West Babine; and
- ✧ the objectives and strategies from previous plans, i.e., the Kispiox and Bulkley LRMPs and the Babine Local Resource Use Plan.

The West Babine SRMP does not, however, address:

- ✧ management within the Babine River Corridor Provincial Park. BC Parks has prepared a plan for the park, called the “Park Management Direction Statement” (2000). The West Babine SRMP has been developed to be consistent with the Park Management Direction Statement, in recognition of the integral nature of the Park to the plan area as a whole; and
- ✧ allocation of land and resources. Allocation decisions (i.e. tenured resource development opportunities) are outside the mandate of the MSRMP and are addressed through tenuring and permitting processes, led by other agencies.

1.1.4 Direction from Other Plans

The West Babine SRMP was developed to be consistent with pre-existing strategic plans, including the Babine LRUP and the Kispiox LRMP. These plans were developed with significant public input and provide an important foundation for the SRMP.

1.1.4.1 Babine Local Resource Use Plan

Before land use planning began in the Babine River watershed, the area was subject to a number of ongoing conflicts over competing interests. These conflicts led to the development of the Babine Interim LRUP, which was completed in 1994. The Babine LRUP addresses timber harvesting, grizzly bear conservation, fisheries, biodiversity, and wilderness recreation and identifies a number of management zones for various resources. It also directs district managers to undertake access management planning. The recommendations in the LRUP led to the establishment of the Babine River Corridor Park and its associated special management zone by the Kispiox LRMP. The West Babine SRMP is consistent with the direction of the Babine LRUP within the Kispiox Timber Supply Area. Specifically, the treatment unit zonation within the Babine LRUP has been incorporated into the West Babine SRMP. To provide consistency in land use across the Babine LRUP area, the LRUP zonation has been renamed to match the terminology used within the Bulkley portion of the LRUP area. These changes are summarized in **Appendix 6**, page 117.

1.1.4.2 Kispiox Land and Resource Management Plan

The Kispiox LRMP (approved by Cabinet in 1996 and amended in 2001) was developed through a public process involving people with a range of interests in the Kispiox Timber Supply Area (TSA): foresters, miners, recreationists, tourism operators, environmentalists, and interested members of the local communities.

“First Nations chose not to participate in the [LRMP] process for they felt they had not participated in the design of the process and were concerned that their participation would be interpreted as recognition of government ownership and jurisdiction over land and resources. There was also concern that participation would prejudice ongoing litigation against the provincial government over Aboriginal rights (i.e. the Delgamuukw case and appeals).”⁶

The LRMP contains management direction for the range of values in the TSA. It establishes three zones of direct relevance to the West Babine:

- ✧ the Babine River Corridor Provincial Park, which runs through the center of the West Babine plan area. Management direction within the park is addressed separate to the SRMP and is managed by the Ministry of Water, Land and Air Protection;
- ✧ the Babine River Valley Special Management Zone, where the objective is to protect and buffer river-based resource values within Babine River Corridor Park; and,
- ✧ the Atna Shelagyote Special Management Zone, where the objective is to maintain provincially significant resources, backcountry recreation opportunities, grizzly bear denning habitat, mountain goat habitat and extensive wetlands in the upper Scintine and Shelagyote River valleys.

The management direction in the West Babine SRMP is consistent with the LRMP and provides greater detail specific at the SRMP scale of planning.

1.1.4.3 Access management planning

The document *Access Management Direction for the Babine Watershed, Kispiox Forest District (2000)* provides direction to guide forest development in the interim until SRMPs are completed. The West Babine SRMP will replace the interim direction in the access management document.

1.1.4.4 Planning for adjacent areas

While the SRMP does not apply to the Bulkley TSA and other adjacent areas, the management direction in the SRMP has been written to be consistent with standards across the region and in consideration of the management in these adjacent areas. This standardization is so that management can be implemented seamlessly between timber supply areas and incorporated into operational plans, such as Forest Stewardship Plans.

Both the *Fort St James LRMP* (1999) and *Bulkley LRMP* (1998) provide management direction to maintain a range of resource values similar to the West Babine, including forestry, tourism, biodiversity, grizzly bear, and other wildlife. The *Bulkley LRMP* contains direction for the Bulkley TSA portion of the Babine River Corridor Provincial Park and Babine River Special

⁶ Quote taken from Amended Kispiox Land and Resource Management Plan, March 2001, pg.6.

Management Zone, ensuring that values of significance are maintained along the entire Babine River system.

The Babine Landscape Unit Plan, which borders the West Babine, has been prepared by the Bulkley Forest District to provide more detailed direction consistent with the *Bulkley LRMP*. The Landscape Unit Plan provides detailed management direction for biodiversity, including landscape corridors, grizzly habitat, and fish habitat as well as objectives and strategies for the Bulkley portion of the Babine River Special Management Zone.

The Bulkley TSA also has a Coordinated Access Management Plan in place that guides access across the eastern portion of the Babine watershed. The West Babine SRMP access management direction is consistent with the intent of the Coordinated Access Management Plan in the Bulkley TSA.

1.1.4.5 Plan Process

The West Babine SRMP was initiated by the Ministry of Sustainable Resource Management in October 2001, to complete a co-ordinated access management plan. This plan would fulfill an outstanding government commitment made as a result of the Babine LRUP in 1992.

Concurrently, a priority government initiative was to complete landscape level biodiversity planning. The biodiversity elements in the plan were based on the biodiversity guidebook and the Babine LRUP treatment unit zonation. The access management direction was developed within a results-based framework that provided flexibility in access management, grizzly bear protection and timber access. A work plan, circulated to the Babine River LRUP monitoring committee detailed this process, with a commitment to have the plan completed by March, 2002. This first draft of the SRMP was completed with substantial involvement from WLAP and the Kispix forest industry.

Draft 1 of the West Babine SRMP was released for an informal review amongst stakeholders, agencies, Gitx̱san and the public in July 2002. Comments critical of the plan were received from MoF, WLAP, the Babine River Foundation (BRF), the Gitx̱san and New Skeena. In short, the comments suggested that the SRMP provided little certainty around acceptable uses on the land base, did not fairly consider an economic base broader than forestry, did not recognize the influence the plan would have on the Babine River Corridor Park and did not consider the economic impact on the forest sector. In response to these comments, MSRMP committed to further consultation with these parties to ensure that the next draft of the plan would better reflect the interests articulated. Key changes to the plan included: integration of the Gitx̱san culture throughout the plan, spatially defined access management direction, identification of visual quality objectives, refinement of the Atna/Shelagyote and Babine River SMZs, and additional sections were added on the West Babine economy including mining, trapping, and fishing. Additionally, a socio-economic analysis was completed for the plan area. The resulting plan was labelled draft 2 and was released for full public review in July 2003.

2.0 Plan Area Overview

The West Babine Sustainable Resource Management Plan (SRMP) covers an area of approximately 240,000 hectares or 2,400 square kilometres. It comprises the entire western portion of the Babine River watershed, which includes the Sam Green, Shedon, Shelagoyote, Hanawald, Gail, Thomlinson and Shegistic Rivers and Gunanoot Lake (see **Map 2, page 67**). It also includes the southern end of the Atna and Sicintine Mountains and the northern end of the Babine Mountains. There are no permanent residents in the West Babine, although the Gitx̄san people use the Kisgegas Canyon and a number of village sites, such as Kisgegas, Xsi D'in, and Anlagasimdex seasonally. The closest towns are New and Old Hazelton, which are approximately 60 kilometres south.

In 1994, the Babine River Interim Local Resource Use Plan (LRUP) first proposed the Babine River as a “wilderness zone,” recognizing its important wildlife habitat and significant recreation opportunities. The Kispiox Land and Resource Management Plan (LRMP) in 1996 and the Bulkley Land and Resource Management Plan in 1998 both confirmed the LRUP zoning and recommended protection of the corridor. In 1999, the Babine River Corridor was designated a Class A Provincial Park.

2.1 Resource Values

The West Babine watershed is in the traditional territory of the Gitx̄san and Lake Babine people and has a rich cultural history. At one time the Kisgegas Canyon was an important Gitx̄san population centre, reportedly one of the largest Aboriginal settlements in the Skeena watershed. In addition, the river corridor provided an important trade route between interior and coastal nations. Today the area is rich in fish, berries, traditional medicines, wildlife, and other resources that were traditionally used, and continue to be used, by First Nations. There are also many cultural features that are part of the First Nations heritage.

The Gitx̄san name for the West Babine is *Xsu gwin lik'l'inswx*, which means Kingdom of the Grizzly. The plan area provides habitat to approximately 70 grizzly bears. This large number reflects the high quality of bear habitat. While many of the bears only come into the area in the fall to take advantage of the abundant food available during salmon spawning, there are also many resident bears that live there year-round. Other wildlife species include black bear, mountain goat, wolf, wolverine, fisher, marten, moose and deer. Grizzly bear, bull trout, fisher and wolverine are blue-listed⁷ by the Conservation Data Centre of BC (CDC).

The Babine watershed supports provincially significant fish populations. The Babine steelhead run supports an internationally renowned wilderness sport fishery. The sockeye salmon run is very important to the Gitx̄san Nation and Lake Babine Nation food fisheries and is a major contributor to the Skeena River stocks that support the Pacific salmon fishery. Other fish species include chinook, coho and pink salmon, Dolly Varden, rainbow and bull trout. Because of its high fisheries values, the Babine River attracts local residents and sport fishing enthusiasts from

⁷ Blue-listed species are considered to be vulnerable and “at risk” but not yet endangered or threatened. Populations of these species may not be in decline but their habitat or other requirements are such that they are sensitive to further disturbance.

around the world. The river is also known for its wilderness recreation opportunities including white water rafting and kayaking. The wilderness experience is enhanced by the opportunity to view grizzly bears during the fall salmon run.

Babine River Corridor Provincial Park runs along either side of the Babine River from two kilometres downstream of Nilkitkwa Lake to Kisgegas Village. The Park was established to protect the wilderness values of the river corridor for fish, bears and wilderness recreation. There is a single road access point into the Park, outside of the West Babine plan area by Nilkitkwa Lake. Road access into the park would threaten the integrity of the Babine River as a Class 1⁸ wilderness angling experience.

Timber harvesting opportunities in the West Babine are significant and must be balanced with other values. The West Babine represents almost 25 per cent of the area of harvestable timber in the Kispiox Timber Supply Area (TSA). Harvestable tree species include hemlock, pine, spruce and balsam.

The area has potential for a range of sub-surface resources, including metallic and industrial minerals, aggregate, oil, gas, and coal/coalbed methane.

2.2 First Nations Culture and Resource Stewardship

2.2.1 Gitx̱san First Nation

The entire West Babine plan area is within the traditional territory of the Gitx̱san First Nation, (see **Map 3, page 68**). The Gitx̱san social structure is a matrilineal kinship society, with exogamous Clans divided into Houses, with crests, poles, oral histories and a land system of territories all of which is managed through a public forum called the feast, or potlatch (Rabnett 2000). The feast hall is the centre of governance and commerce for the Gitx̱san. It is the place where resources are shared within the community and major decisions are made regarding every aspect of community life, including land tenure and resource stewardship.

Gitx̱san society recognizes four Clans (Eagle, Wolf, Frog, and Fireweed) divided into a number of Houses or *Huwilp*. Intercultural relations between the Gitx̱san and adjacent First Nations were extensive and inter-marriage was prevalent. Trading was pervasive, with Kisgegas and Wu'dat (a Lake Babine Nation community) being 'hubs' of trade with trails extending from these communities to the outlying areas (Rabnett 2000).

"*Lax yip*" is a concept central to the Gitx̱san existence. "*Lax yip*" encompasses everything that has kept the Gitx̱san alive for thousands of years, including the land, the soil, the trees, the fish and everything on the territories. "*Lax yip*" also signifies the Gitx̱san tie and commitment to that land. The elders teach that honour and respect must be shown for the land, and, therefore, no part of the House territory can be given up.

⁸ A Class 1 designation is reserved for unique wilderness rivers that offer a quality wilderness angling experience with high-value fish stocks, unspoiled, natural settings, and clear, clean waters.

Gitx̱san have a spiritual tie to the land. Every living thing has a spirit. When you are in the forest, you are merely one spirit among many. It's not possible to determine which spirit is most important, and these spirits are in balance with each other. The elders believe clear-cutting impacts too many spirits and leads to an imbalance. An imbalance in the spirits will bring bad luck or misfortune for the people.

Feasts, or potlatches have been a critical part of local First Nations culture since time immemorial. This is a method of sustainable development. Food, money and material items are brought to the feast, and re-distributed among the members. Because the money, food, and other items come from the land, this strengthens the peoples' tie to the land. All of this money and wealth contributes to the payment for the land and territories, and the passing on of names. The elders say that honour and respect must be shown for the land and its bounty.

Territories are distributed among the Houses so as to provide the range of resources needed for the members of the House. In addition, a complex social arrangement allows each Gitx̱san access to the resources in the House territories of their mother, father, and spouse (GTOWPG, 2002). This arrangement balances the demands on resources from year to year; if a resource is depleted or disturbed in one area, it is possible to meet that demand in another area.

The “*adaawk*,” or oral narratives, give the description of the boundary of the territories. It also registers the names associated with that house, and explains how the territory was taken over originally. The “*adaawk*” is passed orally between house members, and has been since time immemorial. Each territory has one “*adaawk*.” For example, the Gitx̱san *Wilp* Tsa Bux has three territories, so there are three “*adaawk*.” Only the House members have access to the “*adaawk*” of their territories; it is private information. In fact, even when giving testimonial on Gitx̱san title to the territories in the landmark court case, *Delgamuukw v. The Queen*, the elders advised that the “*adaawk*” was not to be shared.

The “*ayookw*” is the code of conduct for Gitx̱san people both in the villages, and on the territories. It includes rules about trespassing: if someone wants to go on someone else's territory, permission for access must first be granted. This access would usually be granted in the Feast Hall.

The Gitx̱san operate under a traditional hereditary system of governance within their traditional territory. Each House chief, or “*Simoogyet*,” acts as spokesperson for the House members and is the primary decision maker in providing stewardship of resources within the House territories, in consultation with the House. When a “*Simoogyet*” dies, a successor is chosen in the feast hall to carry his or her name and responsibilities. The Houses are organized into nine Watershed Tables. The boundary of the West Babine SRMP is similar to that of the Gitx̱san Babine Watershed Table and represents all or part of nine House territories (Milulaak, Djogaslee, Nii Kyap, Tsa Buk, Wii Gaak, Wii Minosik, Wii Gyet, Luus, Gwoimt). The Gitx̱san Treaty Office (GTO) is the administrative arm of the Gitx̱san, and is recognized by the British Columbia Treaty Commission for treaty negotiations. There are also a number of band councils elected under the federal system to provide governance of activities on Indian Reserves.

Traditionally, the First Nations applied a number of strategies and techniques to promote the abundance and sustainability of fish, wildlife, plant and other resources. Management strategies were woven into the fabric of society and were based on a deep understanding of and respect for the natural environment. Management techniques related to fishing, hunting and trapping included ownership of specific sites, access allocation, control of harvest techniques and timing, and conservation limitations (GTOWPG, 2002). First Nations also used burning as a tool to enhance the abundance of plant and animal resources e.g., to promote berry productivity and provide forage for animals as well as structural features necessary for habitat (GTOWPG 2002). These approaches to resource stewardship continue, to some extent, to this day.

The Babine Watershed is very important to the Gitx̱san. The area represents significant cultural and historic values. In addition, the resources in the watershed allow this nation to carry out activities important to their communities such as fishing, hunting, trapping and berry-picking. In the early 1990s the Gitx̱san staged a series of blockades on the Suskwa Forest Service Road (FSR), the Salmon River FSR, and at Sam Green Creek bridge crossing. These blockades were, for the Gitx̱san, an opportunity to bring their concerns to the public regarding loss of resources of importance to them and to challenge the process of consultation around forestry development. In addition, much of the strategizing was done at the blockades for the landmark *Delgamuukw* court case which confirmed, under Canadian law, that aboriginal title exists in British Columbia and that it encompasses a right to the land itself and not just the right to hunt, fish or gather (BC Treaty Commission, 1999).

In 2002 the Gitx̱san Treaty Organization completed a Watershed Sustainability Plan for the Babine Watershed. The plan profiles Gitx̱san interests and values within the Babine Watershed to create a “planning tool based on the natural and cultural features of the territories, which can be used to make balanced resource stewardship decisions, create economic development realities, and communicate traditional Gitx̱san environmental and cultural knowledge and values” (GTOWPG, 2002). In addition, each House or Wilp will be preparing a land use plan for their territory.

The Gitx̱san have done extensive work to spatially represent their interests and traditional uses of the plan area (see **Map 4, page 69**). This work is an on-going process of research, both on the ground and by interviews with elders and their recollection of oral history. Until the data collection is complete, inquiries on Gitx̱san interests and traditional uses should be directed to the appropriate House Chief through the Gitx̱san Treaty Office at 250-842-6780.

2.2.2 Lake Babine First Nation

The eastern portion of the West Babine plan area is within the traditional territory of the Lake Babine First Nation (see **Map 3, page 68**). The Lake Babine Nation differs linguistically from the Gitx̱san, yet they have a similar social structure that has integral connections to the environment. Lake Babine Nation society has five clans (Grouse, Caribou, Frog, Bear and Beaver) also divided into Houses or “*Yax*.” Compared to the Gitx̱san, relatively little is known of the Lake Babine Nation cultural knowledge (Rabnett 2000).

The plan area specifically overlaps with the Wit’at people (Fort Babine). Although the Wit’at are linked federally to the Lake Babine Nation, centered in Burns Lake, they consider themselves an independent nation. Consultation should occur directly with the Wit’at people. Contact information for Fort Babine is through the Lake Babine Nation Office in Burns Lake at 250-692-4700.

3.0 Management Direction

The West Babine SRMP is results-based. This is consistent with other planning initiatives underway in B.C., such as the results-based *Forest and Range Practices Act* and Sustainable Forest Management Planning, whereby planning is less prescriptive i.e., it focuses more on desired future outcomes than the means of achieving those outcomes. The purpose of moving to a results-based approach is that it allows flexibility and innovation on the part of plan implementers to use best professional judgment to meet the desired results. It also allows operational planners to adjust their methods as new information becomes available.

The plan has been prepared using the best available information and data, however, our technological ability and understanding of ecosystems and resources is constantly being upgraded. If a particular objective, indicator or target turns out to be inappropriate or a zone in need of adjustment, the plan can be re-adjusted at a later date (as outlined in **Section 4.0: Plan Implementation, Monitoring and Amendment, page 63**). It is assumed that all management direction within the plan is applied in consideration of management objectives for all other values.

3.1 Ecological Values

3.1.1 Biodiversity

Biodiversity describes the diversity of plants, animals and other organisms, in all their life forms and levels of organization, including genes, species and ecosystems. Biodiversity management assumes that the habitat needs of most species will be addressed by managing forests in a way that maintains structural features and reflects natural disturbance processes. Management direction to address individual species and other aspects of biodiversity are included in Wildlife and Fish Habitat (**Section 3.1.2, page 21**) and Water Quality (**Section 3.1.3, page 32**). As a large reserve area, Babine River Corridor Provincial Park will contribute to the conservation of biodiversity, as will the management within special management zones (**Section 3.2.3, page 38**).

Biodiversity strategies that are implemented at both the landscape and stand scales include:

- ✧ seral stage distribution and old growth retention;
- ✧ landscape connectivity;
- ✧ spatial distribution of patches;
- ✧ stand structure and wildlife tree retention;
- ✧ conservation of rare ecosystems; and
- ✧ tree species diversity.

Management direction for biodiversity is consistent with the Kispiox LRMP and the principles of ecosystem-based management. The *Landscape Unit Planning Guide (1999)* was considered during the development of these objectives. The Gitx̓san Chiefs have clearly identified biodiversity as an important value for the Gitx̓san people, recognizing that their traditional land management has taken an ecosystem approach to sustainable management.

3.1.1.1 Biodiversity Elements

a. Seral stage distribution and old growth retention

Targets for early, mature plus old and old seral stages are based on an updated interpretation of the average fire return intervals for the Sub-Boreal Spruce (SBS) zone and the Englemann Spruce, Subalpine Fir (ESSF) zone (Steventon, 2002). The Interior Cedar-Hemlock (ICH) zone was not examined in that report and is therefore, based on the Biodiversity Guidebook (MoF 1996a). Furthermore, the Kispiox LRMP directs 12 per cent retention of old growth forest within each mid-sized watershed in the plan area.⁹ This percentage has been met by mapping Core Ecosystems (see **Map 6, page 71**). Treatment Units identified by the Babine LRUP (TU2, forest ecosystem networks) have been incorporated into these Core Ecosystems.¹⁰

b. Landscape connectivity

Landscape Riparian Corridors have been mapped to provide connectivity of mature and old forest cover along valley bottom riparian areas and linking lowland to upland areas (see **Map 6, page 71**). Corridors are concentrated around major tributaries to the Babine River, and connections between high value wildlife habitat.

c. Spatial distribution of cutblocks

Targets for spatial distribution of cutblocks, also called “patch size distribution,” are based on the pattern that would be expected due to natural disturbances such as fire and windthrow. The distribution of patch sizes varies depending on the ecosystem. The assumption is that the wildlife and flora within these ecosystems will be adapted to the landscape pattern and will fare better if these patterns are emulated.

d. Wildlife tree retention

Targets have been identified to maintain structural features of old forests within harvested areas.

Requirements for wildlife tree retention are greater when patches exceed 80 hectares (BCMoF, 1996a). This increase is to ensure that larger openings maintain the structural and functional features required by species, including connectivity and habitat structure for small animals such as furbearers. Maintaining habitat within cutblocks also supports First Nations interests in wildlife and trapping.

e. Stand structure

In addition to wildlife tree patches, additional consideration is required to maintain stand complexity, particularly in the ICH and the ESSF. Given the variable nature of this attribute, no objectives are provided. However, operational foresters should consider retaining advance

⁹ This LRMP objective differs slightly from the targets outlined in the *Landscape Unit Planning Guide*. Because the LRMP objective is a higher level plan, it takes precedence over the *Landscape Unit Planning Guide* targets.

¹⁰ Note: Zoning for Core Ecosystems does not impede the right of First Nations to exercise their traditional activities.

regeneration and coarse woody debris, where operationally feasible. **Appendix 3, page 87** provides some direction.

f. Rare ecosystems

There are five blue-listed plant communities that potentially occur in the West Babine (**Table 1**), however detailed site series mapping does not exist, so specific locations are unknown. These plant communities must be identified at the operational scale during forest development planning. Measures are required to conserve rare ecosystems where these are identified on the landbase.

Table 1: Conservation Data Centre (CDC) Blue-Listed Plant Communities

Name	BEC site unit(s)
Hybrid white spruce/ paper birch-devil's club	ICHmc2/54
Hybrid white spruce – twinberry - coltsfoot	ICHmc2/51 SBSmc2/05
Western hemlock/ kinnikinnick/ Cladonia	ICHmc1/02 ICHmc2/02
Western hemlock/ azalea/ skunk cabbage	ICHmc1/06
<i>Poa rupicola</i>	AT

f. Trees species diversity

Guidelines for planting ecologically appropriate species are provided for under the *Forest and Range Practices Act*. Reforestation will establish at least as wide a variety of species as originally found on the site. These strategies provide for acceptable diversity at this scale.

3.1.1.2 Management direction for biodiversity

The Kispiox LRMP contains the following strategic objectives for biodiversity:

- ✧ to maintain the present variety of plant and animal species for each of the major ecosystems at the landscape level;
- ✧ to maintain rare or threatened plant and animal species and communities;
- ✧ to maintain rare ecosystems and environmentally sensitive areas such as wetlands (e.g., upper Shelagyote valley), floodplains, and riparian areas;
- ✧ to maintain deciduous ecosystems; and
- ✧ to retain the structural diversity of managed forests.

The LRMP also contains the following strategies:

- ✧ to manage biodiversity at the level of medium-sized watersheds of approximately 10,000 hectares or greater;
- ✧ within each medium-sized watershed, to manage 12 per cent of the forested landbase for old growth values through a combination of preservation and conservation; and
- ✧ to assume a 200-year rotation within areas managed for old forest retention.

One of the Gitx̱san interests is the protection of the integrity of the land. The Gitx̱san have requested that biodiversity be maintained within each house territory and to recognize the spiritual value of old growth to their people. The Gitx̱san have traditionally carried out practices to maintain a diversity of natural resources within their *Huwilp* territories (e.g., burning to maintain berries and wildlife habitat).

Table 2: Management Direction for Biodiversity

Objective (s) ¹¹	Indicator(s)	Target/Measure	Management Considerations
1. To maintain the structural and functional features of old forest ecosystems within Core Ecosystems (see Map 6, page 71).	Amount of alteration within Core Ecosystems.	No alteration within Core Ecosystems, except to manage natural processes that threaten resources outside of the zone.	<p>No harvesting within Core Ecosystems (see Map 6, page 71) except for incidental tree cutting for mining and exploration purposes.</p> <p>No road building within Core Ecosystems with the exception of:</p> <ul style="list-style-type: none"> ◆ Accessing timber that would otherwise be inaccessible; and ◆ For mineral development¹² <p>Allow natural processes (e.g., fire, insects) to occur within Core Ecosystems except where those processes threaten resources outside the zone.</p>

¹¹The West Babine Plan area is intended to be managed as a series of mid-sized watersheds within a single landscape unit. For example, 12% old growth is spatially identified within core ecosystems for each mid-sized watersheds; however, seral stage objectives are intended to be monitored over the entire landscape unit.

¹²Section 14 (5) of the *Mineral Tenure Act* provides certainty of access for mineral exploration and development outside of protected areas. The statutory decision maker for tenuring and permitting activities related to mineral exploration and development uses LRMP and SRMP direction as advice to ensure effective integration with other Crown land uses. LRMP and SRMP direction may be used as a basis for recommending modified mineral exploration or development procedures.

Objective (s) ¹¹	Indicator(s)	Target/Measure	Management Considerations
2. To maintain a distribution of mature, old and early seral forest reflective of the natural disturbance regime.	<p>a. Amount of <u>mature and old</u> seral forest retained by BEC subzone (See Map 5, page 70).</p> <p>b. Amount of <u>early</u> seral forest at any one time by BEC subzone (See Map 5, page 70).</p> <p>c. Amount of old seral forest at any one time, by BEC subzone (see Map 5, page 70).</p>	<p>% retention of mature and old seral forest by BEC subzone:¹³ ESSFwv >61% ESSFmc >44% ICHmc >46% SBSmc >35%</p> <p>Maximum amount of early seral forest (< 40 years) by BEC subzone:¹² ESSFwv <11% ESSFmc <26% ICHmc <27% SBSmc <39%</p> <p>% retention of old seral forest by BEC subzone:¹² ESSFwv >39% ESSFmc >15% ICHmc >13 % SBSmc >17%</p>	<p>Mature forest is defined as > 120 years in ESSFwv and ESSFmc; and > 100 years in the ICHmc and SBSmc. Old forest is defined as >250 years except in the SBSmc where it is defined as >140 years.</p> <p>Old forest is defined as >250 years except in the SBSmc where it is defined as >140 years.</p> <p>NOTE: Much of the % retention required for old seral forest has been spatially identified in Core Ecosystems, non-operable forest, Special Management Zones, and the Babine River Corridor park.</p>
3. To maintain connectivity of old and mature forest cover within Landscape Riparian Corridors (See Map 6, page 71).	a. Amount and quality of old and mature forest cover within Landscape Riparian Corridors.	<p>At least 70% retention of structure within Landscape Riparian Corridors.</p> <p>No alteration of fluvial or floodplain ecosystems¹⁴ that may be subject to frequent or infrequent flooding.</p>	Operational plans for harvesting within Landscape Riparian Corridors (see Map 6, page 71) should consider the harvest pattern adjacent to the corridor. For example, clearcuts adjacent to the corridor will constrain harvesting strategies within the corridor. Conversely, modified harvesting adjacent to the corridor will increase the flexibility for harvesting in a corridor (see Table 4, page 19).

¹³ Percents for all zones except ICHmc based on Steventon, 2002. Figures for ICH based on Biodiversity Guidebook.

¹⁴ A fluvial or floodplain ecosystem is one in which the floristic community is influenced by the flooding from an adjacent stream or river. This includes subsurface, periodic over-bank or annual over-bank flooding.

Objective (s) ¹¹	Indicator(s)	Target/Measure	Management Considerations
	<p>b. Timing of harvest activities within Landscape Riparian Corridors</p> <p>c. Road density within Landscape Riparian Corridors</p>	<p>Winter only harvesting</p> <p>Road building is not permitted in Landscape Riparian Corridors, except to access areas that would otherwise be inaccessible.</p>	<p>Minimize road density within Landscape Riparian Corridors.</p> <p>Access into Landscape Riparian Corridors should be temporary unless no other alternative is reasonable for ecological or economic reasons.</p>
<p>4. To attain a landscape pattern of patchiness that, over the long term, reflects the natural disturbance pattern and minimizes fragmentation.</p>	<p>Distribution and range of patch¹⁵ sizes (small-medium, large and very large) in each mid-sized watershed.</p>	<p>--</p>	<p>Consider targets in Table 3, page 19 when developing forest stewardship plans.</p> <p>Plan for predominantly small patches within Landscape Riparian Corridors (< 3 ha), Babine River SMZ, and high value grizzly bear habitat (< 15 ha).</p> <p>Plan for predominantly mid sized patches (> 15 ha) across the remainder of the landbase.</p> <p>Locate very large patches (>250 ha) outside of the Shelagyote and Babine River watersheds to help maintain the integrity of the park.</p> <p>Objectives to minimize fragmentation can be achieved by concentrating development in one area at a time, allowing other areas to remain inactive for longer periods.</p>

¹⁵ A patch is defined as one cutblock, or group of cutblocks within close proximity. Multiple cutblocks in close proximity become one patch when the area between the cutblocks is non-forested or is a narrow forested strip of timber that acts like a wildlife tree patch or riparian reserve zone, i.e. does not provide at least 120 m of interior forest condition.

Objective (s) ¹¹	Indicator(s)	Target/Measure	Management Considerations
5. To maintain the range of structural attributes of old forest ecosystems within forest stands throughout the rotation.	<p>a. Area of wildlife tree retention having the structural characteristics of older forests.</p> <p>b. Distance between wildlife tree patches.</p> <p>c. Amount of coarse woody debris left on cutblocks.</p> <p>d. Amount of structural features retained throughout the cutblock, outside of WTPs.</p>	<p>% of cutblock area retained in wildlife tree patches (WTPs) over the rotation (see Table 5, page 20).¹⁶</p> <p>< 500m between wildlife tree patches.</p> <p>--</p> <p>--</p>	<p>Wildlife tree retention should, as a first priority, protect trees with valuable wildlife tree attributes.¹⁷ Mature stand structural attributes may be achieved through a variety of means, including wildlife tree patches, alternate silvicultural systems, and Core Ecosystem reserves across the landscape.</p> <p>Targets for retention of specific structural attributes are listed in Appendix 3, page 87.</p> <p>Provide structure for small mammals in cutblocks e.g., by leaving some coarse woody debris or slash piles.</p> <p>Locate slash piles near to wildlife tree patches.</p> <p>Targets for retention of specific cwd attributes are listed in Appendix 3, page 87.</p> <p>Where ecologically appropriate and operationally feasible:</p> <p>Maintain advanced regeneration protection to provide for mature stand structure. Targets for retention of specific structural attributes are listed in Appendix 3, page 87.</p>
6. To maintain the structural and functional integrity of red- and blue-listed plant communities.	Area of red- and blue-listed ecosystems.	No reduction in the functional area (ha) of known red- and blue-listed ecosystem polygons over time.	Where possible, locate rare plant communities within wildlife tree patches and core ecosystems.

¹⁶ Note: amount of retention varies with BEC zone and the size of opening.

¹⁷ High value wildlife tree characteristics include: internal decay; crevices present (loose bark or cracks); large brooms present; active or recent wildlife use; current insect infestation; tree structure suitable for wildlife use (e.g., large nest, hunting perch, bear den, etc); largest trees on site (height and/or diameter) and/or veterans; and locally important wildlife tree species. Where there are few trees suitable for wildlife trees, priority should be given to retaining large, stable trees that will likely develop two or more of the above characteristics.

Table 3: Percent of Forested Area Logged in each 10 yr Period¹⁸

Watershed	Small Gaps ¹⁹	Medium Gaps (1-80 ha)	Large Gaps (80-250 ha)	Very Large Gaps (>250 ha)
Shedin	15	45	20	40
Babine Shelagyote	10	60	30	
Hanawald Gail/Thomlinson Nichyeskwa	5	10	30	55

Table 4: Decision Matrix for Timber Harvesting within Landscape Riparian Corridors

Timber Type	Maximum Block Size Adjacent to Clear Cuts ^a	Maximum Block Size Adjacent to Partial Cuts ^b	Silviculture System/Mgt. Strategy	Objective	Adjacency
I. Pine (No understory)	1.5 ha. max. 0.3 to 1.5 ha.	3.0 ha. max. 1.5 ha. ave.	Patchcuts or Clearcut with reserve if operationally feasible (i.e., in larger openings) ^c	Artificial or Natural Regeneration (Pine major)	No harvest until the block is 50 years old ^d
II. Pine (Bl/Sx Pole size understory of good quality)	1.5 ha. - 3.0 ha. dependent on amount of pole size saplings (5 - 15 cm.)	1.5 ha. - 3.0 ha. dependent on amount of pole size saplings (5 - 15 cm.)	Overstory Removal with reserves where operationally feasible (i.e. in larger openings) ^c	Artificial Regeneration or Natural Succession to Spruce/Fir stand	No harvest until opening provides sufficient forested attributes. ^d
III. Hemlock Spruce/Fir (little or no understory)	Groups 0.3 - 1.5 ha. dependent on the snag component in the stand	3.0 ha. max. 1.5 ha. ave.	Patchcuts or clearcut with reserve if operationally feasible (i.e. in larger openings) ^c	Mainly artificial regeneration Spruce/Fir	No harvest until opening provides sufficient forested attributes. ^d

¹⁸ If the base is the total forested area, the calculation of the above percentages has to include any naturally occurring disturbance, particularly large fires.

¹⁹ Partial harvest systems would meet the intent of this strategy.

^a Age and height of the regeneration in the clearcut must be considered. Where the cutblock provides forested attributes, flexibility may be considered. Forest health and catastrophic events will be dealt with on an individual basis.

^b Partial cutting does not refer to seed tree, shelterwood or larger clearcuts with reserves where there is minimal structural attributes retained. A patch clearcut design with five hectare blocks and which phases into larger openings as one moves away from the corridor is one example of partial cutting as it relates to the intent of this policy.

^c Approximately 60 stems/hectare comprising 50 per cent windfirm C2/C1 stems and 50 percent 5 metre stubs on openings >1 hectare. Where feasible means safe and technically possible.

^d Adjacency is dependant on the growth of the stand and return to mature forest characteristics. In Forest Types I, II and III, a maximum of 30 per cent by area is to be removed at any time.

Timber Type	Maximum Block Size Adjacent to Clear Cuts ^a	Maximum Block Size Adjacent to Partial Cuts ^b	Silviculture System/Mgt. Strategy	Objective	Adjacency
IV. Spruce/Fir/Hemlock with good quality varied stand structure	Single Tree or Group selection (0.3 to 1.5 ha.) maintaining approx. 70 % basal area. Single Tree if low snag %. Groups if high snag %.	Single Tree or Group selection (0.3 to 1.5 ha.) maintaining approx. 70 % basal area. Single Tree if low snag %. Groups if high snag %.	Retain approx. 70% of the unit. If the area outside the corridor is a partial cut, flexibility will be considered.	Natural Regeneration Site may be fully stocked after harvest .	Few constraints. ^d

Table 5: Wildlife Tree Patch Retention Targets (Targets for retention of specific wildlife attributes are listed in **Appendix 3, page 87**)

Watershed ²⁰	BEC subzone	% of Cutblock Area Required as Wildlife Tree Patches	
		Blocks ≤ 80 ha	Blocks > 80 ha ²¹
1. Shelagoyote	ESSFwv	1	1.5 - 2
2. Babine River	ESSFmc	7	10.5 - 14
	ICHmc	1	1.5 - 2
	SBSmc	3	4.5 - 6
3. Gail-Thomlinson	ESSFwv	1	1.5 - 2
4. Nichyeskwa ²²	ESSFmc	5	7.5 - 10
	SBSmc	3	4.5 - 6
5. Shedin	ESSFwv	1	1.5 - 2
6. Hanawald	ESSFmc	7	10.5 - 14
	ICHmc	3	4.5 - 6
	SBSmc	5	7.5 - 10

²⁰ See **Map 5, page 70** for watershed boundaries.

²¹ The *Biodiversity Guidebook* notes that the need for structural retention within cutblocks increases with cutblock size (BCMof, 1996a). Additional structural retention with large cutblocks helps to minimize fragmentation and provide habitat for species such as bears and furbearers.

²² Part of the Nichyeskwa watershed is in the Bulkley TSA. Targets for wildlife tree retention are based on the entire watershed.

3.1.2 Wildlife and Fish Habitat

The West Babine provides habitat for a diverse array of wildlife species. Large mammals include grizzly bear, black bear, wolf, mountain goat, moose, mule deer and, possibly, white-tailed deer. Anecdotal reports of caribou and historic sightings are present for the Shelf Ridge and Upper Shedin. Other bird and animal species such as woodpeckers, songbirds, raptors, small mammals and furbearers, bats, and amphibians also inhabit the plan area. A variety of upland game birds reside in this area and numerous species of waterfowl frequent the area seasonally.²³ Wolverine, fisher, and grizzly bears are blue-listed by the Conservation Data Centre of BC.

The Kispiox LRMP contains the following objectives for wildlife habitat:

- ✧ to maintain natural ecosystems and habitat to sustain viable populations of all native wildlife within their natural ranges; and
- ✧ to protect or enhance populations and habitat of rare or endangered and regionally significant species.

The Babine watershed is renowned for its fish resources. The river supports all of the five Pacific salmon species as well as steelhead, bull trout and many resident fish species.²⁴ The richness of the salmon production in the Babine drainage is due to Babine Lake, which moderates the temperature, flows and clarity of the water and provides excellent rearing habitat for juvenile sockeye.

Although the fisheries values in the West Babine portion of the Babine drainage are very high (see **Section 3.3.5, page 54**), the habitat values in the plan area itself are relatively low. The prime spawning and rearing areas in the Babine watershed are upstream of the plan area. Within the West Babine itself, the fish habitat value of the mainstem Babine River and its tributaries in the study area is moderate to low for most species (GTOWPG, 2002). The mainstem of the river functions mainly as a migration corridor for anadromous fish. The tributaries have relatively low habitat value because of steep gradient, obstructions, sharp peak flows, high bed load and low water temperatures e.g., Shedin and Shenismike Creek. Exceptions do exist however. The Shelagyote River and some of its tributaries provide excellent habitat for bull trout, a blue-listed species, and steelhead. The headwaters of Nichyeskwa Creek provide salmonid and steelhead spawning habitat, and lakes such as Gunanoot Lake provide good habitat for rainbow trout.

The Kispiox LRMP contains the following objectives for fish:

- ✧ to maintain or increase wild indigenous fish populations including salmon, steelhead, trout, Dolly Varden char, bull trout and Rocky Mountain whitefish; and
- ✧ to protect the following sensitive fish populations and habitat: (a) stream reaches with identified populations of bull trout; (b) important spawning and rearing areas; (c) Class 1 and 2 angling waters and their tributaries.

²³ D. Fillier, Ecosystem Specialist, Ministry of Water, Land and Air Protection, Skeena Region. Personal communication. February, 2003. Smithers, BC.

²⁴ Resident fish species include rainbow and cutthroat trout, Dolly Varden, bull trout, lake char, kokanee, lake and mountain whitefish, lamprey, burbot, sculpins, suckers, and shiners (GTOWPG, 2002).

The West Babine SRMP includes specific management direction for grizzly bears and bull trout. It is assumed that management for berries (**Section 3.3.6.2, page 58**), visual quality (**Section 3.2.2, page 35**), special management zones (**Section 3.2.3, page 38**), biodiversity (**Section 3.1.1, page 12**), and water quality (**Section 3.1.3, page 32**) will provide for the habitat needs of most other species in the plan area.

3.1.2.1 Grizzly bears

The West Babine area has high habitat value for grizzly bears. The Babine River and its tributaries provide an important food source for bears because of the large numbers of salmon that travel up these rivers. In addition to the area's resident bears, a large number of bears are drawn to the area from other population units during spawning season. For this reason, it is important to maintain grizzly bear populations both within and outside of the plan area.

A comprehensive risk assessment tool (MSRM 2002) was used to provide a measure of risk to grizzly bears and potential harvest value for a set of development scenarios. The tool assessed each potential timber development pattern, and evaluated core security area, habitat displacement statistics, grizzly bear mortality risk, grizzly bear habitat displacement risk, timber volume, operational value and net stand value and timber access. The results of this analysis and risk assessment was used to develop the access strategies for maintaining critical grizzly bear habitat, and for minimizing displacement risk due to human bear interactions.

Key components of grizzly bear conservation include access management and maintenance of critical or important habitat.

a. Access-related issues

The primary human influences on grizzly bears and their habitats are related to roads and road use. This includes:

- ✧ potential for increased risk of *bear mortality* due to human-grizzly bear interactions e.g., negative habituation, bears being shot in defense of life and property, illegal kills; and
- ✧ potential for increased risk of *displacement* of grizzly bears from their preferred habitats, primarily due to disruption (noise, human activity).

The risk assessment completed for this plan has shown that with increased access into the West Babine, the effect of mortality risk on bear populations will be much greater than the effect of habitat displacement (West Babine Grizzly Bear Technical Working Group, 2001). Therefore, direct mortality has been identified as a critical risk factor to grizzly bear conservation within the plan area.

One of the main strategies to meet objectives for grizzly bear conservation while maintaining access to timber harvesting is to concentrate harvesting activities over space and time. Under this strategy, a period of high activity will be followed by long periods of inactivity while harvesting operations move to other areas. This strategy is justified in areas where bear use is known to be high or bears are considered to be at high risk.

b. Habitat-related issues

Grizzly bears require habitat that provides for their nutritional, security, thermal, reproductive and “space” needs. It is difficult to generalize about habitat requirements for grizzly bears in B.C. because the bears have such a wide range of behavioural adaptations to the diverse ecosystems that occur in this province. Although meeting nutritional requirements is the primary factor in habitat choice, selection is also based on thermal cover (e.g., dens/bedding sites), security (e.g., females protecting cubs), or access to potential mates during the breeding season. Habitat selection is also strongly influenced by social interactions between bears and the presence and activities of people.

Because bears employ a variety of strategies to meet habitat requirements, management of grizzly habitat must be considered at several spatial scales – from specific food-producing stands and microsites (= critical habitats), to landscape level forage supply, to habitat supply at the population unit scale. Habitat must also be considered over various time scales to account for continually shifting seasonal food supplies and annual food variance (e.g., berry crop failure) as well as longer-term changes in landscape condition.

Critical habitat

Critical habitats are areas that are considered essential for bear survival. These areas have high forage, bedding or proven denning value, particularly in situations where these habitats are in short supply. Critical habitat areas tend to receive repeated and/or prolonged use by at least one bear. Overall, these relatively small areas of habitat can contribute in a large way to the overall seasonal requirements of a bear, and thus of a population.

Critical habitat areas are defined at the stand level and are typically one to five hectares in size. Critical habitats in the West Babine include herb-dominated avalanche tracks with adjacent forest; non-forested fens; herbaceous riparian meadow/wetland complexes and seepage sites; skunk cabbage swamps; subalpine parkland meadows; salmon fishing areas (e.g., Grizzly Drop); and old burns or other successional areas dominated by *Vaccinium* (blueberry or huckleberry) species. Non-forested critical habitats include a core area and buffer of forested cover. Patches of forested critical habitat do not require an additional forested buffer.

Habitat effectiveness

The Wildlife Branch has estimated grizzly bear populations for each Wildlife Management Unit of the province under the Grizzly Bear Conservation Strategy. This estimate is based on habitat capability (because of the impracticality of census), “stepped down” for the existing levels of habitat loss, habitat alteration, displacement, fragmentation and mortality in each Management Unit. These estimates are presented for Management Units 6–7, 6–8 and the plan area in **Table 6, page 24**.

Table 6: Grizzly Bear Population Estimates

Area	Minimum Capability Estimate	Stepdown (percent of capability) ²⁵	Present Population Estimate
M.U. 6-7	165	82%	135
M.U. 6-8	306	56%	171
Plan Area	89	82%	73

These management units are large areas and that the step-down is applied as an average of conditions across the area. Management Unit 6-8 has a much higher step-down because it includes settled areas of the Bulkley River Valley and large areas that have been developed for forestry. The step-down for Management Unit 6-7 is much less, reflecting its larger undeveloped area. The numbers shown for the plan area reflect the present population (factored by area) and the step-down used for Management Unit 6-7, since the plan area and Management Unit 6-7 have similar habitats and degree of development. These numbers should not be interpreted as precise, but as an illustration of approximate numbers and step-down.

The present population and capability estimates can be used to approximate the future step-downs that could be applied to the plan area. These numbers (Figure 1) should be interpreted as anticipated trends, not population targets.

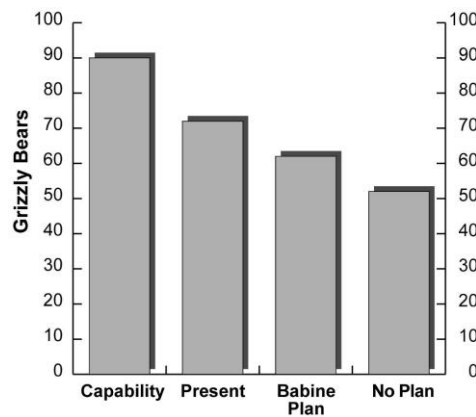


Figure 1: Population estimates for the plan area under different scenarios

²⁵ A fully protected area would only be 90% of capability

Figure 1, Population estimates for the plan area under different scenarios on the previous page, illustrates several concepts:

- ✧ The present population has already been affected by development and mortality inside and outside the plan area. We expect this risk to increase as watersheds surrounding the plan area are developed.
- ✧ The population of the study area will decline because of the effects of access. The intent of the plan is to mitigate that decline. The step-down shown for the Babine plan is midway between the present population and the population expected without a plan. The actual result would vary depending on the effectiveness of the plan's management measures, but is very difficult to quantify.
- ✧ The step-down with no plan in place was assumed to be about 60 per cent in the long term, assuming conventional development. If all of the surrounding watersheds are to be developed conventionally as well, the step-down would likely be greater over the long term.
- ✧ The LRUP goal of "maintaining the present grizzly bear population" does not recognize that the range of many of the Babine bears extends beyond the plan boundaries or that integrated development as required in the LRUP and both LRMPs will have an affect on estimates of the bear population.

3.1.2.2 Management direction for grizzly bear habitat

The Kispiox LRMP contains the following strategies to maintain grizzly bear habitat and address access issues:

- ✧ high value grizzly bear habitat will be protected through application of management strategies such as buffering with reserves, modifying silvicultural systems, and minimizing clearcut sizes (i.e., < 15 ha);
- ✧ selection harvesting will be applied to a minimum of 5% of the forested portion of high value grizzly bear habitat outside of riparian management areas or wildlife habitat areas;
- ✧ established strategies for management of grizzly habitat will be used in the development and review of landscape and operational plans;
- ✧ effects of access on grizzlies will be addressed through coordinated access management plans and modified road construction practices; and
- ✧ regulated grizzly bear hunting may be restricted in portions of the planning area, such as the Babine River corridor, as part of the provincial conservation strategy.

In this plan, strategies to conserve grizzly bear populations focus on both access management and habitat conservation. Areas containing the highest habitat values have been identified as high value grizzly bear habitat (see **Map 7, page 72**). Management within these zones will focus on maintaining the necessary structural features of grizzly bear habitat.

Management in the Babine SMZ, as it pertains to grizzly bears is found in **Section 3.2.3.1, page 38**. Landscape level objectives to manage seral stage distribution of forests in watersheds, as outlined in **Section 3.1.1, page 12** will also contribute to landscape level management of forage supply for grizzly bears, as will management of berry areas (**Section 3.3.6.2, page 58**).

Table 7: Management Direction for Grizzly Bears

Objective	Indicator(s)	Target/Measure	Management Considerations
<p>1. To reduce number of human bear interactions.</p>	<p>a. Density of roads by mid-sized watersheds (see Map 5, page 70) open to timber harvesting activity at one time.</p>	<p>80% of the Shedin and Hanawald watersheds < 0.6 km/km²</p>	<p>These thresholds should be monitored and re-evaluated in conjunction with the watershed assessments. Initial report should be completed in 10-15 years.</p> <p>Deactivated roads²⁶ will not contribute towards the road density target.</p> <p>Minimize the number of road networks open at any one time.</p> <p>Mortality risk to bears within the plan area will be reduced by:</p> <ul style="list-style-type: none"> ◆ harvesting in winter; ◆ deactivating or blocking temporary roads and secondary roads after operations are completed.
	<p>b. Level of public awareness on reducing human-bear interactions.</p>	<p>--</p>	<p>Where possible, initiate programs to educate members of the public and visitors on low impact garbage handling methods and ways to minimize human-bear interactions in shared fishing areas.</p>
	<p>c. Level of tourism use within periods of active bear use.</p>	<p>--</p>	<p>If bear viewing is proposed as a tourism activity, BC Parks will address carrying capacities and strategies to minimize habituation and mortality risk to bears.</p>

²⁶ Roads which effectively prevent four wheel drive access

Objective	Indicator(s)	Target/Measure	Management Considerations
<p>2. Minimize disruption to bear use of high value habitat within the Babine River Corridor Park and at Grizzly Drop due to forestry activities within the Big Slide Access Management Zone (see Map 12, page 77).</p>	<p>a. Percent of forest >70 years in age.</p> <p>b. Amount of non-industrial motorized use within the Big Slide access management zone during operations.</p> <p>c. Amount of motorized use of the road network within the Big Slide access management zone between operations.</p>	<p>70 % of Big Slide Access Management Zone >70 years at any time.</p> <p>Industrial motorized use only within the Big Slide access management zone during forest operations.</p> <p>No motorized use (including snowmobiles and ATVs) past access control point 3 (see Map 12, page 77) between operations.</p>	<p>Consider the strategies presented in the May 23, 1997 Big Slide Agreement between Skeena Cellulose, MoF, and WALP.</p> <p>The primary access control point is locally referred to as 4.5 km and a secondary access point at 7.9 km.</p>
<p>3. Minimize the disruption to bear movement along Shenismike Creek.</p>	<p>Amount of road built within the Shenismike Corridor.</p>	<p>No roads built within the Shenismike Corridor (see Map 7, page 72).</p>	
<p>4. Minimize the disruption to bear use of the high value habitat in the Sperry/Rosenthal access management zone (see Map 12, page 77).</p>	<p>a. Percent of forest > 50 years in age.</p> <p>b. Duration and season of activity during operations.</p>	<p>50 % of forest > 50 years old.</p> <p>Five years. Harvesting is to occur in the winter.</p>	<p>High value avalanche chute habitat occurs in this area.</p> <p>Road building, harvesting and silviculture is to occur within a five-year window.</p>

Objective	Indicator(s)	Target/Measure	Management Considerations
	c. Amount of motorized use of the road network between operations.	No motorized use past the access control point 1 identified on Map 12, page 77 between operations.	
5. Protect conservation values (wilderness, grizzly bear, moose, mountain goat, steelhead, bull trout) affected by increased access north of the Babine River and east of Shenismike Creek.	Amount of public access through the “Nichyeskwa Connector.”	Winter only access on the “Nichyeskwa Connector” (November 1 to April 30) except in the case of emergencies (access control point 7, Map 12, page 77).	Install a locked gate at Km 10.9 on the Nichyeskwa North Forest Service Road to prevent formation of a circle route. Place large rip-rap in the ditch lines to deter ATVs. Install road signs with closure rationale and contact information.
6. Minimize the disruption to bear movement and the risk of human/bear interactions within the Shenismike West access management zone (see Map 12, page 77).	a. Percent of forest > 50 years in age. b. Duration and season of activity during operations.	50% > 50 years. Five years. Harvesting is to occur in the winter.	Harvest the operable volume in two passes, with a minimum of 35 years between each pass. Road building, harvesting and silviculture is to occur within a five-year window.
	c. Amount of motorized use of the road network between operations.	No motorized use past access control point 2 (Map 12, page 77) between operations.	All secondary and tertiary roads in the Shenismike-West access management zone (on the south side of the primary road) to be deactivated. This can be done through the building of winter roads only, with high stumps, right-of-way slash and logging slash pulled back on to the road following completion of operations.
Within high value grizzly bear habitat:			

Objective	Indicator(s)	Target/Measure	Management Considerations
7. To maintain the integrity of and linkage amongst critical grizzly bear habitats. ²⁷	Amount of alteration of critical habitats. ²⁷	No alteration of critical habitats, unless no practical alternative exists.	Critical habitats ²⁷ will be identified during operational planning.
8. To provide forest cover adjacent to non-forested critical habitats ²⁷ in order to provide visual (security) and resting (bedding) cover.	Area of functional forest cover adjacent to non-forested critical habitats. ²⁷	Provide a 100m buffer of windfirm, functional forest cover adjacent to non-forested critical habitats, ²⁷ unless no practical alternative exists.	Configure areas of forested cover within critical habitat to provide interior forest conditions that minimize wind exposure, provide shading and prevent the introduction of prolific understory growth. Logging is allowed within forested buffers provided that these features are maintained.
9. To minimize the impact of road building and forest harvesting activities on critical habitat. ²⁷	Distance of roads from critical habitats. ²⁷	No permanent roads located within 150m of critical habitats, ²⁷ unless no practical alternative exists.	

²⁷ See Babine River Interim Local Resource Use Plan, Appendix 5. Critical patch habitats include Sitka alder-spiny wood fern seepage sites; south aspect Trembling aspen-Douglas maple sites; Sitka alder-cow parsnip avalanche chutes and surrounding forest; Spruce-black twinberry floodplain; trembling aspen-beaked hazelnut sites; paper birch-red osier dogwood fans; south aspect Paper birch-falsebox sites; black cottonwood-red osier dogwood floodplains; thimbleberry-cow parsnip moist meadows; willow swamps and willow-sedge wetlands (SBSmc and ICH: Polygons with > 50% willow-sedge wetland (WS); WS complexed with spruce-devil's club lower slope (SD); WS complexed with spruce-horsetail flat (SH); WS complexed with black spruce bog (BS); WS complexed with devil's club-oak fern (DO); WS complexed with horsetail swamp (HO); and Willow swamp (WI). ESSFmc: Polygons with >50% WS complexed with black huckleberry-five-leaved bramble (BB) and black huckleberry-bunchberry mesic (HB)).

3.1.2.3 Ungulate Winter Range

The plan area provides important habitat to mountain goat and moose. The quality of winter range is a primary determinant of winter survival, providing forage, thermal cover and snow interception cover.

a. Moose

Moose (*Alces alces ssp. andersoni*) are relative newcomers to northwestern British Columbia, expanding their range westward from the Liard Plateau in the last two hundred and fifty years. High value moose habitat occurs primarily on the north side of the Babine River from the confluence with the Skeena River and partway up the Shelagyote River. In BC, the species is of management concern (yellow-listed) and is considered locally to be widespread, abundant and secure.

Moose are associated with riparian habitats, especially floodplains and large wetlands. Winter range areas provide forage and thermal cover. Most of the moose winter range in the plan area is located within Babine River Corridor Park and the Babine River SMZ. In the future, the Ministry of Water, Land and Air Protection may apply winter range guidelines to winter range located outside of the Park and the SMZ. These winter range guidelines are not intended to be constraining to timber development.

b. Mountain goat

Mountain goats (*Oreamnos americanus*) occur only in North America. The highest populations are found in British Columbia where they are associated with mountainous topography. Within the West Babine, mountain goat winter range occurs anywhere where there are mountains with steep slopes. Goats are frequently seen at Tommy Jack Pass. Mountain goats are a yellow-listed species, meaning that although the species is not currently at risk, it is a species of management concern.

In winter, predator avoidance and a deep coastal snow pack confine mountain goats to mature and old forest stands in close proximity to escape terrain. Features of winter range include south and west-facing slopes generally within 400 meters of steep escape terrain. Two of the key factors affecting the functionality of goat winter range are:

- ✧ changes in forest cover, resulting in a loss of snow interception, which, in turn, results in reduced availability of forage, and an increase in the energy required to move from place to place; and
- ✧ increased road access, resulting in increased disturbance and risk of displacement as well as increased risk of direct mortality due to hunting and poaching.

The Kispiox LRMP contains the following strategies for mountain goats:

- ✧ effects of access on mountain goats will be addressed at the landscape planning level;
- ✧ connectivity between alpine and lower elevation winter ranges for annual movements and between landscapes for population dispersal, will be maintained through landscape planning;
- ✧ key habitat features, such as mineral licks, will be identified and protected; and

- ✧ roads will be located and constructed to minimize impacts of increased predator access on wintering goats.

No objectives have been identified in this plan for goat winter range, however, the no-logging provisions within the Atna/Shelagyote SMZ and the access management provision will provide significant protection to goat habitat. The Ministry of Water, Land and Air Protection, guided by legislative authority and LRMP direction may, in the future, apply ungulate winter range guidelines for the purpose of maintaining goat habitat. Guidelines would focus on motorized access.

3.1.2.4 Furbearers

There are a number of furbearers in the plan area. Marten is the most commonly trapped species. Other species include: wolf, lynx, beaver, squirrel, coyote, fox, otter, fisher, weasel, mink, and wolverine (see **Section 3.3.7: Trapping, page 61**). Wolverine and fisher are blue-listed in BC and fisher is a species under the Identified Wildlife Management Strategy (BC MoELP/MoF, 1999).

The marten is an arboreal member of the weasel family. These animals prefer mature and old coniferous forest, although burned and open canopied forest with adequate vertical structure may also be used (Buskirk and Powell, 1994).

Fishers inhabit forested environments, and are generally associated with riparian and dense wetland forest types. Forest structure is particularly important (Banci, 1989). In the West Babine this would most likely include large diameter cottonwood, spruce and hemlock trees with cavities.

Management direction for furbearer habitat

There is management direction throughout the SRMP that will help to maintain the structural features of furbearer habitat, particularly for species that require mature and old forest structure. This management direction includes objectives to:

- ✧ maintain biodiversity across the landbase (**Section 3.1.1, page 12**), including
 - ◆ retention of representative old growth forest;
 - ◆ retention of stand structure within cutblocks, including wildlife trees and specific direction to maintain coarse woody debris for furbearers; and
 - ◆ zoning of Landscape Riparian Corridors to provide connectivity along riparian areas.
- ✧ maintain productive berry sites (**Section 3.3.6.2, page 58**)

Babine River Corridor Park and the Babine River and Atna-Shelagyote SMZs will also provide habitat for furbearers.

3.1.2.5 Bull trout

Studies of bull trout within the West Babine has shown that the Shelagyote system is a significant contributor to the Babine River population (Giroux, 2001). Field assessments have shown that the Shelagyote provides significant staging/rearing areas and over-wintering and post-spawn emigration habitat as well as being a natal stream. Many of these specific habitat features are located within the Atna-Shelagyote SMZ or are buffered by Core Ecosystems or Landscape Riparian Corridors.

The bull trout is blue-listed in B.C because populations are declining throughout its global range. The declines are mainly due to habitat degradation, disruption of migration patterns, and over-fishing.

Management direction for bull trout

The Kispiox LRMP includes the following objectives:

- ✧ to maintain or increase populations of bull trout; and
- ✧ to protect sensitive populations and habitats within stream reaches having identified bull trout populations.

Table 8: Management Direction for Bull Trout

Objective	Indicator(s)	Target/Measure	Management Considerations
1. To conserve critical bull trout habitat in the Shelagyote River and its tributaries.	Location of permanent access structures in proximity to known bull trout staging areas.	No permanent bridge within 750m of known bull trout staging areas on the Shelegyote River.	Information about preferred period for in-stream operations can be obtained from MWLAP and their <i>Skeena Region Work Windows and Measures</i> document. Prior to operations, consult with MWLAP for locations of identified bull trout staging areas as documented in Triton 2002.

3.1.3 Water Quality and Hydrology

The Babine River is the largest tributary of the Skeena River, contributing approximately 15 per cent of the Skeena’s mean annual flow. The upper Babine, outside of the plan area, is composed of Babine Lake and its drainages. The lake drains into the Babine River, which flows 96 kilometres to its confluence with the Skeena River.

The Babine River mainstem and its major tributaries in the West Babine plan area experience their peak flows during the spring freshet and again during late fall storms. Peak flows in the Babine River are moderated significantly by Babine Lake (i.e. the flows take longer to rise, reach a peak that is lower, and maintain a more constant, higher flow than would be expected without the lake). A number of streams in the plan area, including Shedin Creek and Shelagyote River, are glacially fed and introduce natural sedimentation into the river (GTOWPG, 2002).

Water quality is one of the primary interests expressed by the Gitx̱san First Nation and stakeholders. Water quality tends to be most influenced by forestry activities related to road layout, construction, maintenance and deactivation. MSRM has assessed the implications of timber harvesting on water quality and quantity, given the other management strategies that are in place for the area. Generally speaking the West Babine plan area is at a low risk for harvesting-related hydrological instability (i.e., changes to peak or low flows) due to its relatively small amount of operable forest. In addition, objectives to maintain biodiversity, visual quality, and grizzly bear habitat limits the amount of timber harvesting that can occur in a given watershed. In the Gail, Shedin and Shelagyote watersheds where the majority of snow pack accumulates above the operable landbase, and in the Babine watershed where a large portion of the forested area is within the park, clearcutting will have a minimal impact on peak flows and hydrological integrity.

Management direction to maintain water quality and hydrological integrity

The Kispiox LRMP includes the following objective for hydrological integrity:

- ✧ to protect the hydrological integrity of watersheds.

A strategy of the LRMP, which is to be refined at the landscape planning level is: on average no more than 22 per cent of the forested land in a watershed will be in a hydrological condition equivalent to clearcut (ECA). The recommended ECAs by watershed in **Table 10, page 34** are based on assessments by hydrologists in Prince Rupert Forest Region, and replace the 22 per cent “rule-of-thumb average.

Table 9: Management Direction for Water Quality

Objective	Indicator(s)	Target/Measure	Management Considerations
1. To maintain water quality and quantity within the range of natural variability.	a. Equivalent clearcut area (ECA) within each mid-sized watershed.	ECAs to not exceed values shown in Table 10, page 34 without guidance from an independent watershed assessment.	Where the ECA exceeds a trigger for a watershed (see Table 10, page 34) undertake a complete overview watershed assessment (WAP) prior to forest management activities, including: <ul style="list-style-type: none"> ◆ Sediment source mapping (natural); ◆ Description of the natural sediment regime (timing) ; ◆ Erosion hazard mapping; ◆ Detailed field description of where past forest harvesting has occurred.

Objective	Indicator(s)	Target/Measure	Management Considerations
	b. Number of landslides or slope failures from forestry activities as a percentage of watershed area.	No landslides related to forestry development.	Develop the following prior to forest management activities: <ul style="list-style-type: none"> ◆ Terrain stability mapping on class IV & V slopes; ◆ Special management practices for alluvial and colluvial fans; ◆ Erosion control plans.
	c. Sedimentation within the Nichyeskwa, Babine Mainstem and Shelagyote Watersheds (see Map 5, page 70)	Low risk of introducing sediment at stream crossings.	Consider P. Beaudry's Stream Quality Crossing Index (SCQI) methodology.

Table 10: Recommended Equivalent Clearcut Areas (ECAs) by Watershed²⁸

Watershed	Area (Ha)	Recommended ECA Triggers ²⁹
Babine River	55790	—
Gail	25279	20%
Hanawald	23092	30%
Nichyeskwa ³⁰	35843	15%
Shedin	61070	25%
Shelagyote	57437	20%

3.2 Social and Cultural Heritage Values

3.2.1 Cultural Heritage Resources

First Nations have a longstanding presence in the West Babine and there are a number of cultural heritage resources across the landbase related to First Nations occupation and use of the area. There is also a history of non-aboriginal use of the Babine River that dates to early contact. A cultural heritage resource is defined in Section 1(1) of the *Forest Act* as “an object, site or location of a traditional societal practice that is of historical, cultural or archaeological significance to the Province, a community, or an aboriginal people.” In the West Babine, this term refers to the First Nation’s physical infrastructure developed mostly by the Gitx̱san,

²⁸ D. Wilford. Regional hydrologist, Ministry of Forests. 2002. Smithers, BC.

²⁹ Equivalent clear cut area is measured as a percentage of total watershed area.

³⁰ Recommended ECA based on entire watershed and comes from the Bulkley’s Babine Landscape Unit Plan.

including villages, home and camp sites, trails, bridges, and culturally modified trees. There are no identified non-aboriginal cultural heritage sites in the plan area.

The Kispiox LRMP contains the following objectives for cultural heritage resources:

- ✧ to maintain cultural heritage resources, including archaeological sites, traditional use sites and trails, and structural features; and
- ✧ to recognize the significance of House territories and associated resources to First Nations.

Currently, the plan contains no specific management direction for cultural heritage resources. The Gitx̱san are assembling data on types and locations of cultural heritage features in the plan area (see **Map 4, page 69**). Once this information is completed, it can be used to inform resource development activities to ensure that Gitx̱san rights are not unjustifiably infringed upon. Future amendments to the SRMP may include specific objectives to maintain First Nations cultural heritage resources.

Within the Gitx̱san First Nation, the Simoogyet, or House Chief, makes decisions on the issues affecting cultural heritage resources within their House territory. Consistent with Gitx̱san house system, resource development activities should be referred to the appropriate House Chief through the Gitx̱san Treaty Office (250-842-6780). The Huwilp land use plans, currently being prepared for each House territory, will provide additional information regarding management of Gitx̱san cultural heritage resources.

Fort Babine should be contacted through the Lake Babine Nation Office at (250-692-4700).

3.2.2 Visual Quality

The Kispiox LRMP recognizes the Babine River as a scenic area, however, these scenic areas were not formally established under the Forest Practices Code. Visual landscape inventories have been completed for viewscapes from the Babine and Skeena Rivers and a number of lakes (see **Map 8, page 73**). Visual quality objectives (VQOs) have been identified but were not legally established at the time of preparing this plan. Visual management in the Kispiox TSA is intended to be similar to practices within the Bulkley TSA.

The Kispiox LRMP contains the following objective for scenic areas:

- ✧ to maintain visual quality in scenic areas, including the Babine River.

Table 11: Management Direction for Visual Quality

Objective	Indicator(s)	Target/ Measure	Management Considerations
<p>1. To manage viewscapes zoned with a <u>retention</u> visual quality objective so that alterations are not visually apparent (see Map 8, page 73).</p>	<p>Amount and type of visual alteration.</p>	<p>--</p>	<p>Alterations must borrow from natural line and form to such an extent and on such a scale that they are comparable to natural occurrences.</p> <p>Openings will exhibit elements of good block design including strategic placement of leave trees and patches, feathered edges, and borrowing lines from the natural character of the landscape.</p> <p>Alternative systems will be considered where stand structure is suitable.</p> <p>Select a technique (i.e. photographic manipulation or computer model (DTM)) and prepare a Visual Impact Assessment (VIA) for each design option. Consult the forest district if there is any doubt as to the technique necessary for a given operation.</p>

Objective	Indicator(s)	Target/ Measure	Management Considerations
<p>2. To manage viewsapes zoned with a <u>partial retention</u> visual quality objective so that alterations remain visually subordinate to the characteristic landscape and blend with the dominant landscape elements (see Map 8, page 73).</p>	<p>Amount and type of visual alteration.</p>	<p>--</p>	<p>Alterations must borrow from natural line and form to such an extent and on such a scale that they are comparable to natural occurrences.</p> <p>Openings will exhibit elements of good block design including: strategic placement of leave trees and patches, feathered edges, and borrowing lines from the natural character of the landscape.</p> <p>Alternative systems will be considered where stand structure is suitable.</p> <p>Where visible openings are created, silviculture prescriptions will incorporate treatments to reduce the time to visually effective green-up(5 metres).</p> <p>Select a technique (i.e. photographic manipulation or computer model (DTM)) and prepare a Visual Impact Assessment (VIA) for each design option. Consult the forest district if there is any doubt as to the technique necessary for a given operation.</p>

Objective	Indicator(s)	Target/ Measure	Management Considerations
<p>3. To manage viewsapes zoned with a <u>modification</u> visual quality objectives so that alterations borrow from natural line and form to such an extent that they are comparable to natural occurrences (see Map 8, page 73).</p>	<p>Amount and type of visual alteration.</p>	<p>--</p>	<p>Alterations must borrow from natural line and form to such an extent and on such a scale that they are comparable to natural occurrences.</p> <p>Openings will exhibit elements of good block design which may include: strategic placement of leave trees and patches, feathered edges, and borrowing lines from the natural character of the landscape.</p> <p>Visually effective green-up shall be 3 metres.</p> <p>Alternative systems will be considered where stand structure is suitable.</p> <p>Select a technique (i.e. sketch, photographic manipulation or computer model (DTM)) and prepare a Visual Impact Assessment (VIA) for each design option. Consult the forest district if there is any doubt as to the technique necessary for a given operation.</p>

3.2.3 Special Management Zones

There are two Special Management Zones (SMZs) in the West Babine, designated as an outcome of the Kispiox LRMP: Babine River SMZ and Atna-Shelagyote SMZ (see **Map 6, page 71**). Both of these SMZs were zoned for their Scenic/ Recreation/ Wildlife values.

3.2.3.1 Babine River Valley SMZ

The Babine River Valley SMZ is adjacent to Babine River Corridor Provincial Park and provides a buffer between the park and the landbase zoned for integrated resource management. The stated objective of the SMZ is “to protect and buffer the river-based resource values” (specifically grizzly bears, recreation/tourism, and fish habitat and water quality) within Babine River Corridor Provincial Park. The area continues to be used by the Gitksan people and there are a number of cultural heritage features within the area.

The Kispiox LRMP contains the following strategy for within the Babine River SMZ:

- ✧ Timber harvesting will be limited to selective harvesting or clearcuts less than 15 hectares, a slower rate of cut will be emphasized, roads will be temporary and will be deactivated when they are no longer required for forestry, and cutblocks and temporary roads will be located to minimize impacts on the adjacent protected area.

Management within the SMZ is consistent with the Babine LRUP.

Table 12: Management Direction in the Babine River Special Management Zone

Objective	Indicator(s)	Target/Measure	Management Considerations
1. To maintain a single point for motorized road access to the Babine River Corridor Park, located at Nilkitkwa Forest Service Road, so wilderness values can be protected.	Type and location of roads.	No permanent motorized access within the SMZ. All temporary access will remain at least 300 m from the Park boundary. Access Control Points 5 and 6 established prior to entering the SMZ for the Thomlinson Road and Shelagyote Crossing (see Map 12, page 77).	Deactivate roads when no longer required for forestry. “No permanent motorized access” can be achieved through implementing access control points, deactivation strategies or temporary roads.
2. To maintain: <ul style="list-style-type: none"> ◆ the aesthetic (visual and auditory) quality of the Babine River Corridor; and ◆ habitat quality within the SMZ for grizzly bears. 	a. Season and method of timber harvesting. b. Age class distribution.	Winter harvest only. Openings < 15 ha in size. More than 30% of forest stands to be greater than 140 years in age.	Locate cutblocks and roads to minimize impacts to the park. Emphasis on silvicultural systems that maintain the integrity of the SMZ in providing a forested buffer to the park. Suggested management: 200 year rotation. Maintain critical habitat features as described for High value grizzly bear habitat (Section 3.1.2.1, page 22).

Objective	Indicator(s)	Target/Measure	Management Considerations
3. To minimize potential for human-bear interaction.	Type and location of roads within the Babine River SMZ.	Sight distance < 300m along roads.	
4. To respect and preserve First Nations cultural heritage resources and uses within the SMZ.	--	--	To be assessed at the operational level following appropriate consultation procedures. The Gitksan request that the GTO coordinates consultation, and that the house chiefs participate directly.

3.2.3.2 Atna-Shelagyote SMZ

The Atna-Shelagyote SMZ is located in the northern portion of the plan area. Much of the zone is high elevation, encompassing the Atna Mountain Range and Kisgegas Peak and the upper Shelagyote and Sicintine Rivers. The western portion includes the Tommy Jack pass which is in close proximity to the upper Shedin. The objective of the SMZ is “to maintain provincially significant scenic resources, backcountry recreation opportunities, grizzly bear denning habitat, mountain goat habitat, and extensive wetlands in the upper Sicintine and Shelagyote valleys.”

The Kispiox LRMP contains the following strategies for within the Atna-Shelagyote SMZ:

- ✧ commercial timber harvesting will be deferred so that additional information about scenic, recreation and wildlife resources can be collected; and
- ✧ backcountry use will be monitored to ensure recreational use is sustainable.

As a result of the high ecological values identified through further assessment undertaken during the development of this plan, commercial timber harvesting will be precluded from the SMZ. This replaces the temporary deferral from the Kispiox LRMP. This is to maintain the integrity of the large wetland complexes and wildlife habitat and to provide a suitable area for future growth of backcountry wilderness recreation within the plan area. An assessment of timber values has shown that the timber values in the SMZ are low and that the economic impacts of designating the area as no logging are minimal.

Table 13: Management Direction in the Atna/Shelagyote Special Management Zone

Objective	Indicator(s)	Target/Measure	Management Considerations
1. To maintain: <ul style="list-style-type: none"> ◆ provincially significant ecological values; ◆ provincially significant scenic resources; and ◆ backcountry recreation opportunities in the SMZ. 	Amount of resource development activity in the Atna-Shelagyote SMZ.	No commercial logging within the SMZ, except where required for mineral exploration or mine development.	Exploration and development of mineral and energy resources is not precluded in this zone. However, activities will consider the ecological and recreational values for which the zone was established. Backcountry use will be monitored to ensure recreational use is sustainable.

3.2.4 Babine River Corridor Wilderness Protected Area

The Babine River Corridor Wilderness Protected Area was designated by the Kispiox LRMP to “protect a nationally significant unregulated river corridor, high salmonid values, a Class 1 angling river, and critical grizzly bear habitat.” It is important to note that the Gitxsan do not support the notion of the Babine River Corridor as a park and feel they were not appropriately consulted on this decision.

While the park is outside of the management of the West Babine SRMP, geographically it runs through the heart of the plan area and the corridor is an integral part of the watershed.

Management priorities within Babine River Corridor Park are described in the *Management Direction Statement for the Babine River Park* (2000). One of the main management priorities is to protect conservation values, notably salmon habitats, seasonal grizzly bear food sources and habitats, and the SBSmc2 riparian forest ecosystem. An equal priority is to protect river-oriented recreation values and permit wilderness recreation and tourism opportunities that are compatible with protecting conservation values. A further role is to educate the public about First Nations cultural heritage values and past and present First Nations use within the river corridor.

Given the linear nature of the park, protection of its various values requires significant coordination with other agencies responsible for management of resources outside of park boundaries. The Babine River Valley Special Management Zone was designated by the Kispiox LRMP to buffer the environmental and recreational values in the park. Activities are restricted within the SMZ, particularly with regard to access development and timing and extent of timber harvesting.

Because management outside of the park can impact values within the park there are a number of issues that need to be addressed in the SRMP. The Management Direction Statement identifies the following issues as requiring attention in areas adjacent to the park:

- ✧ increases in sedimentation, which may impact downstream fish values;
- ✧ noise, smell and visual impacts from activities outside the park that diminish the wilderness experience;
- ✧ to manage motorized vehicle access to the Babine River as roads are built into the SMZ;
- ✧ impact of increased access on grizzly bears; and
- ✧ vulnerability of large bull trout spawners to habitat disruption and over-fishing following increased access to smaller tributaries outside of the park.

These issues are addressed through management within the Babine River Valley SMZ (**Section 3.2.3.1, page 38**) and management direction for Grizzly Bears (**Section 3.1.2.1, page 22**), Fish Habitat (**Section 3.1.2.4, page 32**) and Water Quality (**Section 3.1.3, page 32**). The *Forest and Range Practices Act* also contains requirements to maintain water quality and fish habitat during forestry operations, for example, to minimize potential for increased sedimentation of streams.

3.3 Sustainable Economic Development

3.3.1 Summary of Economic Development Opportunities in the West Babine

Recreation, both local and commercial, and forestry are the primary resource economic activities in the West Babine. The plan area is also important to the informal, or sustenance economy of First Nations and other local residents.

The Babine River, with its captivating scenery and exceptional angling opportunities, annually draws a large number of resident recreationists and international clientele to fish, raft and kayak. There is also guided hunting in the overall plan area. Clients to the Babine area pay high-end prices to stay in local fishing lodges and fish in a wilderness setting. Total tourism expenditures on the Babine River, including taxes, grossed \$ 3.87 million in 2001 (Babine River Foundation (BRF), 2002).

The Babine watershed is an important timber supply for the communities of Smithers and the Hazeltons. Timber licenses in the West Babine are currently allocated to three forest licensees. The West Babine SRMP area comprises approximately 22.5 per cent of the timber harvesting landbase in the Kispiox TSA. The area north of the Babine River represents a significant portion of the wood supply for two of these licensees over the next ten years.

The West Babine is geologically diverse and there is known potential for metallic and industrial minerals, aggregate, oil, gas, coal and coalbed methane. There are currently mineral claims on the far southeast and northwest lobes of the plan area, but no active mines. A mineralized area on Mt. Thomlinson has been assessed as having large deposits of molybdenum.

The Babine watershed supports a large proportion of the fish in the Skeena River system. While there is little commercial fishing in the West Babine itself, the Gitx̱san do have a food, social and

ceremonial fishery at Kisgegas. When stocks permit, there is also a commercial fishery. The Babine River is very important to the Gitx̄san and Lake Babine Nation food fisheries and the watershed contributes large numbers to the Pacific commercial fish catch. In addition, the Babine supports a world-class sports fishery, particularly related to steelhead.

The West Babine contributes to sustenance activities and the informal economy of the larger area. Hunting, fishing, trapping, berry-picking, and mushroom-picking are all carried out here. These activities are an integral part of the lifestyle of the First Nations, who manage these resources within the House territories represented in this portion of the Babine watershed. Sustenance activities are also important to other residents of the Kispiox.

There is an expectation of consultation and accommodation of Gitx̄san interests arising from their *prima facie* rights and title for all resource development.

3.3.2 Tourism

The West Babine offers a world-class wilderness experience that is enjoyed by local residents and tourists.

At this time, the area supports one steelhead fishing operation, made up of two camps on the Babine River, two guide-outfitting operations, and several commercial rafting operations (see **Map 8, page 73**). Due to the remoteness of the area, tourism features are associated with natural attributes such as wilderness mountains, lakes and rivers, and abundant fish and wildlife. The area also has a number of cultural features that could contribute to aboriginal tourism development by the Gitx̄san, including traditional trail routes, historic village sites and traditional use sites such as Gunanoot Lake. Additionally, Gunanoot Lake is a popular fly-in destination that offers a pristine, wilderness environment.

Access to the plan area occurs by road, watercraft, floatplane and helicopter. Road-based access is limited, involving travel on forestry roads. A number of lakes in the plan area are of sufficient size to facilitate floatplane access (> 0.8 km long). Helicopter access is also possible; however, bases are limited to the community of Smithers. Additional nearby communities include the Hazeltons, Kispiox and Wu'dat (Fort Babine). This plan does not change existing access patterns and future potential access to the Babine River will be affected only minimally.

The Babine River supports a large number of recreational users, who are primarily from BC. Together with the BC residents, a large proportion of existing commercial tourism clients to the area are non-BC residents, with the majority coming from the United States and overseas. Most of the non-commercial recreationists who visit the Babine River are self-guided kayakers, canoeists, or rafters rather than fishers (BRF, 2002).

The Babine is a Class 1 river and, as such, commercial activities are regulated. The Ministry of Water, Land and Air Protection regulates the number of commercial raft trips on the river, the period of commercial angling activity and the number of guided rod days. Class 1 attributes include wilderness setting, exceptional fisheries, good water quality, and uncrowded conditions.

3.3.2.1 Value of the tourism resource

A study commissioned by the Babine River Foundation (2002) has provided a detailed assessment of the economic value of the tourism resource within Babine River Corridor Park. The study estimates that, in 2001, the total contribution to the Provincial Gross Domestic Product of tourists using the Park is estimated at \$5.57 million. The contribution to provincial revenue directly attributable to tourism in the park, including the West Babine portion, was \$323,000,³¹ based on a gross annual income by commercial operators of \$3.87 million (BRF, 2002). Tourism-related employment in the Babine corridor is estimated at 29 full-time equivalent positions, although the seasonal nature of the work means that there are more actual employees (approximately 70) over a short operational window (July to October). The total wages paid in 2001 were \$1,138,057 (roughly \$16,374 per employee over the season). Tips contribute an estimated 17 per cent in addition to wages.

Three angling lodges, and associated satellite locations, situated in Babine River Corridor Park supply world-class angling opportunities to an international clientele. One of those lodges is within West Babine. Operating in a two-month window (September and October), key resources include abundant steelhead fish, clear/visible waters and remote, wilderness settings. The lodges comprise about 50 – 60 per cent of the total commercial activity within Babine River Corridor Park (BRF, 2002). Currently 1718 rod days are allocated for guided angling during the classified period (September 1 – October 31) (D. Atagi, pers comm). The maximum allowable allocation for the Babine River is 1798 rod days.

There are two commercial guide-outfitters with territories in the West Babine. The outfitter located north of the Babine River accesses the area by floatplane and offers a remote wilderness experience. The other outfitter, operating south of the Babine River, bases clients from a nearby lodge at Babine Lake. For the most part, this outfitter relies on road access into the area with clients over-nighting in the front-country. Both guide-outfitters operate between August and late October. Key resources include scenic wilderness settings, large game animals and, for the northern-based operator, accessible lakes. Existing trail infrastructure includes routes leading to Tommy Jack Pass from Damsumlo Lake and to Shelagyote headwaters from Sicintine Lake.

At this time, there are seven rafting operations on the Babine River. Two companies have rights to the majority of the trips allocated to the river. BC Parks allocated fifteen commercial rafting permits in 2003. Two permits are held for exclusive use of First Nations, but are not in use at this time. The maximum allowable commercial use for rafting on the Babine River is four departures in any two week period. July and August are the main months of use for rafting, although some trips do go out in September.

³¹ If indirect and induced economic activities are included, the contribution to provincial revenue is approximately \$548,000. “Indirect” refers to economic activity generated by industries supplying goods and services to tourist businesses; “induced” refers to activity from wages that are, after removal of taxes and saving, re-spent in the economy.

3.3.2.2 Tourism opportunities

All tourism opportunities for the West Babine area must be compatible with the identified values of wilderness, fish, wildlife, habitat, water, visual quality, and cultural heritage features. Future tourism proposals must be evaluated within the context of maintaining these values. The province will consult with first nations on all future tourism proposals and seek workable accommodation of their rights.

Currently two Gitx̱san tourism initiatives are being proposed, both by the House of Miluuluk (Meredith & Associates, 2002a). One proposal involves development of an historic trading trail for the purpose of cultural and eco-tourism. It would entail a central area at the ancient village of Kisgegas³² which would serve as both a staging area for back-country tourists and an interpretative site for rubber-tire tourists. The concept includes the building of a 3,000 sq. ft. long house as a main base of operation; revitalizing old trail routes to Bear Lake; and establishing cabins along the trail that would incorporate themes and instruction about things such as fish/meat processing, leatherwork, and trail gear.

A second initiative involves the building of wilderness cabins northeast of Kisgegas that would be accessible by the Shedin Forest Service road. Other possible opportunities identified by the Gitx̱san include: Shedin River-Shelf Ridge ancient trail system from Kisgegas to Kuldo; the Kisgegas-Atna range ancient trail system and snowmobile route; guided fishing, including fish processing; and grizzly bear viewing.

A third tourism initiative is being undertaken by the Collingwood Bros. They are attempting to develop adventure hiking tours, linked to cabins either developed or that will be developed on Gunanoot Lake, Hilary Lake, Sicintine Lake and Motase Lake.

A tourism opportunity analysis was completed in 2002 to assess the broad capability, feasibility and suitability of seven tourism products within the West Babine but outside of the Babine River Corridor Park (Davis, 2002). The plan area hosts a relatively short summer season (July-October) and an extended winter season (December-May/June). The analysis considered four winter-based and three summer-based tourism products (heli-skiing, cat skiing, ski touring, snowmobile touring, lodge-based fishing, hut-to-hut hiking and mountaineering, and cultural tourism lodges or retreats), all of which have been shown to have moderate to high capability for the West Babine (Davis, 2002).

The following is a summary of general findings from the tourism opportunity analysis. Any proposals for tourism development would need to be assessed more thoroughly regarding impacts on other resource values such as wildlife.

- ✧ the valley and sub-alpine areas between the Atna and Sicintine Ranges appears to offer the most attractive *circle-route opportunities for lodge or hut-to-hut based hiking*, as well as opportunities for *ski touring and winter/summer mountaineering*³³. This area features a few lakes large enough to access by float plane, which are close to high elevation areas;

³² Note that Kisgegas is located within federal jurisdiction and is not a part of the West Babine plan area.

³³ Dietzfelbinger, Christoph. Certified Alpine Mountain Guide. Personal communication. October 9, 2002. Smithers, BC. Note: further on-the-ground reconnaissance is necessary.

- ✧ while an adequate amount of *heli-ski* terrain appears to exist, unless a helicopter is based full-time near or within the study area, this activity is not likely to be economically feasible;
- ✧ limited high elevation road-access occurs for *cat-skiing*; however, the south Atnas are a possible area for development. Currently, local snowmobilers use the south Atnas and there is a cabin accommodating 8 - 10 people nearby. A more detailed investigation into current snowmobile use is recommended as well as possible development opportunities linked to future forest road development in the eastern Atnas;
- ✧ *lodge-based snowmobile touring* could be a popular regional activity, since the area's powder snow conditions and high elevation features are attractive to coastal residents and those living in more moderate terrain. However, the Monashee and Kootenay's popularity for sledding provides a high amount of product competition;
- ✧ currently, commercial *summer- and winter-based mountaineering lodges* are limited in BC, as such, this product could be feasible if equipped with professional guide expertise and appropriate marketing ventures;³⁴ and
- ✧ the close proximity of K'san First Nations Museum and Historic Totem Poles, combined with the potential to develop Kisgegas village, lends itself well to use of the plan area for *aboriginal-themed activities* – especially if combined with other education and recreation-related products.

A Tourism Opportunities Study (Meredith & Associates, 2002b) also identified Mt. Thomlinson as an excellent location for mountaineering opportunities that are readily accessed from population centres. Gunanoot Lake was identified as a recreationally significant lake for canoeing and fishing in a remote, wilderness setting in addition to being a traditional Gitxsan use area.

3.3.2.3 Contribution of the SRMP to economic development for tourism

The key marketable values of this area are an abundance of fish and wildlife in a remote wilderness setting, and extensive First Nations cultural heritage features and values. Currently, clients traveling to the Babine River pay a premium (approximately eight times the expenditures per day compared to the provincial average) to experience high quality fishing in a wilderness setting (BRF, 2002). They also are attracted to opportunities for wildlife viewing and hunting and enjoying the Babine River from the water.

The West Babine SRMP will help to maintain tourism opportunities by:

- ✧ applying visual quality objectives;
- ✧ restricting industrial activity adjacent to the park (within the SMZ) during peak tourism periods (August - October);
- ✧ creating a remote experience by maintaining a single point for motorized access to the river (from the weir located outside the plan area, downstream of Nilkitkwa Lake).

At this time the area outside of Babine River Corridor Provincial Park, especially north of the river, is relatively remote and inaccessible and so receives low amounts of recreational use.

³⁴ Dietzfelbinger, Christoph. Certified Alpine Mountain Guide. Personal communication. October 9, 2002. Smithers, BC.

Issues of carrying capacity and level of use were not considered due to low current levels of use but may be introduced at a later date, if necessary.

3.3.2.4 Management direction for tourism

The following objectives in the Kispiox LRMP direct land managers to factor existing and potential tourism values into resource planning initiatives:

- ✧ to maintain tourism opportunities based on recreation, wilderness, scenery, fish, wildlife and cultural heritage resources;
- ✧ to provide a wilderness environment for fishing, boating, hiking, hunting, camping and wildlife viewing; and
- ✧ to foster a sustainable tourism industry.

In addition, the LRMP has designated two special management zones (SMZs): (1) Babine River SMZ immediately adjacent to Babine River Corridor Provincial Park, with the intent of protecting and buffering river-based conservation and recreation values in the park; and (2) the Atna-Shelagyote SMZ to conserve ecological values and backcountry recreation.

Management direction for tourism primarily applies to forestry and other activities within the Babine River SMZ (**Section 3.2.3.1, page 38**), the Atna-Shelagyote SMZ (**Section 3.2.3.2, page 40**) and the Babine/Babine Tourism Node (see **Map 8, page 73**).

As commercial recreation continues to expand within the West Babine SRMP, ongoing communication between commercial recreation tenure holders and forestry tenure holders will be required. Collaborative planning and good communication, in most cases, will limit future conflicts. Where development is being proposed in the vicinity of established cabins and trails, consideration should be given to maintaining the integrity of these sites. In most cases, harvest system and season of harvest will minimize conflicts between activities.

Table 14: Management Direction for Tourism

Objective	Indicator(s)	Target/Measure	Management Considerations
<p>1. To provide a wilderness experience on the Babine River by maintaining a single access point to the Babine River Corridor Provincial Park.</p>	<p>Type and location of roads within the Babine River SMZ.</p>	<p>No temporary access within 300 m of the boundary with Babine River Corridor Park. No permanent access within the SMZ.</p>	<p>Deactivate all roads once operations are complete. Introduce access control measures, where necessary, to manage the level of non-industrial access into the SMZ.</p>
<p>2. To maintain visual quality and aesthetics from the Babine River.</p>	<p>a. Quality of viewscales within visually sensitive areas. b. Visual quality from the Babine River around the Shelagyote/Babine confluence.</p>	<p>Cutblocks to be < 15ha within the Babine River SMZ. No commercial logging within the area identified as the Shelagyote/Babine Tourism Node (see Map 8, page 73) with the exception of draft cutting permit 991-201³⁵ and a single road built through the zone to access timber between the Shelagyote River and Shenismike Creek. Shelagyote Road and CP 991-201 to be built to a retention VQO as viewed from the existing tourism facilities. Alterations should not be readily visible.</p>	<p>Visual management is addressed in Section 3.2.2, page 35. Shelagyote Road should approximate the location shown on Map 12, page 77. No visible change within the Shelagyote/Babine Tourism Node as a result of other development activities.³⁶</p>

³⁵ As identified in Carnaby's draft 2001-2007 FDP

³⁶ Section 14 (5) of the *Mineral Tenure Act* provides certainty of access for mineral exploration and development outside of protected areas. The statutory decision maker for tenuring and permitting activities related to mineral exploration and development uses LRMP direction as advice to ensure effective integration with other Crown land uses. SRMP direction may be used as a basis for recommending modified mineral exploration or development procedures.

Objective	Indicator(s)	Target/Measure	Management Considerations
	c. Amount of perceptible industrial activity in the Babine River SMZ during times of peak tourism activity (August – October).	No perceptible industrial activity (e.g., noise or dust pollution due to harvesting or road building) within the SMZ during peak months (August – October).	Applies to the range of resource activities, such as forestry, road development, and commercial backcountry use. Avoid blasting within and outside the SMZ from August to October.
3. To Maintain <ul style="list-style-type: none"> the remote access associated with the Babine River Corridor Park and the existing tourism facility around the confluence of the Shelagyote and Babine Rivers; and high-value grizzly bear habitat 	a. Amount of non-industrial motorized use across the Shelagyote Bridge in the Shenismike Shelagyote Access Management Zone (see Map 12, page 77) during or between operations. b. Season of operations across the Shelagyote bridge.	No non-industrial motorized use across the Shelagyote Bridge (see access control point 4, Map 12, page 77). No operational activity (except for road building) between July 31 st and November 15 th across the Shelagyote bridge.	Gate to be installed to prevent non-industrial motorized use of bridge crossing. Bridge should be removed during prolonged periods of inactivity. If access control number 5 (leading into the SMZ) is effective in limiting non-industrial motorized access across the Shelagyote, a second access control point on the Shelagyote River (No. 4), is not necessary. Road and bridge construction can occur within this period, but must be completed by September 1 st .
4. To maintain a wilderness setting for Gunanoot Lake	a. Amount of permanent roads within 1km of Gunanoot Lake. b. Width of right-of-way for temporary roads within 1 km	No permanent roads within 1 km of Gunanoot Lake 20 metres or less	
5. To maintain or enhance the abundance of fish and wildlife within the	--	--	Management of fish and wildlife habitat is addressed in Section 3.1: Ecological Values, page

Objective	Indicator(s)	Target/Measure	Management Considerations
range of natural variability.			12.
6. To maintain cultural heritage features.	--	--	Management of cultural heritage features is addressed in Section 3.2.1: Cultural Heritage Resources, page 34

3.3.3 Forestry

3.3.3.1 Value of the timber resource

The timber values in the West Babine are significant for the Kispiox Timber Supply Area (TSA). Both the Babine LRUP and Kispiox LRMP confirm the importance of the Babine watershed as a timber supply area to support the economies of the local communities.

As of 2003, timber harvesting rights are held by three licensees within the plan area: Northwest BC Timber and Pulp (formerly Skeena Cellulose Inc.), Kispiox Forest Products, and the Ministry of Forests Timber Sale Program (formerly the Small Business Forest Enterprise Program). Currently the Timber Sale Program operates only on the south side of the Babine River. Forestry development on the south side of the river has been active in the Big Slide, Gail Creek and Nichyeskwa Creek areas over the past 15 years. For BC Timber Sale Program, this area represents 21 per cent of the total timber volume for their operations over the next five years.

The area north of the Babine River has only recently been opened up to development. As such, the forests north of the river represent a significant portion of the wood supply in the short-term (5 years) for NWBC Timber and Pulp and Kispiox Forest Products, representing 24.8 per cent and 78.1 per cent of the total timber volume for their operations, respectively.³⁷ The most commercially viable areas for forestry activity on the north side are found primarily in the lower portions of Shedin, Shelagyote and Hanawald drainages. The greatest limiting factor to forestry development on the north side is the infrastructure cost associated with accessing the area between Shenismike Creek and the Shelagyote River.

Commercially harvested tree species in the West Babine include western hemlock, lodgepole pine, subalpine fir, and Interior spruce. Two species of forest insects are endemic in the plan area: balsam bark beetle (*Pryocetes confusus*) and spruce beetle (*Dendroctonus rufipennis*). Beetle hazard mapping by the Ministry of Forests has shown that beetle infestation is not a high risk in the plan area. There are pockets of infestation that can be addressed at the operational scale.

3.3.3.2 Contribution of the SRMP to economic development for timber

³⁷ Based on the most recent Summary of Harvest Tables from Forest Development Plans for these licensees.

The West Babine SRMP will support sustainable forestry-related development by clearly defining the parameters for forestry operations. This will provide greater certainty for licensees and minimize conflicts with other resource values.

The plan will provide strategic direction to forest licensees as they implement the results-based *Forest and Range Practices Act*. The plan will allow licensees to use flexibility and innovation in plan implementation. Flexibility is important both with regard to being able to log a mixed profile and to be cost-effective in accessing wood while meeting objectives for other resource values.

Maintaining access to a commercially viable timber supply is one of the main interests expressed by licensees in order to meet their economic goals. Area-based targets as part of the provincial working forest initiative will be identified within the operable forest, outside of protected areas, reserves, and no-log areas to provide increased certainty to forest licensees and promote investment in the timber resource over the larger TSA.

3.3.3.3 Management direction for timber

The Kispiox LRMP contains the following strategic objectives for timber:

- ✧ to maintain the economic viability of timber harvesting;
- ✧ to maintain the health and productivity of forest resources by providing protection from fire, insects and diseases, and through reforestation;
- ✧ to provide a secure forest land base and a sustainable supply of timber to ensure the long term viability of the timber industry; and
- ✧ to maximize recovery of high quality wood.

The objectives in this section is intended to confirm the goal of maintaining a sustainable and economically viable supply of timber over the short- and long-term. **Map 9, page 74** shows an approximation of stand quality³⁸ within the plan area.

Table 15: Management Direction for Timber

Objective	Indicator(s)	Target/Measure	Management Considerations
1. To provide sustainable and economically viable access to timber supply.	--	--	<p>Timber harvesting activities are permitted throughout the operable forest consistent with objectives and targets in the SRMP for other resource values.</p> <p>Areas zoned for no harvesting e.g., to meet old growth retention targets, have been netted out of the area of commercially viable forest.</p> <p>A working forest target will be developed as part of a provincial initiative.</p>

³⁸ Stand quality mapping differentiates between saw log, marginal saw log and pulp wood based on forest cover inventory. The economic value of these stands will vary depending on the markets for these different products.

3.3.4 Mineral and Energy Resources

3.3.4.1 Value of mineral and energy resources

The West Babine area is geologically diverse and has known resources and potential for metallic and industrial minerals, oil, gas, coal and coalbed methane (CBM). Much of the eastern third of the plan area is underlain by predominantly sedimentary rocks that are considered to have very high potential for the discovery of gas and moderate potential for oil resources (see **Map 10, page 75**). The geology of rocks surrounding these sediments indicates significant potential for finding metallic mineral deposits, ranking in the 8-10 range of the provincial 10-scale ranking for geological tracts (10 is the highest). Knowledge of worth of the area's subsurface resource is incomplete due to the hidden nature of resources and relative lack of exploration for most commodities.

Six past producing mines lie just south of the SRMP boundary. Within the plan area there are 24 known mineral occurrences, and one mineralized site, on the north face of Mt Thomlinson that has been assessed as having 40.8 million tonnes of molybdenum with secondary copper and tungsten (see **Map 10, page 75**). There currently are mineral claims on the far southeast and northwest lobes of the plan area.

Aggregate (sand and gravel) resource potential exists and is currently produced from several sites located just south of the plan area.

There is no active oil, gas or coalbed methane exploration activity at this time. The geothermal potential in the area is low.

3.3.4.2 Contribution of the SRMP to economic development of mineral and energy resources

The West Babine SRMP allows for economic development of mineral and energy resources outside of protected areas. A completed land use plan contributes to certainty of the landbase by clearly indicating areas of ecological, social, or economic concern for consideration during approval and planning of developments related to mineral and energy resources.

3.3.4.3 Management direction for mineral and energy resources

Access to mineral resources outside of protected areas is provided under section 14 (5) of the *Mineral Tenure Act*, which ensures that mining applications are considered, subject to all applicable laws, in all areas except parks, ecological reserves, protected heritage properties or areas where mining has been prohibited by an order under the *Environment and Land Use Act*.

Objectives for other resource values in the SRMP will not preclude application for mining activities anywhere outside of protected areas. This includes, but is not limited to: Core Ecosystems, Landscape Riparian Corridors, high value grizzly bear habitat, and visual landscapes. SRMP direction may be used as a basis for recommending modified mineral exploration or development procedures.

Mineral exploration and development activities are regulated under the *Mines Act* and the *Health, Safety and Reclamation Code for Mines in British Columbia*. A full program of work may also require permits from other ministries and is regulated where applicable, under the *Forest Act*; *Forest*

and Range Practices Act; Forest Practices Code of British Columbia Act; Waste Management Act; Water Act; Environmental Assessment Act; and other federal and provincial statutes.

Oil, gas, coal and coalbed methane (CBM) are subject to intergovernmental review. Oil, gas, and CBM projects are regulated by the *Petroleum and Natural Gas Act and Regulations*. Large energy projects are subject to the Environmental Assessment Process.

The Kispiox LRMP provides the following objectives for mineral resources and oil/natural gas:

- ✧ to encourage new opportunities and development in mining, oil and gas, that provide local employment and investment;
- ✧ to maintain or enhance access to Crown land exploration and development of mineral and energy resources; and
- ✧ to maintain opportunities for sand and gravel mining.

Table 16: Management Direction for Mineral and Energy Resources

Objective	Indicator(s)	Target/Measure	Management Considerations
1. To provide certainty of access for exploration and development of sub-surface and aggregate resources in consideration of objectives and targets for other resource values.	Area of Crown land available for exploration and development of sub-surface resources.	Applications considered for exploration and development of aggregate and sub-surface resources on 100% of Crown lands outside of protected areas. ³⁹	Standard permitting and approval processes include consideration of SRMP objectives and targets for other resource values.

3.3.5 Fisheries

3.3.5.1 Value of the Babine River fishery

The Babine River is prized for its high fish values and its contribution to the commercial, sport and First Nations food fisheries. In recognition of its high values, the river has been designated as both a Class 1 angling river and a BC Heritage River.

Steelhead provide a world class sport fishery on the upper reaches of the Babine River mainstem during the late summer and fall. Babine steelhead have a large body size and are very abundant, both of which make angling on the Babine very desirable. Guided anglers caught an average of 2,439 steelhead annually from 1990 – 1998, with less than 1 per cent of the catch retained (Gottesfeld et al, 2002). There are three lodges on the Babine River that provide opportunities for guided angling. One of these is in the West Babine plan area. Recreational (unguided) angling is also very popular.

³⁹ Includes parks, ecological reserves, protected heritage properties or areas where mining has been prohibited by an order under the *Environment and Land Use Act*.

The Babine River is considered Classified Waters in order to maintain opportunities for “any class of angler to participate in a fishery in a relatively unspoiled, uncrowded environment” (BC Fisheries, 2002). The classified waters system was established to recognize high quality trout rivers in BC, in particular steelhead rivers, and to maintain angling opportunities for resident anglers in those waters. The classification prescribes the level of angling use and guiding activity and allocates use between classes of anglers (BC residents, other Canadians, non-Canadians). Class 1 rivers are premier waters where the level of guided use is restricted.

Summer-run steelhead populations travel up the Skeena during the summer months and arrive in the Babine system in late summer and fall to spawn. The principle spawning ground for steelhead is outside of the plan area and runs from the counting fence to Nilkitkwa lake. The largest concentration of steelhead occurs just below the outlet of Babine Lake (GTOWPG, 2002). Within the plan area, steelhead spawning has been documented in the Hanawald and Shelagyote Creeks, and in the headwaters of the Nichyeskwa Creek (Gottesfeld et al, 2002).

Sports fishing also occurs on the lower Shelagyote River and on some of the lakes in the West Babine. Other sport fish include Chinook, Sockeye, Coho, bull trout, Dolly Varden char, lake trout, and rainbow trout. Within the plan area, bull trout primarily occur in the Shelagyote River and its tributaries.

The Babine-Nilkitkwa lake system supports the largest sockeye salmon population in Canada (GTOWPG, 2002). The Babine population has accounted for 75 – 95 per cent of the Skeena sockeye production, averaging more than 3.8 million adult fish annually since 1990 (DFO, 1999). Much of this high productivity can be attributed to artificial channels in the Fulton River and Pinkut Creek, outside of the plan area, which typically account for more than 70 per cent of smolt production from the Babine-Nilkitkwa lake system.

The Babine chinook are one of the most important of the Skeena chinook populations (GTOWPG, 2002). The West Babine provides rearing and migration habitat for most of the Chinook populations in the Babine drainage, with documented spawning runs on the Shelagyote River and Nichyeskwa Creek (DeGisi, 2000 as cited in GTOWPG, 2002). Pink runs represent approximately 4% of the total Skeena watershed escapement (Gottesfeld et al. 2002) and Chum are present but are not abundant. Babine coho stocks are currently depressed in abundance and of high conservation concern (GTOWPG, 2002). Coho do not spawn in the plan area.

The Babine fishery is of very high importance to the Gitx̱san and Lake Babine Nation. Traditionally, the fishery provided food, trade goods, as well as cultural expression and connection to ancestral practices (GTOWPG, 2002). The Gitx̱san salmon fishery at Kisgegas Canyon is thought to have been the largest traditional aboriginal fishery in the Skeena watershed (GTOWPG, 2002), while the major Lake Babine Nation fishery occurred outside of the plan area, around Nilkitkwa Lake.

Fishing continues to be an integral cultural practice and sustenance activity for the Gitx̱san and Lake Babine Nation. Salmon is a fundamental food source and the sockeye run is, and has been, particularly important to the First Nations. Fort Babine Enterprises operates an Excess Salmon to Spawning Requirement (ESSR) fishery targeting sockeye jacks harvested from the Babine at the counting fence outside of the plan area, primarily by dip-netting (Gottesfeld et al, 2002). In

addition, beach seines and a small seine boat harvest ESSR large sockeye near the Fulton and Pinkut Creek spawning channels, in Babine Lake. When stocks permit, Gitx̱san have an ESSR fishery at Kisgegas.

3.3.5.2 Contribution of the SRMP to economic development of fisheries

The fisheries activity within the plan area involves sport fishing and the Gitx̱san food and fishery. The West Babine SRMP has management direction and zoning to maintain the biophysical capability of fish habitat and the wilderness quality of the sport fishing experience. Measures to maintain fish stocks will contribute to the health of upstream and downstream fishing activities, such as the Lake Babine Nation fishery and the commercial Skeena fishery.

3.3.5.3 Management direction for fisheries

Within the plan area, much of the important spawning habitat for species important to the commercial, sport and First Nations fishery occurs in the Babine River Corridor Park, the adjacent Babine River SMZ, and the Atna-Shelagyote SMZ. Within these zones development activities are limited to maintain other values, including fish habitat and water quality.

Objectives and targets to maintain fish populations and the quality of water include:

- ✧ managing roaded access. Both the Babine River Corridor Park and the Babine River Special Management Zone contain objectives to manage the level of motorized access to the river in order to maintain a wilderness recreational experience. In addition, **Section 3.1.2.4, page 32** includes direction to locate roads away from important bull trout habitat;
- ✧ zoning for Landscape Riparian Corridors and other biodiversity objectives (**Section 3.1.1, page 12**); and
- ✧ thresholds for equivalent clearcut area (ECA) to maintain water quality and the hydrological integrity of watersheds (**Section 3.1.3, page 32**).
- ✧ low risk sedimentation targets for the Babine Mainstem, Shelagyote and Nichyeskwa watersheds (**Section 3.1.3, page 32**)

In addition, **Section 3.3.2: Tourism, page 43** contains management direction to maintain the quality of experience for sports fishers on the Babine River. As part of this, visual quality objectives (**Section 3.2.2, page 35**) have been identified to maintain the quality of viewscapes from the river.

3.3.6 Botanical Forest Products

Botanical forest products are non-timber based products gathered from forest and range land. The Ministry of Forests (1995) has grouped botanical forest products into the following categories: wild edible mushrooms, floral greenery, medicinal and pharmaceutical products, wild berries and fruits, herbs and vegetable products, landscaping products, craft products, and miscellaneous. The West Babine SRMP addresses mushrooms and berries, but recognizes that collection of medicinal plants is also an important activity, particularly to First Nations. The use of medicinal plant preparations is an important part of Gitx̱san traditional medicine, and plants collected include such species as Devil's club (*Oplopanax horridum*), soapberry (*Shepherdia canadensis*), cow parsnip (*Heracleum lanatum*), Indian hellebore (*Veratrum viride*) and common

juniper (*Juniperus communis*) (Gottesfeld and Anderson 1988). The Gitx̄san are hesitant to provide detail around specific locations for medicinal plants, fearing that the plants may then be exploited for commercial use.

The Kispiox LRMP contains the following objectives for the management of botanical forest products:

- ✧ to maintain and use botanical forest products, including wild berries;
- ✧ to maintain mushroom resources and provide opportunities for sustainable harvesting of mushrooms; and
- ✧ to maintain sites that are important for production of traditional medicinal plants.

3.3.6.1 Mushrooms

The harvesting of forest mushrooms is an important activity for the Gitx̄san, as well as other local residents. The Gitx̄san harvest not only pine mushroom, but up to 13 various mushroom species. Commercial gathering of forest mushrooms in the northwest has been increasing over the past 20 years. Commercial species harvested include pine mushrooms, morels, boletus and chanterelles. Pine mushrooms are the most significant commercial species due to a high demand in Japanese markets. The species (*Tricholoma magnivelare*) found in the northwest is closely related to the matsutake (*Tricholoma matsutake*), which is highly valued in Japan.

A 1998 study by Kranabetter et al (2000) found that highly productive pine mushroom habitat is frequently found in mature forest stands (80 – 200 years old) with a submesic soil moisture regime and poor–medium soil nutrient regime. In the West Babine, high value habitat occurs in the 01b phase of ICHmc1 and ICHmc2 subzones. The 01b site series is dominated by Western hemlock with a minor component of lodgepole pine and stepmosses. In the West Babine, this site series occurs in the Shedon and lower Sam Green watersheds. Approximately 339 ha of pine mushroom habitat have been identified in the plan area, which represents approximately 1.2 per cent of the total ICH zone (Freisen, 2002).

There are no estimates of the number of people harvesting mushrooms in the area or the dollar value of the mushrooms harvested.

Management direction for pine mushrooms

Due to the small amount of mushroom habitat in the plan area, management direction is focused mainly on maintaining a portion of mushroom habitat in productive age classes.

Table 17: Management Direction for Pine Mushrooms

Objective	Indicator(s)	Target/Measure	Management Considerations
<p>1. To maintain high value pine mushroom sites (ICHmc1 (01b) and ICHmc2 (01b)) through time. See Map 11, page 76.</p>	<p>Age class distribution of ICHmc1 (01b) and ICHmc2 (01b) sites greater than 3 ha.</p>	<p>>60% of ICHmc1 (01b) and ICHmc2 (01b) sites >80 yrs.</p>	<p>Management applies to the submesic ICHmc1 (01b) and ICHmc2 (01b) sites within the polygons identified on Map 11, page 76. Mapping may be modified at operational planning level, following on-the-ground assessment of site series.</p> <p>If stand level retention was >50%, then stand age would be considered >80 years old.</p>

3.3.6.2 Berries

Berry-picking is an integral part of the cultural fabric and subsistence economy of Gitx̱san and is also important to non-Gitx̱san residents of the Kispiox area. Traditionally, wild berries were the most important plant food within the watershed, with huge quantities collected and consumed (GTOWPG, 2002).⁴⁰ The Gitx̱san have a number of traditional berry management areas that have been managed and handed down from generation to generation within Houses or Huwilp (Burton et al, 2000). Until the time that fire prevention came into effect in the 1930s, these managed areas were actively burned to prevent trees from encroaching and to stimulate the growth of new shoots. Since fire prevention, the productivity of some of these areas has gone down considerably (Burton et al, 2000).

Some of the most significant berry species of interest to gatherers are soapberry, high-bush cranberry, oval-leaved blueberry, and black huckleberry. Black huckleberry (*Vaccinium membranaceum*) is particularly important and the following management direction pertains primarily to this species. Black huckleberries are able to persist as an understory shrub, but are most vigorous and productive for berries in open, early seral stands. Berry yield has been shown to be reduced below 60 per cent exposure to sunlight, with maximum productivity at 90 per cent exposure (Wintergreen Consultants, 2001).

There is one cottage industry, Wilp Sa Maa’y Harvesting Co-operative based out of Hazelton, that picks huckleberries and sells the jam. It is thought that only a small proportion of the berries for the co-operative are harvested in the West Babine. The co-operative pays about \$5000/year in total to berry pickers and has about \$12,000 a year in sales. There is a product demand that

⁴⁰ Total annual huckleberry harvests in pre-European times are estimated at 400 litres per person. Based on population estimates of 1,000 or more people near Kisgegas, this would translate to over 400,000 litres of huckleberries per year, requiring at between 1,500 and 2,400 ha of productive huckleberry bushes (Burton et al, 2000).

would allow a three to five-fold increase in operations but the project would need capital to increase in size (P. Burton, pers comm.).

Management direction for berries

The Gitksan have mapped berry management areas within the West Babine (Map 11, page 76; polygons from SWAT 1999). The following objectives and targets are to promote berry productivity within berry management areas. They are based on recent studies into berry management in the Kispiox Forest District (Burton et al., 2000; Oikos, 2001; Wintergreen, 2001).

Table 18: Management Direction for Berries

Objective	Indicator(s)	Target/Measure	Management Considerations
1. To maintain and enhance the productivity of berry habitat within berry management areas (see Map 11, page 76).	a. Amount of full sunlight available on harvested sites within mapped berry management areas.	Where harvesting occurs, remove sufficient forest cover to provide at least 60% exposure to sunlight.	Where berry areas overlap the THLB, use silviculture systems that result in a substantial uniform canopy reduction or large gaps in the canopy e.g., clearcuts, patch clearcuts, coppice systems, seed tree systems, and irregular and group shelterwood systems ⁴¹ .
	b. Amount of impact on soils and understory vegetation.	--	Minimize impacts to understory vegetation and associated root systems. Use low ground disturbance systems such as hand falling and cable logging. Alternatively, use conventional mechanical falling and skidding on a sufficiently deep snow pack (approx 75 cm).
	c. Productivity of berry shrubs.	--	Apply appropriate cultural and silviculture practices to traditional berry-picking areas to enhance productivity. Examples include: <ul style="list-style-type: none"> ◆ Prescribed low intensity burning to kill older berry plants, kill over-topping trees and shrubs, increase soil nutrients, and stimulate resprouting. ◆ Avoid cutting berry plants during brushing and spacing of commercial trees. ◆ Restocking trees at low densities (approx 420 stems/ha minimum).

⁴¹ Burton, P, C. Burton, and L McCulloch. 2000. *Exploring options for the management of wild berries in the Kispiox Forest District: Phase One of a pilot project focussing on the Suskwa River area*. Kispiox Forest District. Hazelton, BC

3.3.7 Trapping

3.3.7.1 Value of trapping in the West Babine

The Gitx̓san have identified the importance of trapping, and associated trapline areas in the West Babine plan area. There are eleven registered trapline areas, or portions thereof, within the plan area. Seven of these recorded some commercial activity within the last 16 years.⁴² Marten is, by far, the most common species trapped. The following trapped species are also known to occur in the plan area: lynx, beaver, squirrel, coyote, fox, otter, fisher, weasel, mink, wolf and wolverine.

Most of the trapping activity in the West Babine area appears to be for subsistence purposes. Many years the records show less than 20 furs per trapline. Based on an estimated value of marten of \$20 per pelt, the average income from trapping per year would be \$400. Monetary return on trapping can be enhanced by making furs into value-added products such as moccasins, gloves, hoods, etc. Furs may also be traded internally amongst First Nations, who continue to trap for food, ceremonial and social purposes.

3.3.7.2 Contribution of the SRMP to trapping

The SRMP contributes to trapping by providing management direction to maintain biodiversity across the landbase, including retention of old growth forests, increased stand level retention in larger blocks and maintaining forest cover within riparian areas (**Section 3.1.1, page 12**). Objectives to enhance berry production (**Section 3.3.6.2, page 58**) will also contribute to furbearer habitat. Habitat for furbearers is discussed in **Section 3.1.2.3, page 31**.

3.4 Access Management Summary

Access management strategies are a key component to this plan. Access management zones and access control points (see **Map 12, page 77**) have been identified to protect and maintain wildlife, specifically grizzly bear, wilderness values associated with the Babine River and associated tourism values. Minimizing active road densities is a critical part of decreasing grizzly bear mortality and habitat displacement risk associated with human-bear encounters.

Existing access to the Babine River Corridor Park for local residents will not be impacted by the access management direction within the plan. Future access will be affected only minimally to maintain high value grizzly bear habitat and to minimize human-bear interactions that may result in increased bear mortality or habitat displacement.

The following table summarizes management zones and access control points identified in this plan. For more information about objectives related to these zones and points, please see appropriate section as referenced in **Table 19, page 62**.

⁴² MWLAP keeps a provincial Fur Harvest Data system. All trapline holders are required to report the fur harvest to MWLAP if they are going to be selling their furs. The data system does not record trapline date if furs were used for personal consumption (i.e., crafts or clothing) or used to make value-added products for resale.

Table 19: Summary of Access Management

Access Management Zone/ Access Control Point (ACP) #	Key Value(s) Being Managed For	Objectives Found in Section
Sperry/Rosenthal 1	Grizzly bear habitat	3.1.2.1
Shenismike West 2	Grizzly bear habitat at Grizzly Drop	3.1.2.1
Big Slide 3	Grizzly bear habitat, wilderness values of park	3.1.2.1
Shenismike-Shelagyote 4	Wilderness values of park; tourism	3.3.2
Shelagyote Crossing 5	Wilderness values of park; integrity of Babine River SMZ	3.2.3.1
Thomlinson Road 6	Wilderness values of park; integrity of Babine River SMZ	3.2.3.1
Nichyeskwa Connector 7	Grizzly bear habitat, wilderness values of park	3.1.2.1

In addition to the above access control points, secondary and tertiary roads throughout the plan area should be decommissioned following completion of planting, to the extent that motorized traffic is not practical or is prohibited. An emphasis will be placed in areas that contain a mosaic or a concentration of high value grizzly bear habitat (see **Map 7, page 72**). All secondary and tertiary roads in the Shenismike-West access management zone that are on the south side of the primary road should be deactivated to the extent that it inhibits foot travel. This can be done through the building of winter roads only, with high stumps, right-of-way slash and logging slash pulled back on to the road following completion of operations.

4.0 Plan Implementation, Monitoring and Amendment

Following Government approval of the plan, the management objectives and targets will be applied through a dual process of implementation and monitoring. Implementation and monitoring of the plan is a shared responsibility between government agencies and stakeholders. First Nations should also be involved in both the administrative side of the implementation and monitoring processes, as well as in the operational decision making.

4.1 Implementation

MSRM will be establishing the West Babine SRMP plan area as a single landscape unit and the objectives, indicators and targets within the plan will be established as landscape unit objectives. These designations will be made under sections 4(1) and 4(2) of the *Forest Practices Code of British Columbia Act*.

Holders of Crown land tenure are responsible for the implementation of the plan. Alternative methods of implementing the plan may be used if they clearly achieve or surpass the plan's objectives and associated targets. The Ministry of Forests will play a crucial role in the approval of forest stewardship plans prepared by forest licensees. To determine if the results and strategies proposed within a forest stewardship plan will meet land use objectives, the person preparing a forest stewardship plan should consider the following factors and their information requirements.

Table 20: Additional Factors and Information to be Considered in Developing a Forest Stewardship Plan

SRMP Objective	Factors to be Considered	Information Requirements
3.1.3 (1.a) - Watersheds	The cumulative effects of forest harvesting and other development with mid-size watersheds.	Watershed assessment prior to ECA triggers being exceeded.
3.1.3 (2.a) – Fish stream crossings in high-value watersheds	The presence or absence of fish.	Fish stream classification (or default to fish bearing)
	The risk of introducing sediment into the stream.	An evaluation and monitoring strategy to ensure mitigation measures are effective in maintaining a low risk of sediment entering the stream.

SRMP Objective	Factors to be Considered	Information Requirements
3.1.2.1 (8) – High value grizzly bear habitat	The affect of development on grizzly bears and bear habitat.	<ul style="list-style-type: none"> ◆ Amount of disturbance from cutblocks within 100 meters of critical habitat types (consider season of operation, existing use of habitat), ◆ the number and amount of roads within 150m of critical habitat types, ◆ the amount of development (ha) within high-value habitat.
3.1.2.1 (2) – Big Slide, 3.1.2.1 (4) – Sperry/Rosenthal 3.1.2.1 (6) – Shenismike West	The affect of access on grizzly bears.	<ul style="list-style-type: none"> ◆ Location and type of access control measures being proposed, ◆ duration of operations within the zone as this relates to the need for and use of roads, ◆ the extent of development (ha) within each zone.
3.2.2 – Visual Quality	The affect of development on visual quality from identified locations.	<ul style="list-style-type: none"> ◆ Visual impact assessments from the Babine River, Gunanoot Lake, Skeena River and Sicitine Lakes where development occurs within visible areas.
3.1.1.2 (2) – Seral Stage	The affect of development on biodiversity.	<ul style="list-style-type: none"> ◆ The amount of forest in early, mature plus old and old at the end of a proposed FSP, ◆ the range of patch sizes for each watershed unit, ◆ the percentage of a development unit area proposed to be retained for wildlife, ◆ the amount of development within core ecosystems and landscape riparian corridors, including the proposed silviculture system.

Land and Water BC and the Ministries of Forests, Energy and Mines, and Water, Land and Air Protection will assess development proposals to ensure that SRMP objectives are being met.

On a periodic basis, MSRM will conduct a review of approved SRMPs to assess progress in plan implementation and efficacy, in conjunction with regularly scheduled LRMP reviews. Review findings will be documented and published on the regional website and reported to the LRMP monitoring committees. This review will guide service plan development and setting of priorities and practices for SRMP implementation.

4.2 Monitoring

The monitoring phase of the plan involves ongoing assessment of how well the management objectives of the SRMP are being implemented. Resource values in the plan area are subject to varying degrees of risk from development activities. Resource values at high risk will require more regular monitoring than values at low risk, and this will be reflected in the monitoring plan for the SRMP.

Monitoring of this plan will be embedded in the procedures and monitoring reports for the Kispiox LRMP.

To monitor the implementation and effectiveness of this plan and other plans in the entire Babine River watershed, it is proposed that a monitoring trust be established upon completion of this plan. The proposed trust would be managed as a non-profit public-private partnership among government, business and First Nations. It would monitor the values, uses and impacts on the features integral to the Babine River watershed. A Board of Directors would manage the Trust and be primarily responsible for attracting financial contributions, setting priorities for monitoring and developing strategies for implementation.

4.3 Adaptive Management

This plan was developed using the best available information and knowledge. However, our understanding of resources and ecosystems is imperfect and there are uncertainties associated with the plan, both in the information and knowledge used and in the effectiveness of management recommendations. To address this uncertainty MSRMP recommends an adaptive management process to allow continual improvement of management policies and practices. By monitoring key responsive indicators over time and incorporating new information and knowledge, resource managers will be able to analyze and report on the outcomes of their management practices with respect to baseline conditions and incorporate this knowledge into future management approaches. An adaptive management framework could be an effective way of structuring the monitoring of the plan and would need to be developed and implemented by the Trust.

A technical companion document accompanies this plan. This document is an important reference to determine what information and assumptions were used to develop the objectives, strategies and targets, which is required to facilitate adaptive management.

4.4 Plan Amendment

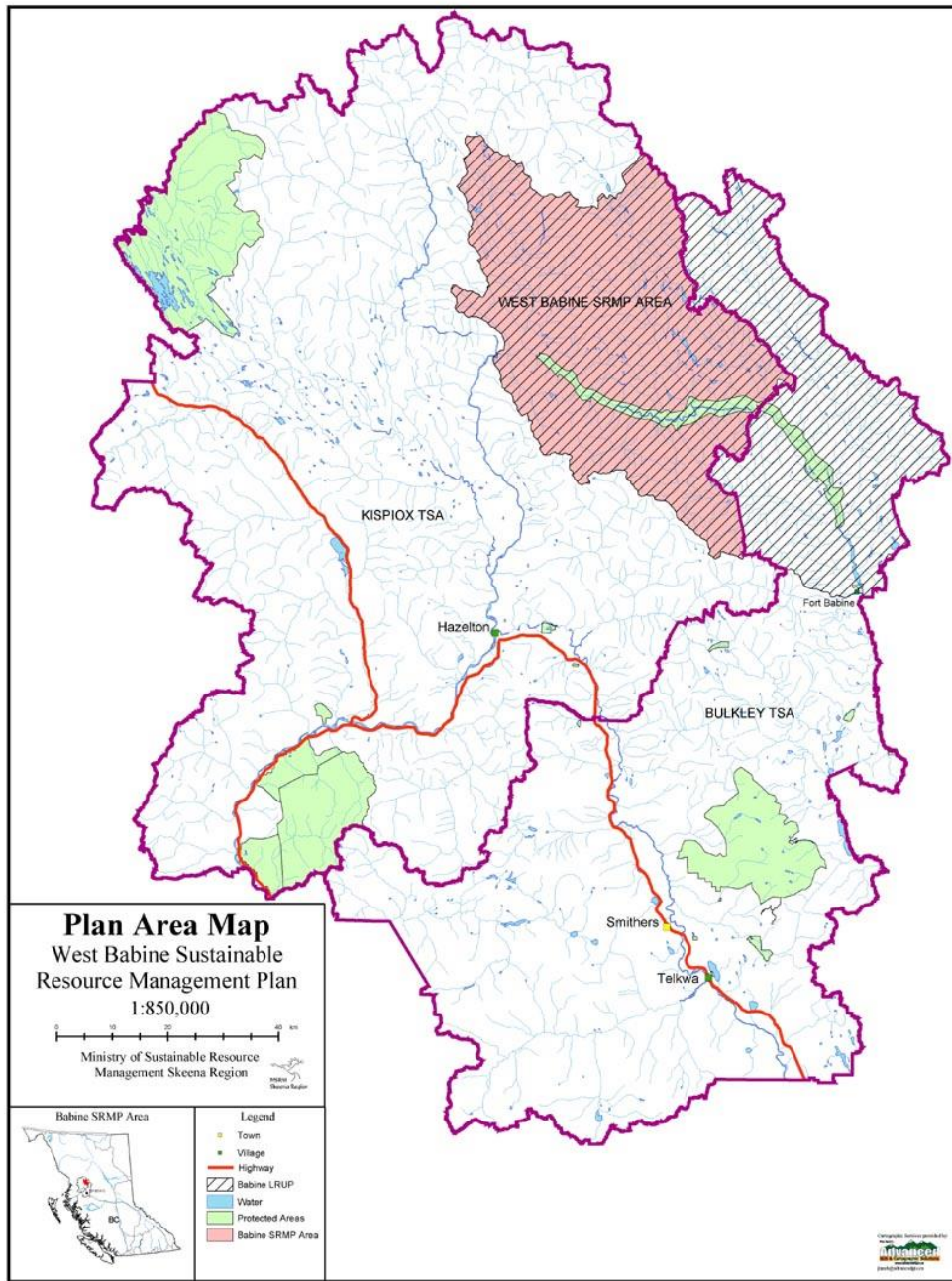
A variety of factors will be considered when evaluating the need for plan amendment. The plan may be amended if:

1. the province and First Nations agree to undertake cooperative planning to further integrate First Nations interests into the SRMP. The amendment process would include consultation with the public and stakeholders.
2. monitoring results show that the SRMP **objectives** are ineffective in achieving **plan goals**. The amendment process would include consultation with First Nations, public and stakeholders.
3. monitoring results show that the **indicators and targets** are ineffective in achieving plan objectives. If there is **minimal social or economic impact**, the plan will be amended to incorporate the new indicators and targets with a minimum of consultation.
4. monitoring results show that the **indicators and targets** are ineffective in achieving plan objectives. If there is **significant social or economic impact**, the amendment process would include consultation with First Nations, public and stakeholders.
5. If monitoring results show that the **management considerations** are ineffective in achieving plan targets and indicators, then new management considerations can be developed without amending the plan itself.

A SRMP and/or the legal objectives that have been established to implement the SRMP should be reviewed at least once every ten years to ensure the plan objectives are still relevant and provide the appropriate balance between social, economic and ecological objectives.

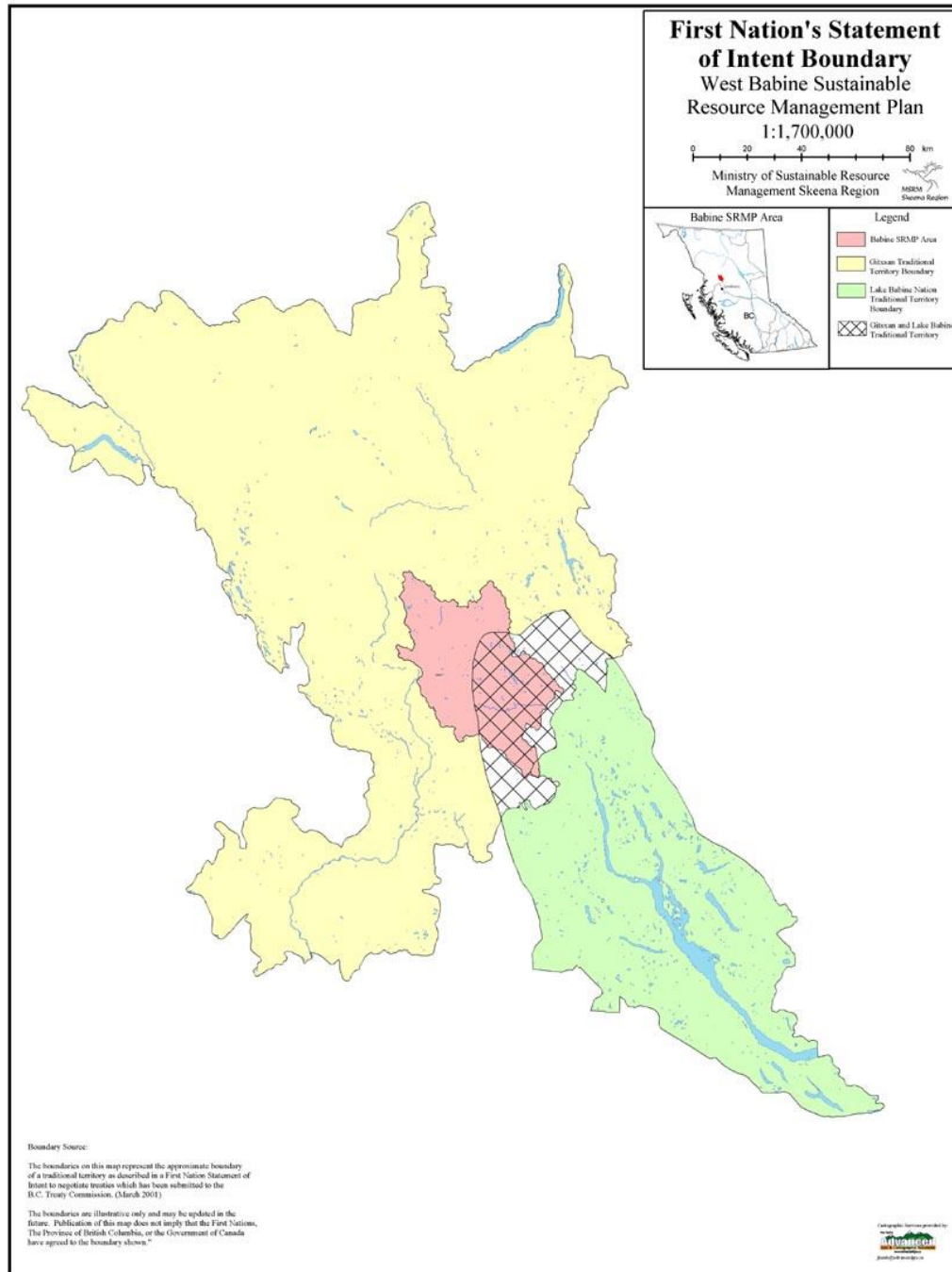
Maps

Map 2: Plan Area

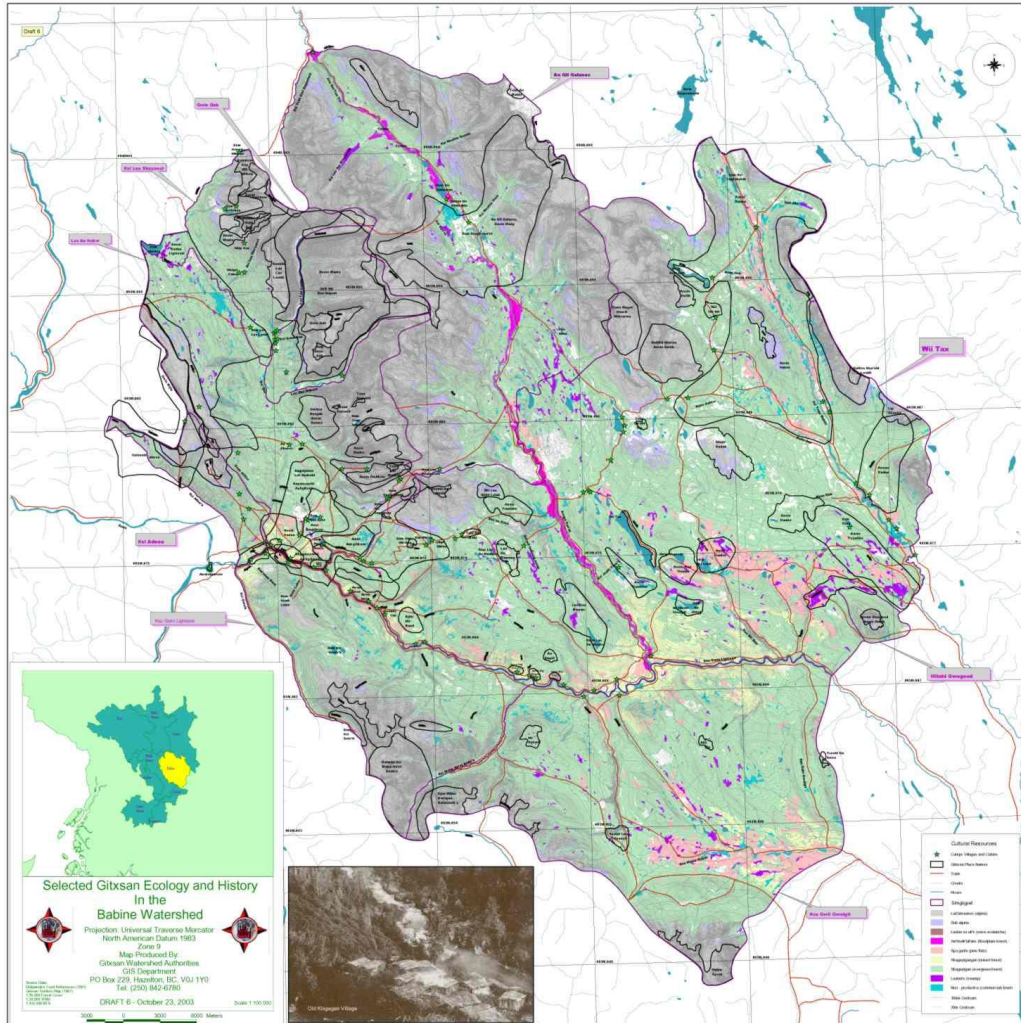


Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Map 3: First Nation's Statement of Intent Boundary

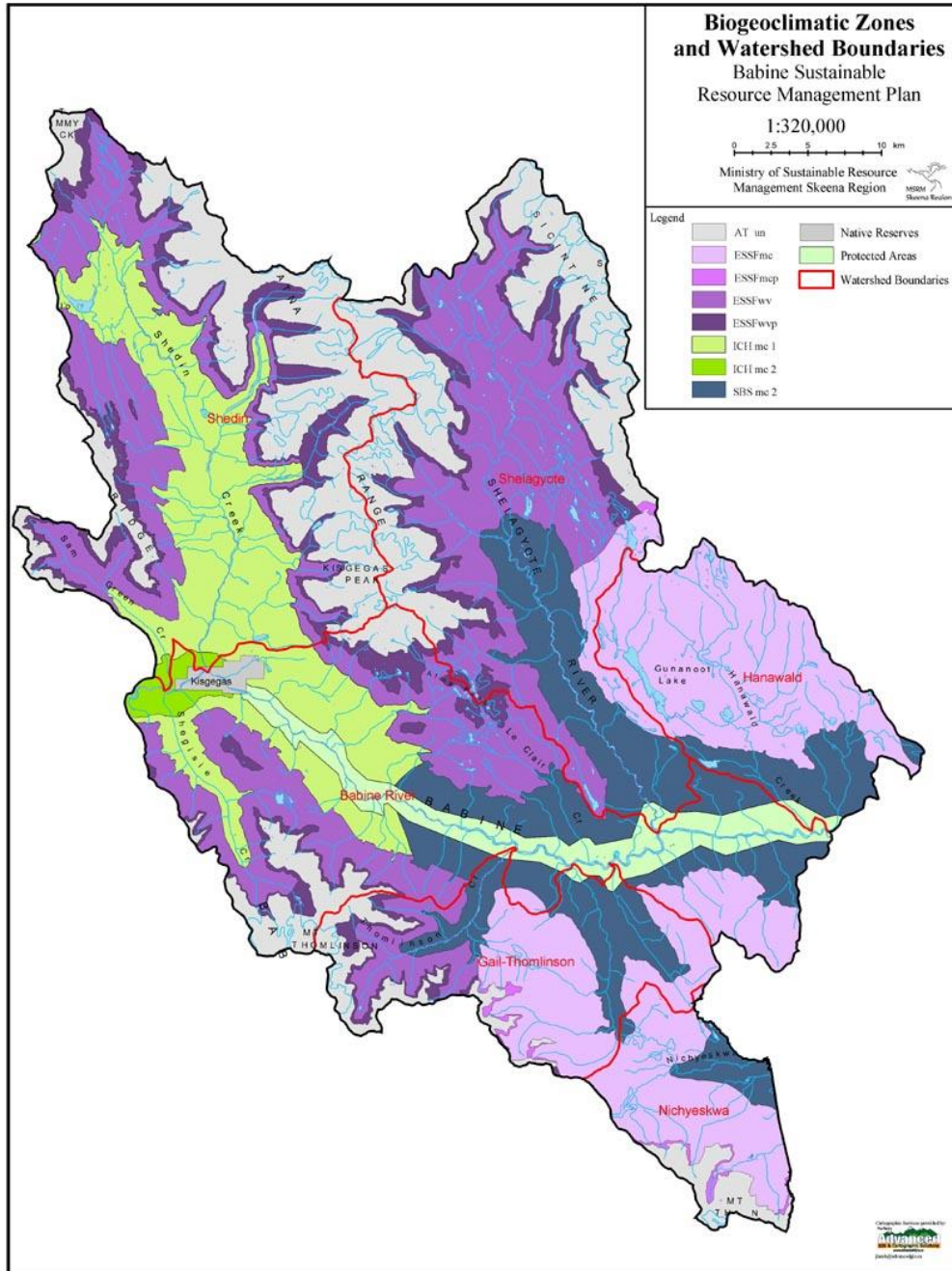


Map 4: Selected Gitksan Ecology and History in the Babine Watershed

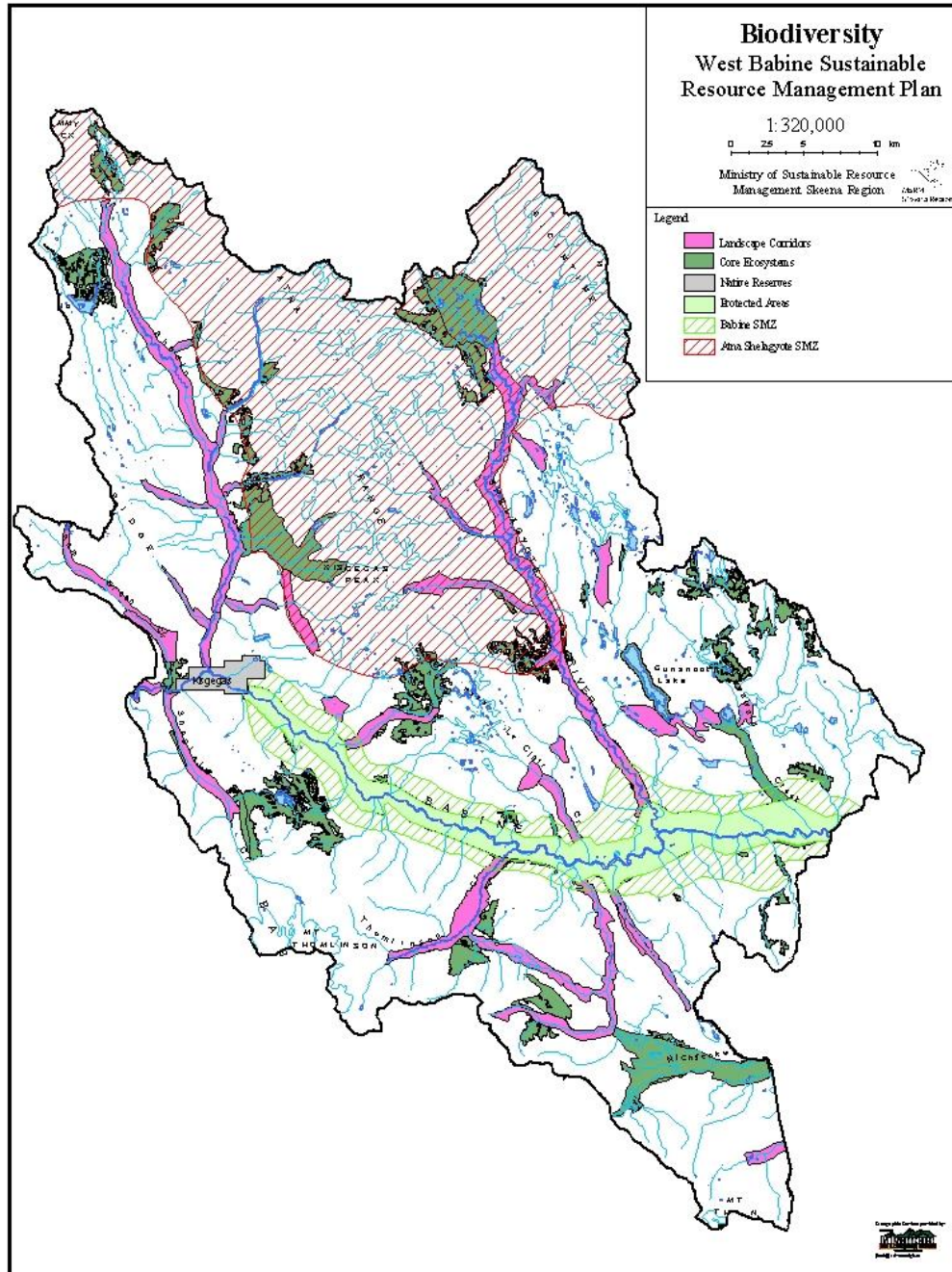


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Map 5: Biogeoclimatic Zones and Watershed Boundaries

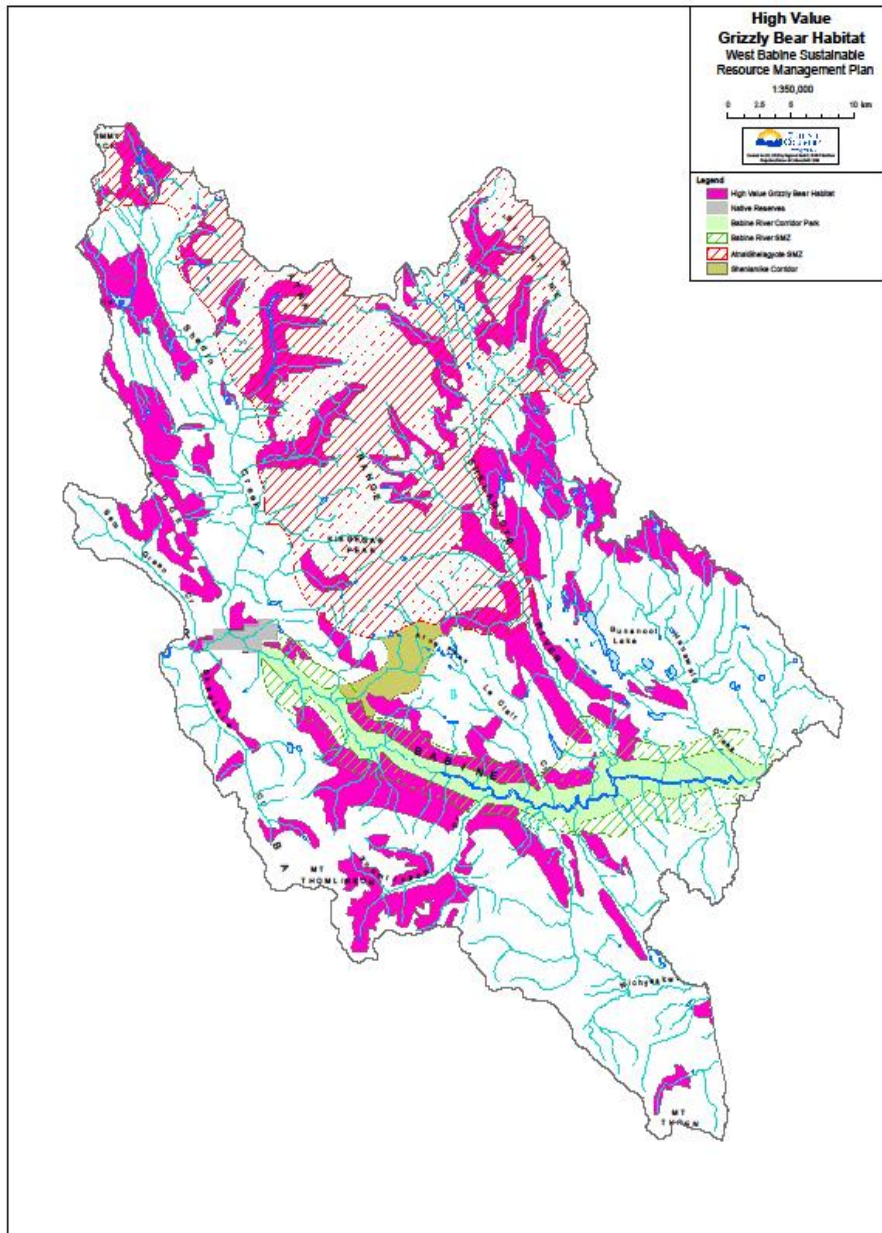


Map 6: Biodiversity

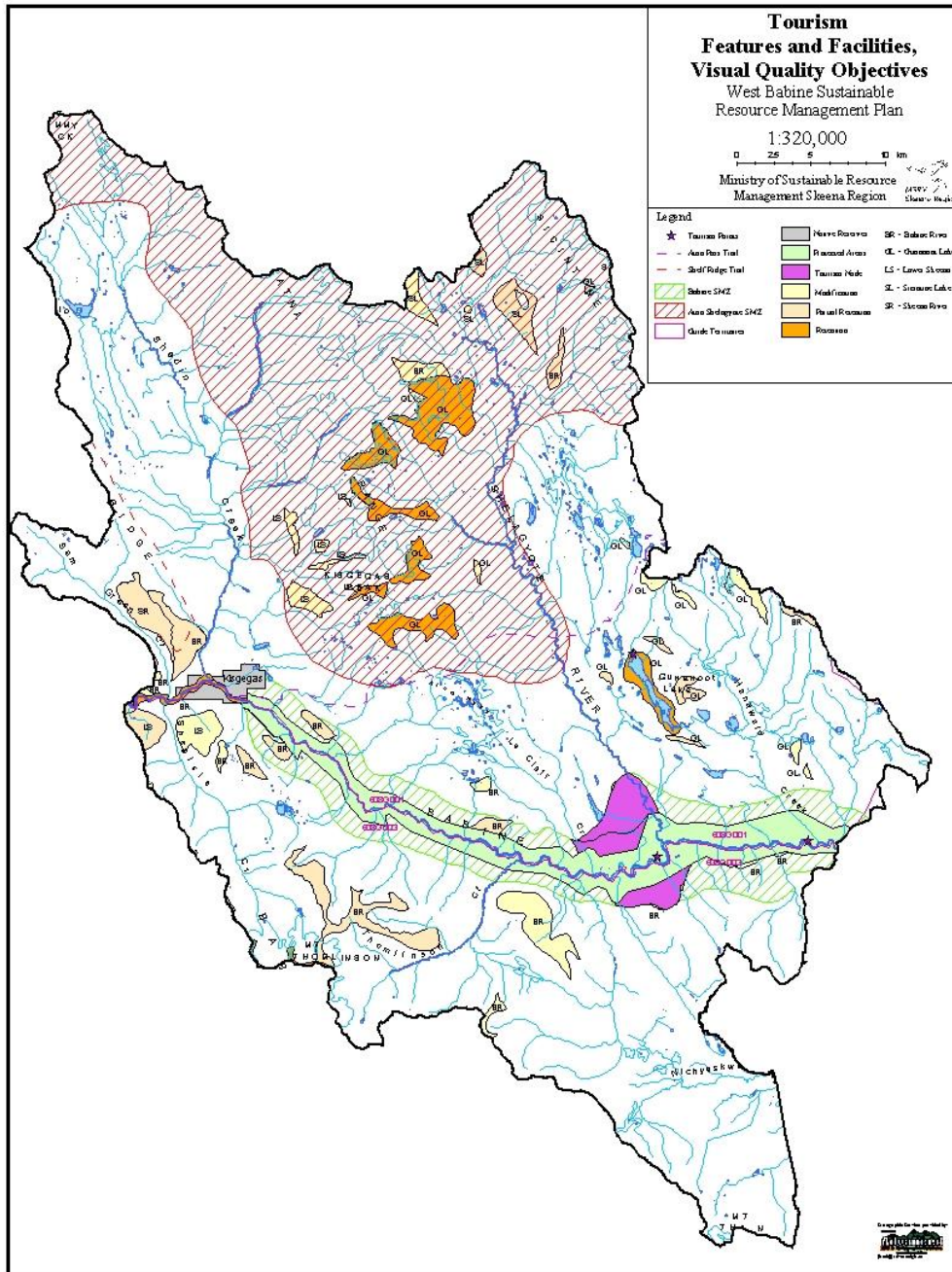


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Map 7: High Value Grizzly Bear Habitat (amended 2012)

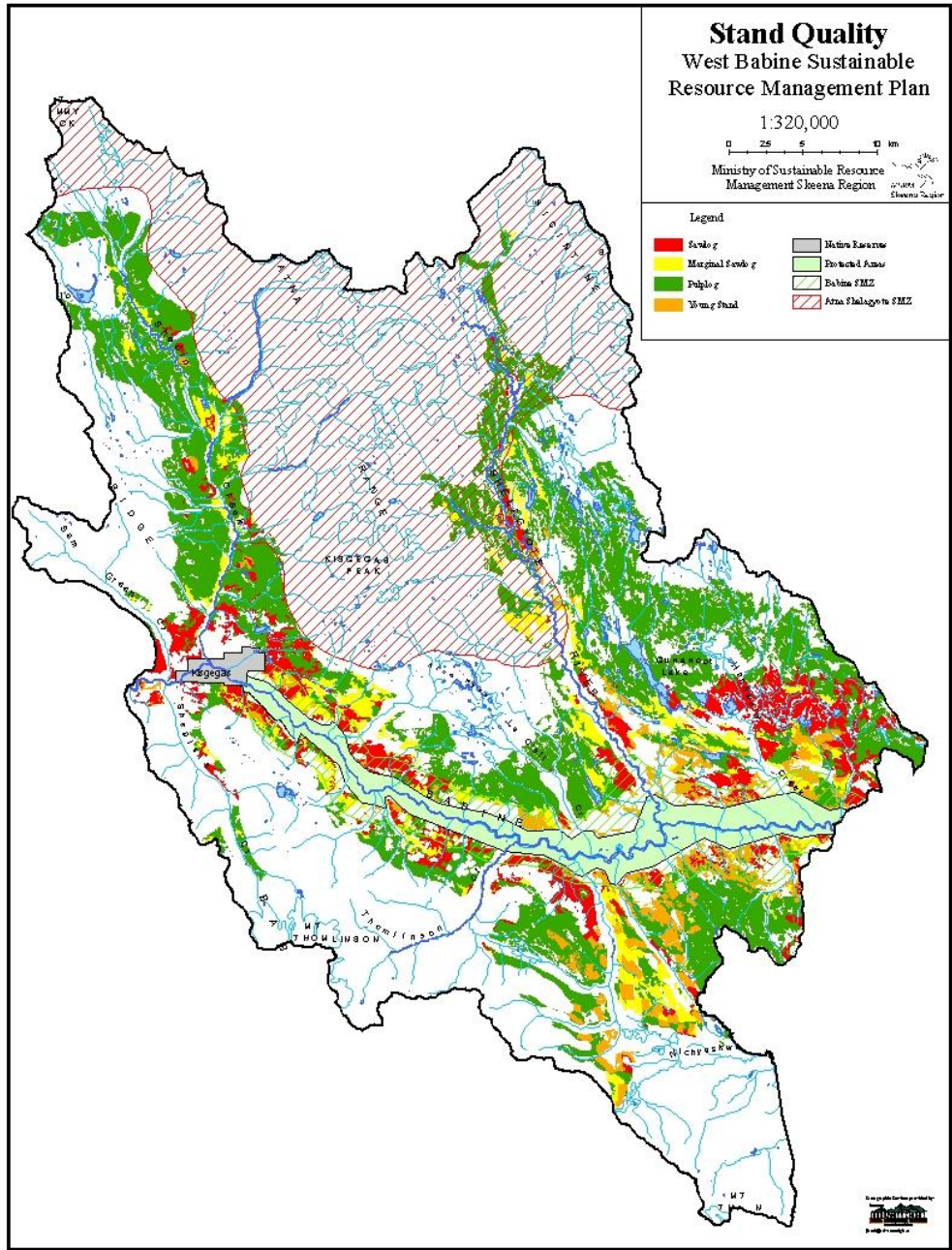


Map 8: Tourism Features and Facilities, Visual Quality Objectives

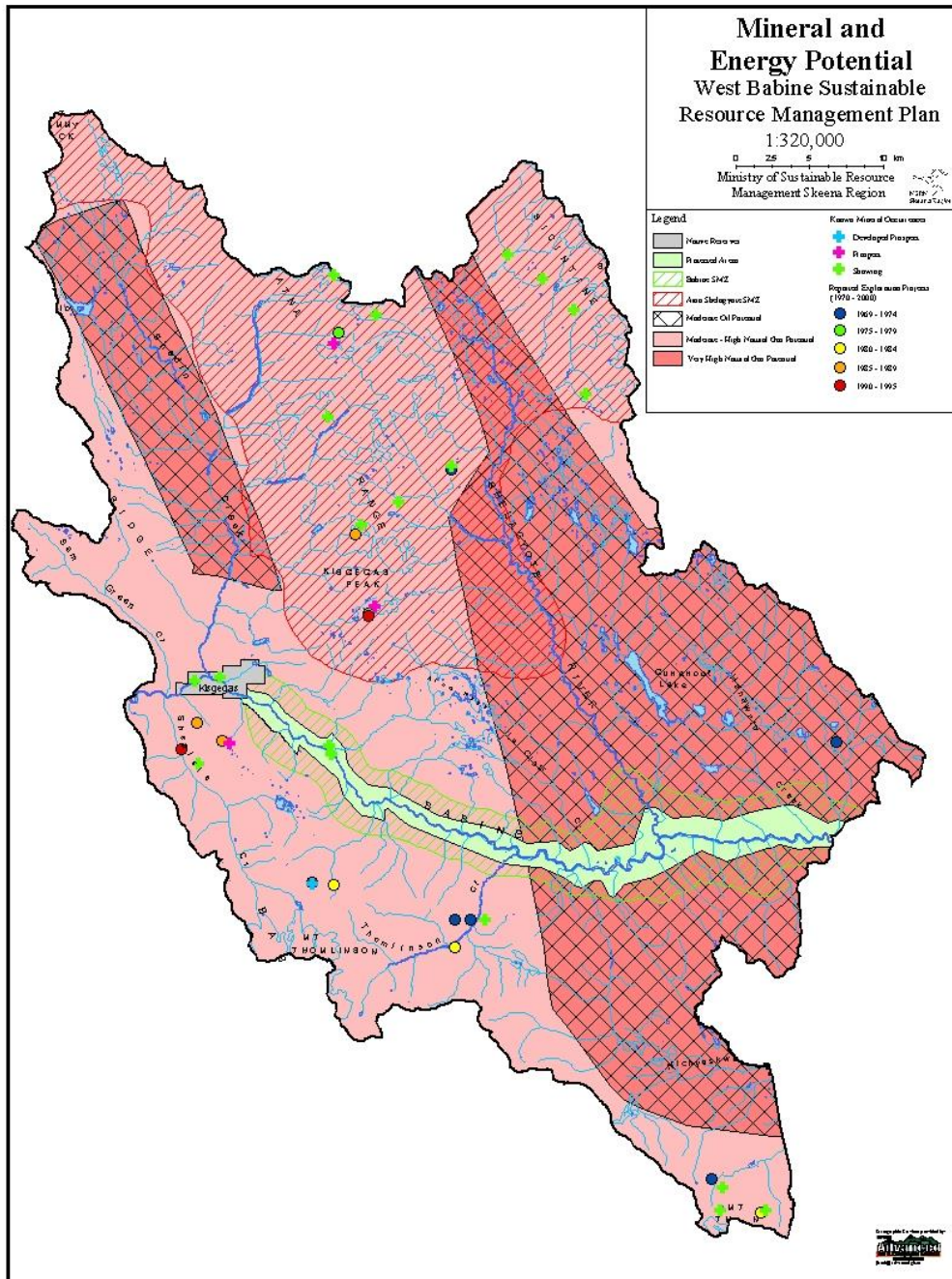


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Map 9: Stand Quality

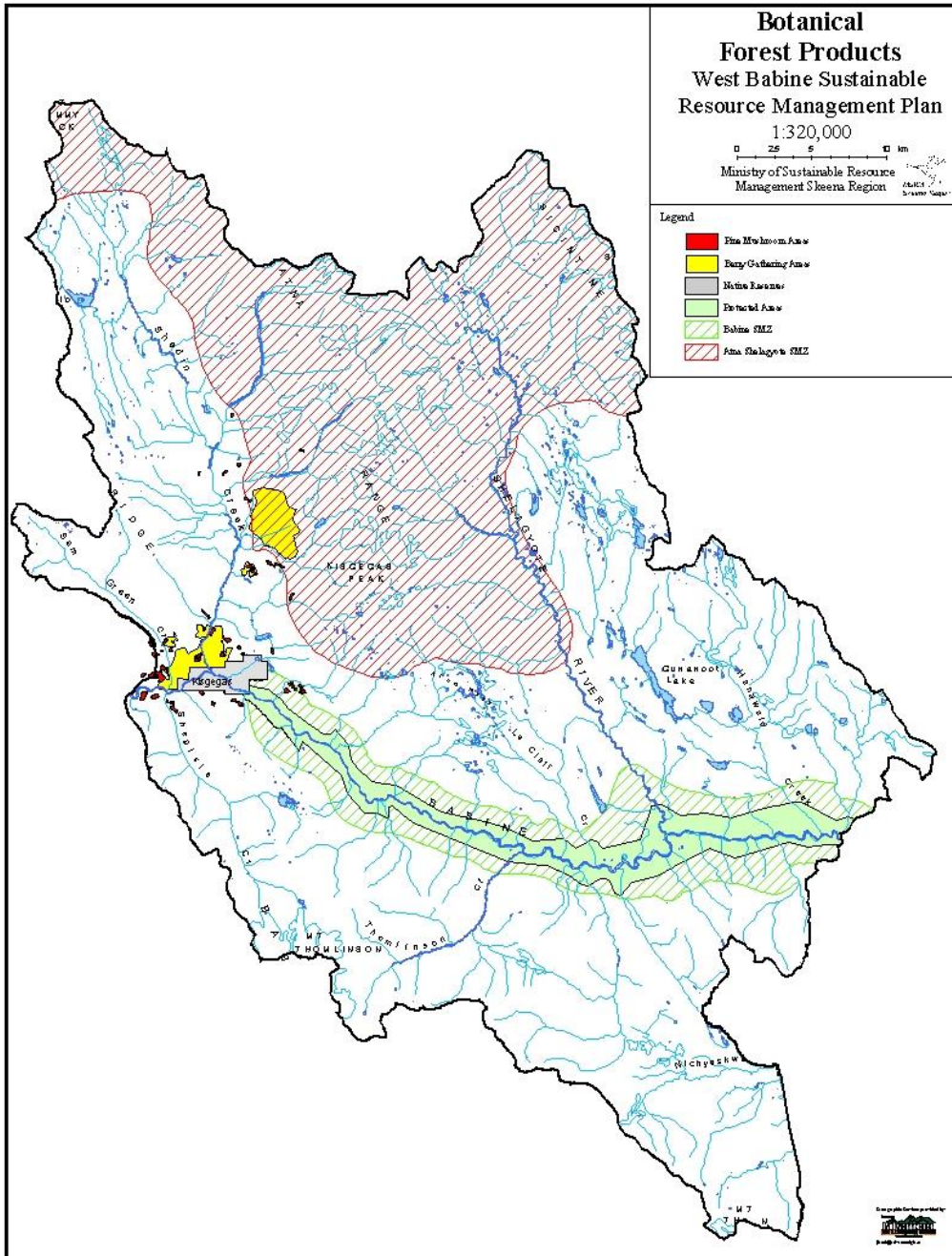


Map 10: Mineral and Energy Potential

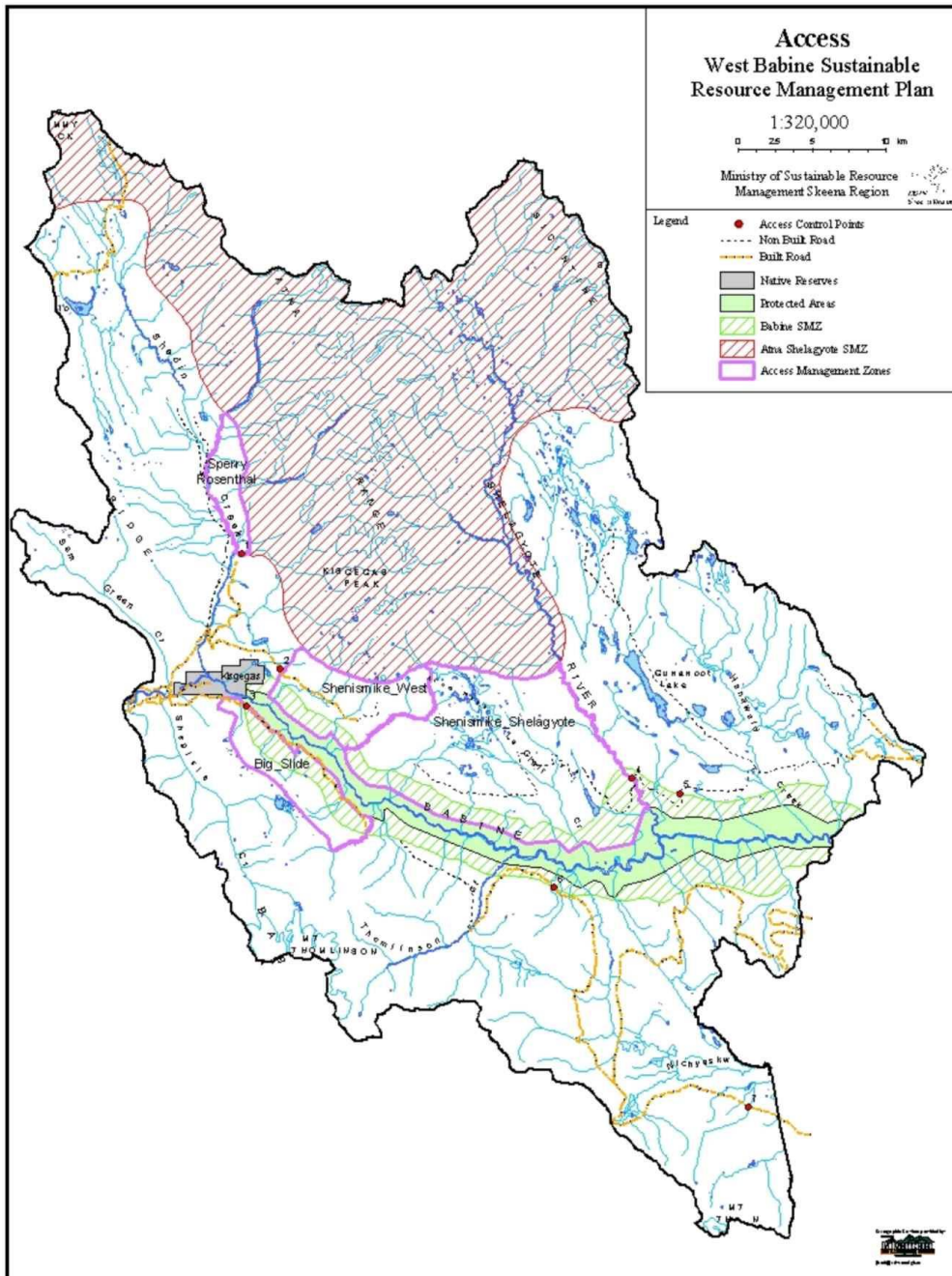


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Map 11: Botanical Forest Products



Map 12: Access



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Appendix 1 - List of Acronyms Used

AAC	Annual allowable cut
AMD	Access management direction
ATV	All terrain vehicle
BEC	Biogeoclimatic ecosystem classification
BRF	Babine River Foundation
CDC	Conservation Data Centre
DFO	Department of Fisheries and Oceans (now Fisheries and Oceans Canada)
ECA	Equivalent clearcut area
ESSF	Engelmann Spruce Sub-alpine Fir zone
FRPA	<i>Forest and Range Practices Act</i>
FSR	Forest service road
GBPU	Grizzly bear population unit
GIS	Geographic information system
GTO	Gitx̱san Treaty Office
GTOWPG	Gitx̱san Treaty Office Watershed Planning Group
ICH	Interior Cedar Hemlock zone
ITG	Inventory type group
IWMS	Identified wildlife management strategy
KFP	Kispiox Forest Products
LUPG	Landscape unit planning guide
LRMP	Land and resource management plan
LRUP	Local resource use plan
MELP	Ministry of Environment, Lands and Parks ⁴³
MLU	Main line unit (a road-shed)
MSRM	Ministry of Sustainable Resource Management
MU	Management unit
MWLAP	Ministry of Water, Land, and Air Protection
NWBC	Northwest BC Timber and Pulp
PEM	Predictive ecosystem mapping
SBFEP	Small business forest enterprise program
SBS	Sub Boreal Spruce zone
SI	Site index
SCI	Skeena Cellulose Inc.
SMZ	Special management zone
SRMP	Sustainable Resource Management Plan
THLB	Timber harvest land base
TSA	Timber supply area
TSR	Timber supply review
TU	Treatment unit
VQO	Visual Quality Objective
WTP	Wildlife tree patch

⁴³ In June of 2001 the Ministry of Environment, Lands and Parks was replaced by the Ministry of Water, Land and Air Protection and the Ministry of Sustainable Resource Management.

Appendix 2 - Glossary

Adaptive management	The rigorous combination of management, research, and monitoring so that credible information is gained and management activities can be modified by experience. Adaptive management acknowledges institutional barriers to change and designs means to overcome them.
Allowable annual cut (AAC)	The rate of timber harvest permitted each year from a specified area of land, usually expressed as cubic metres of wood per year. The chief forester sets AACs for timber supply areas (TSA) and tree farm licences (TFLs) in accordance with Section 7 and/or Section 170 of the <i>Forest Act</i> . The district manager sets AACs for woodlot licences.
Biodiversity	The diversity of plants, animals and other living organisms in all their forms and levels of organization, including the diversity of genes, species and ecosystems, as well as the functional processes that link them.
Biogeoclimatic zones (BEC)	A system of ecological classification based primarily on climate, soils, and vegetation that divide the province into large geographic areas with broadly homogeneous climate and similar dominant tree species. Zones are further broken down into subzones (based on characteristic plant communities occurring on zonal sites) and variants (based on climatic variation within a subzone).
Blue-list	Sensitive or vulnerable species as identified by the Ministry of Environment, Lands and Parks. Blue-listed species are considered to be vulnerable and “at risk” but not yet endangered or threatened. Populations of these species may not be declining but their habitat or other requirements are such that they are sensitive to disturbance. The blue-list also includes species that are generally suspected of being vulnerable, but for which information is too limited to allow designation in another category.
Capability – habitat	A habitat interpretation for a species, which describes the greatest potential of a habitat to support that species. Habitat potential may not be reflected by the present habitat condition or successional stage.
Capability - tourism	Assesses whether the necessary biophysical features are present to support a given recreational activity.

Carrying capacity	The average population that can be sustained on a management unit, compatible with management objectives for the unit. It is a function of site characteristics, management goals and management intensity.
Core Ecosystems	Management zones identified for the express purpose of maintaining structural and functional features of old forest ecosystems. Zone includes Old Growth Management Areas (OGMAs) and Treatment Units 2 from the Babine LRUP.
Critical habitat	Areas considered to be critically important for sustaining a population and where development may cause an unacceptable decline in the population.
Displacement (habitat)	The risk of alienating wildlife species (specifically bears in this plan) from preferred habitat due to point, linear or dispersed human related activities.
Ecosystem networks	Core Ecosystems and Landscape Riparian Corridors.
Equivalent Clearcut Area (ECA)	The area of a cutblock weighted to estimate the equivalent effect on snow hydrology as the area of a clear-cut unregenerated block. For example, a 10 ha clear-cut unregenerated block has an ECA of 10 ha; if a fully stocked stand has regenerated to a height of 6 metres, the block now has an ECA of 5 ha. If, instead of being clear-cut, the block was selection logged with 30 per cent volume removal, the ECA is estimated to be 3 ha.
Feasibility (tourism)	Assesses the logistical practicality of a tourism opportunity, including access and infrastructure, distance to markets and product uniqueness.
Huwilp	Gitxsan word. Plural of wilp (house).
Landscape connectivity	A qualitative term describing the degree to which late-successional ecosystems are linked to one another to form an interconnected network. The degree of interconnectedness and the characteristics of the linkages vary in natural landscapes based on topography and natural disturbance regime. Breaking of these linkages may result in fragmentation.
Landscape corridors	Management zones that include riparian and linkage corridors which provide landscape connectivity. From the Treatment Units 1 and 3 of the Babine River LRUP.

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Monitoring	Ongoing assessment of how well the management objectives of the SRMP are being implemented. Effectiveness monitoring will assess how well the management objectives are meeting the goals or intent of the SRMP.
Range of natural variability	In the absence of human development activities, the range within which fluctuations in the environment occur, for example, water temperature or flow cycles as influenced by time of year or rainfall.
Results-based	A management strategy that focuses on on-the-ground results, providing flexibility in meeting the clear environmental standards set by the <i>Forest and Range Practices Act</i> .
Riparian area	Areas of land adjacent to wetlands or bodies of water such as swamps, streams, rivers or lakes including both the area dominated by continuous high moisture content and the adjacent upland vegetation that exerts an influence on it.
Scenic area	Any visually sensitive area of scenic landscape identified through a visual landscape inventory or planning process carried out or approved by a district manager.
Seral (forest or stage)	Sequential stages in the development of plant communities (e.g. from young (or early seral) stage to old stage (or old seral)) that successively occupy a site and replace each other over time.
Simoogyet (plural Simgiigyet)	Gitx̱san term meaning 'house chief.' Each wilp has a Simoogyet who acts as spokesperson for the House members and is the primary decision maker for land and resource uses within the wilp.
Stand value	Is a complex analysis and is modeled based on the anticipated quality of timber stands and associated harvesting costs.
Statutory decision maker	The individual responsible for making independent decisions or determinations under the existing Provincial law (e.g. <i>Forest and Range Practices Act</i>). The Statutory Decision Maker will determine the balance in regards to managing and conserving the resources.
Suitability - habitat	A habitat interpretation that describes the current potential of a habitat to support a species. Habitat potential is reflected by the present habitat condition or successional stages.

Suitability - tourism	Assesses the potential conflicts with environmental or socio-cultural values
Sustainable	A state or process that can be maintained indefinitely. The principles of sustainability integrate three closely interlinked elements – the environment, the economy and the social system – into a system that can be maintained in a healthy state indefinitely.
Timber supply area (TSA)	An integrated resource management unit established in accordance with Section 6 of the <i>Forest Act</i> . TSAs were originally defined by an established pattern on wood flow from management units to the primary timber-using industries. They are the primary unit for allowable annual cut determinations.
Visual Landscape Inventory (VLI)	An inventory that identifies visible areas that have known or potential scenic value as seen from selected viewpoints, such as towns, parks, recreation sites and highway and river corridors. This province-wide inventory undertaken by the Ministry of Forests is designed to provide information on visual quality for planning including strategic planning (e.g. LRMPs) and operational planning (forest development plans). One of the components of a VLI are Recommended Visual Quality Objectives (VQOs).
Visual Quality Objectives (VQO)	A resource management objective established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social concern for the area. Five categories of VQO are commonly used: preservation; retention; partial retention; modification and, maximum modification.
Watershed	An area of land that collects and discharges water into a single main stream through a series of smaller tributaries.
Wilp (plural Huwilp)	A level of Gitx̱san social structure, also known as a House. Each wilp has tenure of traditional territories of which they are responsible for all decisions regarding resource use.

Working Forest

Proposed initiative of the government of BC. Defined as all Crown forest land in the province that is outside of protected areas and parks. The four central goals of the proposed policy are: (1) To maintain and increase the economic and social benefits that flow from the Working Forest. (2) To identify and provide additional certainty and access about those lands within the Working Forest which have specific priorities for timber and a variety of other values and uses. (3) To assure that land-use decisions affecting the Working Forest are supported by a consistent and transparent process that recognizes forestry and also addresses all other identified values. (4) To assure that society's environmental goals are achieved in the Working Forest.

Appendix 3 - Mature Stand Structure

Structural objectives for retention of forest structure in wildlife tree patches (values in brackets are averages for “zonal” sites). The values are presented as “per hectare” but can be averaged over larger areas (10 – 100 ha).

Wildlife Tree Features	SBSmc	ESSF	ICH
Snags/ha			
>17.5 cm dbh	9 (99)	10 (121)	5 (53)
>27.5	3 (24)	8 (84)	2 (13)
>37.5	2 (11)	4 (40)	3 (25)
Total:	14 (134)	22 (245)	10 (91)
CWD m3/ha	>50 (100)	>50	>50 (100)
>10 cm diam			
Stems/ha	>400 (798)	>400 (887)	>400 (689)
>17.5 cm dbh			
Large trees/ha	15 (83)	15 (145)	>20 (175)
>37.5 cm dbh			

From Steventon, 1993

Appendix 4 - SRMP Consultation Process

Consultation for the West Babine SRMP occurred in two stages. A preliminary draft was circulated in July 2002 to the old Babine Monitoring committee, interested public and stakeholders. Extensive feedback was received from the Gitx̄san and from a number of stakeholders with an interest in the plan area. No feedback was received from the general public. Based on this feedback, additional consultation occurred with the Gitx̄san and key stakeholders. Consultation with Ministry of Water, Land and Air Protection and the Ministry of Forests also occurred. The outcomes of this second round of consultation resulted in Draft 2 of the SRMP.

First Nations Consultation

The West Babine plan area is within Gitx̄san traditional territory, and partially within the Lake Babine Nation traditional territory.

Formal consultation and open information-sharing meetings have been conducted with three levels of Gitx̄san administration: the Gitx̄san Treaty Office executive, the Gitx̄san Babine Watershed Table, and with the House Chiefs (Simgiigyet). Since January 2002 there has been continuous contact with the Gitx̄san Treaty Office executive, specifically Myrtle Muldoe and Beverly Clifton-Percival. MSRM has also committed to consulting at a Huwilp level. Huwilp simgiigyet were initially contacted via letter on January 25, 2002 with an invitation to be involved in the planning process. Individual meetings with each Wilp occurred in March and April of 2002, giving opportunities to Wilp simgiigyet or representatives to identify their concerns in the planning area. A letter from the Regional Director of MSRM, Kevin Kriese, to Ms. Clifton-Percival of the Gitx̄san Treaty Office, dated May 1, 2002 summarizes the consultation procedure that MSRM agreed to. Draft 1 of the West Babine plan, without the cultural heritage chapter was presented to the Wilp simgiigyet and/or representatives at a meeting in July 2002. The draft cultural heritage chapter was distributed and presented in two meetings on January 15, 2003, with an invitation for comment. Additional contact with individual house chiefs has occurred throughout the duration of this project upon request of Gitx̄san.

The Gitx̄san Babine Watershed Table has prepared a resource sustainability plan for an area that includes the West Babine, called *the Babine Watershed Sustainability Plan* (GTOWPG, 2002). The Gitx̄san will meet with MSRM staff at a Reconciliation Round Table meeting to present Draft 2 of the West Babine SRMP and to reconcile differences. MSRM present Draft 2 of the SRMP to the Simgiigyet in August 2003. The Gitx̄san Treaty Office has provide informal comment resulting from this meeting.

Consultation with the Lake Babine Nation was initiated in May 2003. The turn-over in Lake Babine's elected council has required consultation to be re-initiated directly with the Wit'at (Fort Babine) People.

Public Consultation

A large amount of public comment has gone into the information that guided the development of the West Babine SRMP. The Babine LRUP and the Kispiox LRMP, which provided the foundation for the SRMP, were developed by planning tables composed of members of the public and stakeholders. In addition, other documents that informed the SRMP, such as *Access Management Direction for the Babine Watershed*, were distributed for public feedback prior to finalization. Draft 1 of the West Babine SRMP underwent a public review process starting in July 2002 and all input was considered in the revisions that went into Draft 2. Draft 2 went through another round of public comment and review from July to September 2003.

Stakeholder Consultation

Kispiox TSA forest license holders were involved throughout the development of first draft by means of consultative meetings and review of background reports and draft materials. Economic uncertainty during the development of the second draft inhibited ongoing discussions with New Skeena. Consultation on the second draft did occur with Kispiox Forest Products and BC Timber Sales.

The Babine River Foundation (BRF), which is made up of several of the park use permit holders in the Babine River Corridor Park, and represents those who value the wilderness qualities of the park, provided extensive input into the second draft of the SRMP.

Appendix 5 - SRMP Consultation Summary

4.1 Public Review

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Source	Comments	SRMP Resolution
Planning Context & Framework		
BV Rod & Gun Club	The SRMP is in contravention of the LRMP and is a mechanism to forego implementing an 'Angling Use Plan' for the Babine River.	The SRMP does not apply to the Babine River Corridor Park but to the area surrounding the park. The SRMP is consistent with the objectives of the Kispiox LRMP. Similarly the plan does not address allocation issues or people management. Its focus is on land management
BV Rod & Gun Club	Restrictions for boats used by resident anglers and capping of resident angler use before this use reaches 60% of the fishery is not supported.	The SRMP provides no direction regarding use on the Babine River and within the Babine River Corridor Park.
Mike O'Neill	The Babine River Angling Use Plan needs to be completed before the SRMP precludes resident's options.	The SRMP provides no direction regarding use on the Babine River and within the Babine River Corridor Park and therefore will not compromise options contemplated by an Angling Use Plan.
PIR	The SRMP increases the exclusivity for commercial river users, while placing further constraints on forest industry and local recreationists. PIR does not support this management direction for the Bulkley TSA.	The SRMP does not apply direction for people management, allocation issues or for the park. The SRMP confirms the access commitments made in the Parks MDS. No constraints are placed on local recreationists, with the exception of access management areas. These access management areas are consistent with the Babine LRUP and provide for industrial access to the land base. They are not relevant to river access
Great Bear Foundation	Plan lacks sound science about the general biological or ecological knowledge regarding the grizzly bear population in the plan area.	The plan takes in the best available information including: a risk assessment tool jointly developed with WLAP, high-value habitat modelling, and gps collar data. This information has contributed to the identification of high-value habitat types with associated prescriptions and access management zones.

Source	Comments	SRMP Resolution
Great Bear Foundation	Plan contains many contradictions (I.e. Atna-Shelagyote SMZ is important wildlife habitat (denning) yet development opportunities such as heli-skiing, snowmobile touring and cat-skiing are all presented as options).	Tenured uses with the plan area will undergo appropriate consultation under LWBC's mandate
Great Bear Foundation	The plan does not acknowledge the necessity of at least a base line understanding of grizzly bear information in the watershed and ignores evidence illustrating the loss of wilderness values and grizzly population under same pressure that it is difficult to regard it as a serious attempt to conserve habitat necessary to sustain population.	A large area excluding resource activities to provide wilderness for bears would be inconsistent with the Kispiox LRMP.
BRF	The SRMP should clarify the relationship between the LRUP and the SRMP, including an explanation of how the LRUP has been adopted, altered, enhanced or otherwise treated within the SRMP.	An appendix clarifying the linkages between the Babine LRUP and the SRMP has been added.
BRF	The SRMP should contain an explanation with respect to how the SRMP becomes a legally enforceable plan under the <i>Land Amendment Act</i> , the <i>Forest and Range Practices Act</i> , or through other means	A paragraph has been added under the implementation section clarifying that the objectives, indicators and targets will be established as LU objectives.
CRB	The SRMP should be consistent with the objectives from the Babine LRUP. The LRUP was never intended to favour commercial recreation use of the river over non-commercial use, but rather to ensure that values on which recreation depends are maintained over long term.	Plan is consistent with the Babine LRUP and focuses on land management. The plan does not address allocation of resources, people management, or park management. As such, it does not address issues associated with River use.
CRB	It should be clear that the SRMP is not seen as a way to change land use designations along the Babine River within the Bulkley TSA.	The plan is clear that it applies only to the Kispiox TSA.

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Source	Comments	SRMP Resolution
CRB	There appears to be an imbalance between the SRMP and Babine LUP that highlights urgency of addressing issues surrounding allocation of angling opportunities between non-commercial and commercial recreationists; balance between wilderness experience and the use of motorized boats and the carrying capacity of the river. A process should be put in place to address these issues so park continues to provide opportunities for all users and all values associated with the river are maintained.	The SRMP does not include the park. These issues would be best addressed by completing a Park Management Plan.
Policy and Planning Process		
PIR	The SRMP clearly needs to state the plan implements the objectives of Kispiox LRMP and the Babine LRUP in the Kispiox TSA. It should be clear that all direction in the plan applies exclusively to the Kispiox TSA and cannot be applied to the Bulkley TSA.	This clarification is made throughout the plan.
CRB	Why did the public not have a larger involvement in the creation of this plan, especially given that commercial interest groups were given the opportunity to be involved.	The SRMP is a technical plan intended to implement the outstanding issues from the Kispiox LRMP. The plan process did not involve negotiations among stakeholders as social choice had been clearly defined in the LRMP. Different stages of the plan were circulated to public members with an interest in the Babine and Draft 2 was advertized to attract the attention of the public at large. Summaries of the plan were distributed to amongst others, the Kispiox LRMP monitoring committee and the Babine LRUP monitoring committee.
CRB	The government should secure the single access point into the Babine River Corridor Park to ensure that it remains open to the general public for the long term. A MOU between MSR, Parks and DFO regarding permanent public access to the river would be appropriate.	This recommendation will be passed onto Parks and the IAMC.
Ecological		
<i>Biodiversity – Wildlife General</i>		

Source	Comments	SRMP Resolution
BRF	The SRMP does not contain a target for a breakdown between medium and small patches (that is, small gaps required in landscape corridors, Babine Special management Zone, etc).	Patch Size targets have been clarified with the addition of a table to provide guidance. Table is based on feed back provided to the BRF by Jim Pojar and Phil Burton
<i>Wildlife – Ungulates</i>		
PIR	What does it mean when it says winter range designation will not be constraining, except with seasonal considerations?	This sentence has been deleted.
<i>Wildlife – Grizzly</i>		
PIR	Plan needs to clearly identify how the goal of providing long-term sustainability of grizzlies will occur and what this means.	Final draft will add text to explain the decline in bears, and how the goal will be achieved (I.e. the objectives).
PIR	Why would restrictions be placed on hunting within portions of the plan area if the grizzly bear population is viable?	The plan does not place restriction on hunting, but has merely repeated an objective from the LRMP that allows this to be considered if required.
PIR	A 210- year harvest rotation is constraining to timber supply (Big Slide area), have other more effective means to minimize disruption of grizzly habitat been considered?	Longer rotation age is intended to reflect the lighter harvest schedule for the chart.
Veltmeyer	Management prescriptions for the Big Slide chart did not meet objectives for the timber sector. Big Slide chart should be re-interpreted as a results based objective. Big Slide prescriptions may unnecessarily restrain options for FN woodlot development in the vicinity of Kisgegas.	The plan will incorporate the Big Slide agreement objectives, cover constraints and the access control points. The remaining Big Slide conditions will be considered voluntary and will allow a future licensee flexibility in meeting the objectives.
PIR	Wording in objectives 8, 9 (high value grizzly bear habitat) does not allow for flexibility.	Targets have been rewritten to allow for flexibility.
BRF	The SRMP needs to provide clarity with respect to the objectives for grizzly bears and bear habitat, and how these relate to such objectives contained in the LRUP. Refinements or changes to the previous understanding created by these existing plans should be clear to the reader of the SRMP, including the rationale for those changes.	A section under habitat effectiveness, describing the grizzly bear population estimates and the probable numbers under different scenarios has been added. This section is similar to what appeared in draft 1. We have also clarified the discrepancy between "maintain" grizzly bears in the LRUP and the SRMP's projection for less bears than capability.
BRF	High road density can increase risk to grizzly bears through direct mortality and displacement. A road density target is required to ensure risk to bears remains low.	Based on the risk assessment tool developed for draft 1, a road density target was included. The first analysis for this target is not expected for at least 10-15 years.

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Source	Comments	SRMP Resolution
Great Bear Foundation	Maintaining a roadless core in the Shahnagh-Shenismike area is vital to the survival of this grizzly bear population and will remove the last true wilderness from the watershed.	A roadless core would not meet the intent of the Babine LRUP or the Kispiox LRMP.
Great Bear Foundation	With a mandate to not diminish the grizzly population, it is unacceptable to consider developing the only area left that provides a natural pattern of unaltered behaviour and movement of the bears in this watershed.	A roadless core would not meet the intent of the Babine LRUP or the Kispiox LRMP.
Great Bear Foundation	Creating access to remove small patches of commercially viable timber is a known detriment to population viability and also damages the ever-increasing economic value of a healthy wild population of grizzly bears (related to possible viewing opportunities).	A roadless core would not meet the intent of the Babine LRUP or the Kispiox LRMP.
Great Bear Foundation	The management consideration to complete road building by July 31 in the Big Slide area is contradictory to minimizing the disruption to bear use of high value habitat as the spring season is vital to bears and other wildlife.	Road dates for the Big Slide Chart are consistent with the Big Slide Agreement. MWLAP had considerable involvement in this process.
<i>Wildlife – Access</i>		
Veltmeyer	Two access control points should not be necessary to enter the Shelagyote/Shenismike Access Management Area.	Clarification added to ensure an access control point is not duplicated unnecessarily at the Shelagyote crossing.
<i>Bull Trout</i>		
PIR	Rationale for restricting access structures to be 750 m from known staging areas needs to be included. Objective is too constraining and probably unrealistic.	Rationale for distance of 750 m is based on advice received from WLAP. Based on the current Triton inventories, the proposed Shelagyote crossing would be acceptable. The objective has also been clarified to ensure that it only applies to the Shelagyote River and not to its tributaries.
<i>Water Quality</i>		
BRF	Level of risk needs to be defined as it relates to sedimentation at steam crossings, and in particular turbidity as it relates to sedimentation.	An objective calling for low risk to water quality within the high-fishery value watersheds of Nichyeskwa, Babine Mainstem and Shelagyote watersheds has been added.
Social/Cultural/Heritage		

Source	Comments	SRMP Resolution
BV Rod & Gun Club	Do not support restricting or placing gates on roads that inhibits access to recreation users.	The plan does not change any existing access patterns. The Access Management Areas are intended to allow industrial access while minimizing the impact on grizzly bears. None of these Access Management Areas relate to recreational access to the river.
Mike O'Neill	The focus of document is on commercial tourism to the exclusion of resident access. Resident access values are not even addressed.	Plan does not restrict public access. Resident use of the plan area has been emphasized in the tourism section and the executive summary.
Mike O'Neill	The seven gates proposed to exclude non-commercial use of road systems, and exclude residents from the park is wrong.	The plan does not change any existing access patterns. The Access Management Areas are intended to allow industrial access while minimizing the impact on grizzly bears. None of these Access Management Areas relate to recreational access to the river. Two access control points will be established where mainline roads enter the SMZ. These access control points are necessary to maintain the intent of the Babine LRUP for temporary access only , into the Babine SMZ.
PIR	CMTs are not 'physical infrastructure' and do not necessarily need to be maintained.	The Gitksan disagree. Currently, this issue will need to be worked out operationally and on a block by block basis.
<i>Botanical Forest Products</i>		
PIR	The plan needs to address in more detail how burning to enhance or maintain berry production will occur.	The plan does not address in any detail, burning prescriptions for berries. If any burning is considered, it would occur post harvest.
PIR	It needs to be recognized that botanicals naturally vary in range and abundance over time and cannot be 'maintained' at any one level, but rather within a natural range.	Clarification included in Final Draft.
<i>Visual Quality</i>		
PIR	Using percentages of maximum visual alteration can be unnecessarily constraining and may not truly reflect the objective from a visual satisfaction perspective.	VQO objectives rewritten to be identical to Bulkley TSA LU plans.
Collingwood Brothers	The approved cut blocks in the Gunanoot Lake area are managed with respect to visual quality from the cabin at the north end of Gunanoot Lake (i.e. no more than 7% before 'greenup').	VQO objectives within this area have been redone to reflect a partial retention objectives. The management here would be the same as within the Bulkley TSA.
<i>Babine River Valley SMZ</i>		

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Source	Comments	SRMP Resolution
BV Rod and Gun Club	They are not in favour of widening the park boundary, or changing the existing special management zone to a recreation zone	The SRMP does not increase the width of the Park Boundary or change the existing SMZ into a recreation zone.
Mike O'Neill	The proposed expansion of the SMZ is inconsistent with the Bulkley LRMP which adjoins the area and is another attempt to discourage resident angler access to the Babine River.	The minor expansion of the Babine River SMZ does not occur within the Bulkley LRMP area. The expansion provides an increased buffer to the park as is its original intent. The expansion does not exclude access or alter existing or future access patterns.
PIR	A 210 year rotation may be unnecessarily constraining to timber supply given other constraints in the SMZ.	The timber rotation is consistent with the Babine LRUP direction.
CRB	The Babine River SMZ should be narrowed on its east end so that it aligns with the SMZ within the Babine LUP.	Change has been made.
<i>Atna-Shelagyote SMZ</i>		
PIR	Stakeholders must define sustainability of recreational use and what mix of motorized/non-motorized, commercial/non-commercial use is suitable.	Wording for the Atna/Shelagyote SMZ recreation changed to reflect the LRMP.
PIR	Restricting commercial logging is overly constraining to the THLB. Harvesting should be allowed in consideration of the ecological and recreational values for which the zone was established.	Silvicon's assessment of the timber values in this area suggests that this area is inoperable.
Social and Economic Resources		
<i>General</i>		
CRB	Potential employment opportunities for residents of the Kispiox TSA are not a primary focus of the plan; and today's forestry economics should not be used to make decisions about constraining future forest management opportunities that could provide local employment.	Kispiox Forestry Licensees have been consulted throughout the plan's development.
<i>Timber</i>		
PIR	What is the area of forest to be available for forestry development over time and have all constraints imposed by this plan been analysed to show their impact on timber supply?	Economic impact of the draft SRMP has been assessed in the SEA. Estimated impact, based largely on the THLB within the Atna/Shelagyote is 2-4%

Source	Comments	SRMP Resolution
<i>Tourism</i>		
Alpine Lakes Air Ltd.	Proposes no road access and no logging around Gunanoot Lake and the lake to the north east of Gunanoot, close to plan boundary.	200 m core ecosystem (consistent with the Babine LRUP) added to buffer Gunanoot Lake and temporary roads only, within 1 km of the lake (to maintain walk-in status as per the LRUP).
PIR	A balance between commercial / non-commercial recreation opportunities must be created and non-commercial interests should be reflected in the plan.	SRMP now recognizes the interest that non-commercial recreationists have in the plan area.
PIR	The distance of adjacency must be defined (section 3.3.2.3) when saying industrial activity will be restricted adjacent to the park during peak tourism periods.	The objectives table defines adjacency as within the SMZ. This text has been clarified.
PIR	How does plan account for the noise and pollution created by jet boats, helicopters and planes from commercial tourism operations?	Plan does not address river recreation nor access issues related to access to the area.
Veltmeyer	The tourism node does not account for the investment made in the cutting permits proposed in the area. These cutting permits would not contradict the objective for protecting visual quality	CP 991-201 as presented in Carnaby's draft 2001-2007 is grandfathered into the plan. Less than 80 ha are within the outer extent of the Tourism Node. Harvesting this portion of the block would need to meet a retention VQO.
Veltmeyer	The no logging provisions in the tourism node unnecessarily restrict access to THLB. There should be allowances for reducing constraints elsewhere.	The no logging provision reflects the high level of constraints in the area as a result of VQO and the tourism infrastructure. Approximately 850 hectares of THLB are affected by the node.
Collingwood Brothers	Attributes in the Gunanoot lake area and north require attention when planning for timber extraction and propose that the road that is proposed to run adjacent to Gunanoot Lake be built further to the east by Hanawald Creek and that areas to the north of Gunanoot lake are not logged.	Difficult and expensive to build the road to the East. Specific changes to the plan, associated with Gunanoot Lake include adding a 200 m buffer (as per the LRUP) and allowing only temporary roads within 1 km. The visual quality objectives around the lake has been set to partial retention. Additionally, text has been added that emphasizes the need to consult with back country tourism operators, to identify collaborative strategies

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Source	Comments	SRMP Resolution
Great Bear Foundation	How does a roaded landscape qualify as wilderness and provide for remoteness? The future of the wilderness in the Babine rest in 'management considerations', but there is nothing to ensure that these will manifest themselves on the landscape or in legal planning.	The Kispiox LRMP contemplates the Babine River Corridor Park as providing wilderness recreation opportunities, not the IRM landscape.
Plan Implementation, Monitoring and Amendment		
PIR	What is the anticipated role of the Bulkley LRMP Monitoring Committee in the Babine monitoring group, and would that group also monitor objectives in the Bulkley TSA?	The Babine Watershed Monitoring Committee, will provide monitoring results to the Community Resources Board that assess the effectiveness of the land use plans in the Babine.
PIR	Does MSRM have the financial commitment to implement a long-term monitoring program and is adequate funding budgeted for?	Government funding is year to year. The intent is that the Monitoring Committee will provide a longer-term source of funds through partnerships, collaboration and donations.
PIR	The geographic range of the monitoring area must be clearly defined.	The area has been clarified to be the Babine River LRUP area.
Great Bear Foundation	The plan seems only half complete given the lack of information about the monitoring management plan, guidelines and/or thresholds for amended activity?	The Babine Watershed Monitoring Committee, which will require a monitoring framework, is in its initial development stages.
BRF	The addition of the environmental risk assessment component (ERA) to the SRMP should be accompanied by an explanation of how the ERA is intended to fit within the operational planning framework.	A risk assessment component, describing the information that will be part of a Forest Stewardship Plan, is included in the Implementation section.
BRF	The plan should contain language that clarifies that the purpose of monitoring is to measure effectiveness of achieving plan objectives, and that provides a direct linkage between the outcomes of monitoring and the adaptation of the plan.	Criteria for amending the SRMP will be provided within the rationale document and clarified within the SRMP. The criteria will be based on, amongst other things, the results of effectiveness monitoring, where there is substantive changes to the indicators and targets within the SRMP.
CRB	Details on how the monitoring of this plan will occur and be integrated with monitoring in the Bulkley TSA needs to be included. It is also unacceptable that the public is not listed as one of the groups that would form part of the proposed monitoring trust.	The structure of the Babine Watershed Monitoring Committee and its relationship to the CRB is in the initial stages of development. The CRB is participating on the Governance Design Group.

1.1 Gitxsan Consultation

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Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
25/1/2002	Tara Leduc	House Representatives: Neil Sterritt, Wiigaak Solomon Jack, Gwininitxw Roy Wilson, Luus Lloyd Morrison, Wiigyet Wilmer Johnson, Tsa Buk Alice Jeffrey, Miluulak Larry Skulsh, Wiiminosik Jim Angus, Wii Eelast Jerry Gunnanoot, Nii Kyap Sadie Harris, Gwoimtxw Ted Mowatt, Djogaslee Willie Morrison, Joyce Turner, Yagosip Art Ridsdale, Luutkudziwus Elmer Derrick GTO Bev Clifton Percival GTO Myrtle Muldoe GTO	Letters	Invitation to be involved in planning process, with work plan attached.
31/1/2002	Tara Leduc	Myrtle Muldoe, GTO	Phone	Quick update that plan would be initiated in West Babine
31/1/2002	Tara Leduc	GTO	Fax	West Babine Watershed Strategic Access and Biodiversity Plan – Work Plan
6/2/2002	Tara Leduc	Myrtle Muldoe, GTO	Phone	Work plan
12/2/2002	Tara Leduc	Wilp Yagosip Joyce Turner Delbert Turner	Phone	General Concerns
14/2/2002	Tara Leduc	Wilmer Johnson, Tsa Bux	Letter	WJ response to TL letter of 25/01/02
18/2/2002	Tara Leduc	Myrtle Muldoe	Meeting, GTO	To discuss letters to chiefs and upcoming meetings
21/2/2002	Tara Leduc	Wilmer Johnson, Tsa Bux	Phone	General Concerns, follow up with letter

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
4/3/2002	Tara Leduc	Wilp Luutkudziwus Art Ridsdale Wilp Xsimwitziin Les Moore Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
4/3/2002	Tara Leduc	Wilp Miluulak Alice Jeffery Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
7/3/2002	Tara Leduc	Wilp Djogaslee Ted Mowatt Charlie Mowatt Keith Mowatt Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
7/3/2002	Tara Leduc	Wilp Gutginuxw Walter Wilson Doris Wilson Elaine Wilson Myrtle Muldoe GTO	Meeting GTO	To identify house concerns within planning area
8/3/2002	Team Babine	Wilp Wii Eelast Louy Rabocz Irene Cournoyer Leo Braaten Beatrice Rabocz Jim Angus	letter	To Team Babine; Re: workplan sent Jan 21, 2002. Concerns around time, lack of consultation, reactive process of plan and lack of consideration for biological balance within the lax yips.
11/3/2002	Tara Leduc	Wilp Wiigaak Neil Sterritt Myrtle Muldoe GTO	Meeting, GTO, 7:00 PM	To identify house concerns within planning area
11/3/2002	Tara Leduc	Wilp Wiimosik Larry Skulsh Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
11/3/2002	Tara leduc	Wilp Wii Elaast Louy Rabocz Irene Cournoyer Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
11/3/2002	Tara Leduc	Wilp Luus Roy Wilson Philip Wilson Art Jack Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
18/3/2002	Tara Leduc	Wilp Gwininitxw Yvonne Lattie Mercy Loring Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
19/3/2002	Tara Leduc Kevin Kriese	Bev Clifton Percival Don Ryan Catherine Blackstock Myrtle Muldoe	Meeting, GTO	Discussed consultative process between Gitxsan Simgiigyet and MSRM
19/3/2002	Tara Leduc Kevin Kriese	Beverly Clifton Percival Catherine Blackstock Don Ryan Myrtle Muldoe	Meeting, GTO	
8/4/2002	Tara Leduc	Wilp Nii kyap George Sanpere Martha Wilson Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
8/4/2002	Tara Leduc	Wilp Gwoimt Sadie Harris Kellie Nyce Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
10/4/2002	Tara Leduc	Wilps Wiigyet Ralph Michel Myrtle Muldoe GTO	Meeting, GTO	To identify house concerns within planning area
1/5/2002	Kevin Kriese	Bev Clifton Percival	Letter	Letter from Kevin, summarizing key points of meeting on March 19
3/6/2002	Tara Leduc	Kenny Rabnett	Meeting, MSRM	Discussed plan and chiefs concerns.

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
11/6/2002	Tara Leduc James Warren	Don Ryan Robert Fritzsche Myrtle Muldoe	Meeting GTO	Re: plan, GIS information around cultural features, general discussion about goals of plan
5/7/2002	Tara Leduc Kevin Kriese	Don Ryan Beverly Clifton Percival Catherine Blackstock	Meeting GTO	Planning and process issues; resources and economic development opportunities
30/7/2002	Tara Leduc Fred Oliemans	House Representatives Gary Benson, Nii Kyap Lloyd Morrison Wiigyet Larry Skulsh, Wiiminosik Rudy Turner, Yagosip Yvonne Lattie, Gwininitxw Alice Jeffrey, Miluulak Doris Wilson, Gutgunuux Ardythe Wilson, Gutgunuux Beatrice Rabocz, Wii Elaast Ray Wilson, Luus Richard Overstall, GTO Myrtle Muldoe, GTO Bev Clifton Percival, GTO	Meeting, GTO	Presentation of Draft WB AMP
6/8/2002	Tara Leduc	Mary Dalen	Phone	Concerns about cross cultural training session.
12/8/2002	Tara Leduc	Wilp Tsa Bux Wilmer Johnson	Gitwangak Band Office	Comment on draft.
9/8/2002	Tara Leduc	Don Ryan	Phone	Discussion re: Gitxsan issues around plan and how it relates to Gitxsan Watershed Tables,
21/8/2002	Tara Leduc	Don Ryan	Letter	Cover letter with Management Direction Statement for Babine River Corridor PP
26/8/2002	Stan Hagan	Beverly Clifton Percival	Letter	To SH, re: plan and goals for pilot project
28/8/2002	Tara Leduc	Wilp Nii Kyap Gary Benson	Letter	To TL, re: Gitxsan traditions, in response to meeting on 30/07/2002
9/9/2002	Tara Leduc	Wilp Nii Kyap Gary Benson	Letter	Response to GB, with invitation to schedule a meeting for Wilp Nii Kyap

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
12/9/2002	Stan Hagan	Beverly Clifton Percival	Letter	From Minister to BCP in response to her letter dated August 26, 2002. COPY NOT ON FILE.
19/9/2002	Geoff Recknell	Catherine Blackstock, GTO	letter	To GR, re: comments on draft plan
19/9/2002	Tara Leduc	Myrtle Muldoe	Email	Re: draft cultural heritage chapter and chief meetings
23/10/2002	Tara Leduc	Myrtle Muldoe Richard Overstall	Lunch, followed up with email	Questions about the SRMP and how it impacts AAC
20/11/2002	Tara Leduc	Beverly Clifton Percival Catherine Blackstock Gordon Sebastian Vince Jackson Myrtle Muldoe	Meeting GTO	Cultural heritage Draft chapter
17/12/2002	Kevin Kriese	Beverly Clifton Percival Catherine Blackstock	letter	Response to letters from CBlackstock to G. Recknell and from B. C.Percival to S. Hagan.
8/1/2003	Tara Leduc Kevin Kriese James Cuell	Beverly Clifton Percival Mrytle Muldoe Gordon Sebastian Elmer Derrick	Meeting, GTO, 1:30 PM	Review of cultural heritage draft chapter and cover letter to chiefs
10/1/2003	Stan Hagan	Beverly Clifton Percival	letter	To BCP; follow-up on letter of Sept. 12, 2002 in response to BCP letter dated Aug. 26, 2002. Reivew of changes in plan to accommodate Gitxsan interests.
14/1/2003	Tara Leduc	Wilmer Johnson, Tsa Bux	phone	Invitation to discuss draft cultural heritage chapter

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
15/1/2003	Tara Leduc James Cuell	House Representatives Doris Wilson, Gutgunnus Brett Huson, Gutgunnus Daddy Wesley, Gutgunnus Robert Frische, Gutgunnus Larry Skulsh, Wii Minosik Clifford Sanpare, Nii Kyap Les Moore, Luut Kudziiwus Gordon Sebastian, Luut Kudziiwus Jack Sebastian, Luut Kudziiwus Delbert Turner, Luut Kudziiwus Yvonne Lattie, Luus Art Jack, Luus Louy Rabocz, Wii Elaast Joyce Turner, Yagosip Rudy Turner, Yagosip Barry Bush, Wii Gyet Beverly Clifton Percival Mrytle Muldoe GTO	Meeting GTO 1:00 - 4:00 pm	Presentation and review of cultural heritage draft
15/1/2003	Tara Leduc James Cuell	House Representatives Lloyd Morrison, Wuu gyet Alice Jeffery, Miluulak Ted Mowatt, Djogeeslee Keith Mowatt, Djogeeslee Doug Mowatt, Djogeeslee Alvin Sampson, Djogeeslee Abel Sampson, Djogeeslee Myrtle Muldoe GTO	Meeting GTO 6:10 PM	Presentation and review of cultural heritage draft
15/1/2003	Tara Leduc	Xsugwin Liginsxw Huwilp	Letter	Requesting comment on draft cultural heritage chapter, chapter is attached.

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
16/1/2003	Tara Leduc	Myrtle Muldoe	Letter	To TL, consultation process in light of Dec. 10 decision
17/1/2003	Tara Leduc	Wilmer Johnson, Tsa Bux	Letter	To WJ, requesting comment on draft cultural heritage chapter, chapter is attached.
17/1/2003	Tara Leduc	Beverly Clifton Percival Myrtle Muldoe	Meeting	Follow-up to Chiefs presentation.
7/2/2003	Tara Leduc	Beverly Clifton Percival	Meeting, ?	Request for information to be used in the socio-economic analysis.
11/2/2003	Tara Leduc	Beverly Clifton Percival	Letter	To TL. Re: next step in accommodating Gitxsan values and interests in plan
11/2/2003	Tara Leduc	Beverly Clifton Percival	Phone	Re: plan timelines, GIS contract etc.
13/2/2003	Tara Leduc	Beverly Clifton Percival	Letter	To TL. Follow up on phone call re: request for additional funding for cross cultural training and GIS
14/2/2003	Tara Leduc	Beverly Clifton Percival Myrtle Muldoe	Meeting, GTO	To arrange proposed training sessions for the writing of objectives, strategies etc.
22/2/2003	Tara Leduc	Beverly Clifton Percival Myrtle Muldoe	Meeting, GTO	To arrange chief meetings to identify house concerns within planning area

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
26/2/2003	Tara Leduc Denise Van Raalte	House Representatives Norman Stevens Lloyd Austin, Spookw Robert Austin Joyce Turner, Yagosip Rudy Turner, Yagosip Beatrice Rabocz, Wii Elaast Paddy Wesley Rena Benson, Nii Kyap Miriam Benson Roy Wilson, Luus Solomon Jack, Gwininitxw Jack Sebastian Delbert Turner, Yagosip Dilbert Johnson Barry Bush, Wiigyet Larry Skulsh, Wiiminosik Vince Jackson Darlene Vey	Meeting, GTO	Presentation on how to write management direction (goals, objectives, strategies etc.)
26/2/2003	Tara Leduc	Myrtle Muldoe	letter	Response to Jan 16 letter
4/3/2003	Tara Leduc	Beverly Clifton Percival	email	Follow-up request to BCP for information for socio-economic analysis. Response that it was not possible to gather this information.
7/3/2003	Kevin Kriese Tara Leduc Gord Erlandson	Beverly Clifton Percival Gord Sebastian	Meeting, MSRM	Update on role of enhanced stakeholder consultation; reivew of where plan is at, and what next steps are to complete plan
20/3/2003	Tara Leduc	Wilmer Johnson, Tsa Bux	phone	Discussion re: land use planning training session
25/3/2003	Kevin Kriese	Alice Jeffery, Miiluulak	letter	To KK. Re: proposed timeline for land use planning sessions is unreasonable and deadlines should be moved to allow for meaningful input.

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
1/4/2003	Tara Leduc	Beverly Clifton Percival	phone	Re: arrangements for additional land use planning training sessions; verbal agreement that GTO will deliver berry management areas map for which the GTO has been paid.
2/4/2003	Tara Leduc	Myrtle Muldoe	fax	Draft Berry Management chapter sent to GTO.
6/4/2003	Tara Leduc	Wilmer Johnson, Tsa Bux	letter	To TL; re: use of jargon in plan causing confusion for chiefs, many for whom English is a second language; also concerns around MSRM consultation with GTO, which does not represent all houses.
7/4/2003	Tara Leduc	Mrytle Muldoe	phone	Confirm meeting for April 17, 2003
7/4/2003	Kevin Kriese	Beverly Clifton Percival	letter	To KK. Re: time constraints and pressures around consultation process
10/4/2003	Tara Leduc	Gary Benson, Nii Kyap	phone	
15/4/2003	Tara Leduc	Wilmer Johnson, Tsa Bux	fax	Series of faxes sent over week to approve language around concepts of lax yip, adaawk, ayook etc.
15/4/2003	Tara Leduc	Wilmer Johnson, Tsa Bux	fax	To WJ; copies of draft berry and tourism chapters from the WB SRMP
10/6/2003	James Cuell	Myrtle Muldoe	letter	To MM with 2 copies of the draft WB SRMP, an invitation to arrange meeting to discuss draft; and a brief summary of changes to plan as a result of Gitxsan input.
16/6/2003	James Cuell	Myrtle Muldoe	letter	Package to MM with 30 copies of draft plan for review by house representatives.
16/6/2003	James Cuell	Wilmer Johnson	draft plan	Copy of draft plan sent to Wilmer for comment, with invitation to arrange meeting is so desired.
26/6/2003	James Cuell	Beverly Clifton Percival Gordon Sebastian Myrtle Muldoe	meeting, GTO?	Discussion on draft plan distributed June 10/03.
4/7/2003	James Cuell	Bev Clifton Percival	memo	Initial comments on draft plan distributed June 10/03.
18/7/2003	Shauna McCalla	Myrtle Muldoe	letter	Package to MM with 30 copies of Public Review Draft 2.0 for review by house representatives, in preparation for meeting scheduled August 18, 2003.
21/7/2003	James Cuell	Bev Clifton Percival	letter	To BCP about public review period of Draft 2.0, with summary document and draft attached.

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
21/7/2003	James Cuell	Myrtle Muldoe	letter	To MM about public review period of Draft 2.0, with summary document and draft attached.
18/8/2003	James Cuell Kevin Kriese	House Representatives: Roy Wilson, Luus Alice Jeffrey, Miluulak Mary Jeffrey?, Miluulak Delbert Turner, Luudkwzwiis Joyce Turner, Yagosip Roy Wilson, Luus Ted Mowatt, Djogaslee Bruce Johnston, Axti Dzeek Bev Clifton Percival GTO Gordon Sebastian GTO Art Wilson, translator	meeting, GTO	Presentation on Draft 2.0 of plan. Discussion around general comments and concerns and specific concerns addressed in the plan.
19/8/2003	James Cuell	Wilmer Johnson	letter	To WJ about public review period of Draft 2.0, with summary document and draft attached.
28/8/2003	James Cuell	Bev Clifton Percival	email	To BCP with draft SEA attached.
4/9/2003	James Cuell	Bev Clifton Percival Myrtle Muldoe	email	To BCP, MM with meeting summary from Aug. 18, 03 and list of commitments made at the meeting.
30/9/2003	James Cuell	Bev Clifton Percival	Email	To BCP, looking for feedback on the last draft of the plan
30/9/2003	James Cuell	Bev Clifton Percival	Email	From BCP, indicating will respond to the plan soon.
23/10/2003	James Cuell	Bev Clifton Percival	Email	To BCP, looking for feedback on the last draft of the plan
23/10/2003	James Cuell	Bev Clifton Percival	Email	From BCP, high level feedback on the West Babine SRMP. Commits to reviewing the plan in detail by early November
17/11/2003	James Cuell	Bev Clifton-Percival	Email	Forwarding link to most recent version of SRMP in preparation for meeting on the 19th

Date	MSRM Representatives	Gitxsan Representatives	Type of Consultation	Topic
19/11/2003	James Cuell	Bev Clifton-Percival	Meeting	Informal meeting with BCP to see where the Gitxsan are on providing comment. Internal disputes are making it difficult for BCP to consult with the chiefs to provide comment on the plan. Court date to settle internal disputes to happen in mid-December. Once Court is completed, can probably provide comments by mid-January.
26/11/2003	James Cuell	Bev Clifton-Percival	Email	Reiterating commitment to assist in a chiefs meeting on the West Babine SRMP
13/1/2004	James Cuell	Bev Clifton-Percival	Phone	Left message to discuss monitoring trust and the West Babine plan
14/1/2004	James Cuell	Bev Clifton-Percival	Phone	Left message to discuss monitoring trust and the West Babine plan
27/1/2004	James Cuell	Bev Clifton-Percival	Phone	Left message with Bev, acknowledging the voice mail she left
29/1/2004	James Cuell	Kenny Rabnett	Meeting	Kenny dropped of October 23, 2003 version of the Gitxsan ecology and history map for inserting into the West Babine Plan.
29/1/2004	James Cuell	Bev Clifton-Percival	Email	message thanking her for the map and asking some questions around the use of the map

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4.1 Gitxsan Comment

Source	Draft #	Date	Comments	SRMP Resolution
Planning Context & Framework				
GTO	Draft 1	Sept. 19/02	Need to recognize Gitxsan in general, as key decision makers in particular, and as co-managers of land and not just a party to consult.	Gitxsan culture, resource stewardship and decision making outlined in the plan and parallel to the provincial policy framework; recognize that operational referrals to Gitxsan must still occur; recognize that proactive, co-operative planning goes beyond mere consultation.
GTO	Draft 1	Sept. 19/02	Need to accommodate Gitxsan Huwilp title and rights in that timber and other forest products are a base for sustainable, self-sufficient economy.	Need for consultation and accomodation of Gitxsan interests identified in the plan.
Policy and Planning Process				
GTO	Interim Draft	July 7/03	Requires explanation of how Gitxsan interests are accommodated in the West Babine SRMP.	Described in detail in this table for specific concerns identified.
Ecological				
<i>Hydrological</i>				
GC	Cultural Heritage Draft	January 8/03	Need to address water quality, sedimentation and maintenance of stream integrity, particularly in relation to fish and fish habitat.	Risk to sedimentation, protection of steams and fish habitat, and water quality are protected by the plans enhanced riparian protection on the major tributaries (landscape riparian corridors), biodiversity objectives and ECA triggers. Additionally, an objective calling for low risk to water quality within the Nicyeskwa, Babine Mainstem and Shelagyote watersheds has been added.
<i>Biodiversity – Wildlife General</i>				
GC	Cultural Heritage Draft	January 8/03	Need to address concerns about large cutblocks increasing long sight distance for shooting wildlife.	At a strategic level, ND patterns will be approximated through a distribution of patch sizes across landscape. Incorporation of wildlife tree patches and advanced regeneration retention will provide security cover within large cutblocks.

Source	Draft #	Date	Comments	SRMP Resolution
GTO	Draft 1	Sept. 19/02	Need to complete wildlife surveys initiated through SWAT to ground truth assumptions about habitat use by wildlife.	Completion of wildlife surveys for the purpose of monitoring, will be the responsibility of operational managers as guided by a monitoring committee.
GTO	Draft 1	Sept. 19/02	Need to devote section to Gitksan requirements for wildlife and other biodiversity values without imposing arbitrary conditions such as 12% protected, <6% reduction in AAC by FPC, <4% reduction to AAC by biodiversity measures.	This SRMP is not constrained by policy, provided we stay within a range contemplated by the Kispiox LRMP. For example, seral stage objectives are different than found in the biodiversity guidebook.
GTO	Draft 1	Sept. 19/02	Need to protect ecosystem functioning and biological diversity using precautionary principle and risk-averse approach, and not accept extinction or possibility of extinction of key species.	Comprehensive biodiversity objectives maintain a diversity of habitats and reduce the risk of extinction of key species. Monitoring and plan amendment will reduce this risk further.
GTO	Draft 1	Aug. 26/02	Need a full wildlife study to assess the health of all wildlife species in watershed.	Comprehensive biodiversity objectives maintain a diversity of habitats for all wildlife. Monitoring and plan amendment will improve the plan over time.
GTO	Draft 1	Sept. 19/02	Need to explain how a results-based / adaptive management can be used for species where there is no baseline population data, and measurable effects such as changes in population levels and habitat use will likely have too long a lag time to influence development under the plan.	Comprehensive biodiversity objectives maintain a diversity of habitats for all wildlife. Monitoring and plan amendment will improve the plan over time.
GC	Cultural Heritage Draft	January 8/03	Need to address maintaining habitat for small furbearers.	Comprehensive biodiversity objectives maintain a diversity of habitats for all wildlife. Wildlife tree retention will help to maintain wildlife at the stand level. Increased retention is required for larger block. Monitoring and plan amendment will improve the plan over time.
<i>Wildlife – Ungulates</i>				

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Source	Draft #	Date	Comments	SRMP Resolution
GC	Cultural Heritage Draft	January 8/03	Need to provide for moose winter range.	Most of moose winter range is constrained by a number of different zonations including the park, the Babine River SMZ and high-value grizzly habitat. 19% of high-value range, 21% of medium value range and 19% of low value range is unconstrained and within the Integrated Management Area. Given these small numbers, little reduction to risk is expected from have moose winter range objectives, therefore, none have been developed.
GC	Cultural Heritage Draft	January 8/03	Will plan protect mountain goats that seem to be in a decline (Atna to Mt. Tommy Jack area)?	The Atna/Shelagyote SMZ expansion will provide increased protection for mountain goats. The plan provides no objectives for managing mtn. goat habitat. If monitoring results indicate goats are at risk, the information can be used to develop objectives that can be amended into the plan at a latter date.
Social/Cultural/Heritage				
GTO	Draft 1	Sept. 19/02	Need to address 'glaring deficiency' that current & future interests of identified Gitksan villages & houses are not given consideration (include resettlement of villages and pursuit of economic opportunities such as fisheries, tourism, mining, recreation etc.). Need to include appropriate, measurable, enforceable objectives to protect this interest.	Information about current and potential Gitksan tourism opportunities have been included in section 3.3.2. If additional information is provided about Gitksan opportunities in other sectors, this information can be included in the final document.
GTO	Interim Draft	July 7/03	Lack of management objectives around cultural heritage resources is unacceptable.	Comments received from the Gitksan chiefs, GTO, and information from the Gitksan Sustainability plan for the Babine watershed have been incorporated into the plan. In most instances this information provides context and background and is not spatially explicit.
GTO	Draft 1	Aug. 26/02	Need to recognize that cultural heritage resources, features & cultural infrastructure belong to the Gitksan.	Outside the scope of the SRMP.

Source	Draft #	Date	Comments	SRMP Resolution
GTO	Draft 1	Sept. 19/02	Need to accommodate Gitxsan interest within the Babine River SMZ, especially in relation to proposed logging.	Gitxsan have not clarified their interests with sufficient detail that specific plan adjustments can be made. The plan will be amended to consider FN cultural infrastructure when the information and management guidelines is available.
GC	Cultural Heritage Draft	January 8/03	Need to address concerns about logging roads being placed on traditional trail locations, or too close to village sites, cache pits etc.	Cultural Heritage Resource Guidelines are intended to reduce conflicting resource use and to guide development on and around cultural heritage features. As more detailed information is provided by GTO, management guidelines and strategies will be developed.
GC	Cultural Heritage Draft	January 8/03	Need to address logging block placements in relation to retention of Culturally Modified Trees, cremation sites, village sites, cache pits etc.	No objectives have been provided by the Gitxsan for spatial objectives. Therefore, these issues will need to be addressed at the operational level.
GC	Cultural Heritage Draft	January 8/03	Need to recognize importance of Damsumlo Lakes area (many Gitxsan trails, village sites and trapping grounds).	A core ecosystem (no logging) and high-value grizzly bear habitat has been established in the vicinity of Damsumlo Lake.
<i>Botanical Forest Products</i>				
GC	Cultural Heritage Draft	January 8/03	Need to address traditional harvest of 13 different species of mushrooms which could all be harvested commercially.	More specific information is needed on these species in order to manage for them as part of the WB SRMP. Until then, an ecosystem based management approach should reduce risk to these species in the short term by ensuring the habitats that support mushrooms is maintained across the landscape.
GC	Cultural Heritage Draft	January 8/03	Need to address protection of hemlock areas from logging as they are an important source of BFP.	Significant hemlock areas are part of reserves and the inoperable and will never be harvested.
GC	Cultural Heritage Draft	January 8/03	Need to address management of house territories for the gathering of medicine.	More specific information is needed on these species in order to manage for them as part of the WB SRMP. Until then, an ecosystem based management approach should reduce risk to these species in the short term.
GC	Cultural Heritage Draft	January 8/03	Need to address burning for cultural purposes (to manage for berry production, animal habitat, forest health and access).	Section 2.2.1 and 3.1.1.2 discuss the historical use of fire to maintain biodiversity. In Section 3.3.6.2 Management Considerations address the use of fire as a means for increasing berry productivity.

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Source	Draft #	Date	Comments	SRMP Resolution
<i>Babine River Valley SMZ</i>				
GTO	Draft 1	Sept. 19/02	SMZ should be eliminated or a study on Gitxsan interests in zone completed.	Babine SMZ is required to maintain consistency with the Kispiox LRMP.
Social and Economic Resources				
<i>Fishery</i>				
GC	Cultural Heritage Draft	January 8/03	Need to address conservation of bull trout populations and habitat.	Section 3.1.2.4 specifically addresses bull trout habitat. In addition, direction for Water Quality and Hydrology, Landscape Riparian Corridors and Core areas will help protect riparian ecosystem integrity.
<i>Timber</i>				
GTO	Draft 1	Sept. 19/02	Provide a single, clear description of plan's timber access goal and of its priority if it conflicts with other plan goals.	The structure of the SRMP document has been changed to provide clear management direction for all values in the plan area. Where direction applies to one or more values, document is appropriately cross-referenced.
GTO	Draft 1	Sept. 19/02	Need to show options that would provide for an even flow of timber volume and quality from area over both short- and long-term.	Timber allocation and flow is not administered on a Landscape Unit basis.
GTO	Draft 1	Sept. 19/02	Need to determine actual natural disturbance regime for the major ecosystem units in area and provide logging prescriptions that mimic real regime.	Seral stage and patch size objectives are based on current information about natural disturbance regimes, see Section 3.1.1.1
SCI	Draft 1	Sept. 30/02	Need to make plan more flexible, especially around winter harvest time constraints to address forest health risks.	Winter harvest constraints removed.
<i>Tourism</i>				
GC	Cultural Heritage Draft	January 8/03	Need to address commercial recreation / tourism plans that have been proposed by Gitxsan Chiefs.	All available information on Gitxsan tourism proposals and opportunities have been incorporated into section 3.3.2(Tourism).
<i>Trapping</i>				

Source	Draft #	Date	Comments	SRMP Resolution
GC	Cultural Heritage Draft	January 8/03	Need to address loss of trapping areas.	Trapping areas on the large scale will not be lost. Parts of traplines may need to be moved after forest harvest occurs, but the asserted aboriginal right to trap will be maintained over the landscape.
<i>Botanical Forest Products</i>				
GTO	Interim Draft	July 7/03	Need to refer to Gitksan use of medicinal plants (work by Gottesfeld and Anderson).	Reference included in section 3.3.6 (Botanical Forest Products).
Plan Implementation, Monitoring and Amendment				
GTO	Interim Draft	July 7/03	The role of the Gitksan in terms of administrative and operational decision making needs to be explicitly included.	Section 4.0 modified to include statement about First Nations involvement.

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1.1 Lake Babine Nation Consultation

Date	MSRM Representatives	Lake Babine Nation Representatives	Type of Consultation	Topic
14-May-03	Brian Fuhr	Gloria George	Conversation	Brian discussed the LBN overlap in the plan area with Gloria at an Morice LRMP table meeting. Gloria is interested and requests a copy of the plan
23-May-03	James Cuell	Gloria George Ray Williams	email	Initiation for a meeting to discuss the plan and a map of the plan area and LBN territory is provided
28-May-03	James Cuell	Gloria George	phone	Discussed the West Babine plan and process. Set a meeting date for June 30, 2003 in Burns Lake.
28-May-03	James Cuell	Gloria George	email	Sent interim draft of plan to Gloria.
9-Jun-03	James Cuell	Gloria George Ray Williams	email	Sent new version of plan to Gloria
26-Jun-03	James Cuell	Gloria George	phone	Gloria called to change meeting date to July 10 in Smithers
9-Jul-03	James Cuell	Gloria George	phone	Gloria notifies us that her work is on hold following the Lake Babine Nation band elections.
21-Jul-03	James Cuell	Gloria George	letter	Draft plan, inviting review and comment
24-Oct-03				Traditional Territory Meeting at Nedo'ats (Old Fort) Nation. LBN confirms that consultation is to occur with the individual communities - for this plan, it means Fort Babine
27-Jan-04	James Cuell	Frank Alec	phone	message left with Frank, looking for guidance around consultation in Fort Babine
2-Feb-04	James Cuell	Frank Alec	phone	message left with Frank, looking for guidance around consultation in Fort Babine
6-Feb-04	James Cuell	Pat Michell	letter	Invitation to meet and discuss MSRM initiatives in Fort Babine
16-Feb-04	James Cuell	Wes Brendenhof Fred William	meeting	Wes and Fred attend a Babine Monitoring meeting. Discuss MSRM initiatives in the Fort Babine area plus make a commitment to meet.
24-Feb-04	James Cuell	Wes Brendenhof Fred William	email	Offering to come to Fort Babine to discuss planning initiatives and planning history in the Fort Babine area
26-Feb-04	James Cuell	Wes Brendenhof	email	Wes informs us that he will be out of country and not involved

Appendix 6 - Linkages Between the Babine LRUP and The West Babine SRMP Objectives

Babine LRUP Objectives	Babine LRUP Strategies	West Babine SRMP Objectives/Targets
Biodiversity		
Biodiversity	<ul style="list-style-type: none"> Maintain viable populations of all native plant and animal species, genetic diversity within these species, and functional links between species. 	
Old Growth	<p>SBS: 80+ years >30 ESSF: 80+ years >50</p> <p><u>TU 2</u></p> <ul style="list-style-type: none"> Maintain representative stands of old growth. No logging permitted. Maintain linkages with other TUs. No roads unless no other alternative. 	<p><u>Core Ecosystems:</u></p> <ul style="list-style-type: none"> Mapped 12% by midsize watershed/BEC Subzone⁴⁴. No logging in core ecosystems % retention of old seral forest by BEC subzone:⁴⁵ <ul style="list-style-type: none"> ESSFwv >39% ESSFmc >15% ICHmc >13 % SBSmc >17%
Seral Stage	<ul style="list-style-type: none"> SBS: 0-20 yrs <50% ESSF: 0-20 years <30% 	<ul style="list-style-type: none"> % retention of mature and old seral forest by BEC subzone:⁴⁶ <ul style="list-style-type: none"> ESSFwv >61% ESSFmc >44% ICHmc >46% SBSmc >35% Maximum amount of early seral forest (< 40 years) by BEC subzone:⁴⁷ <ul style="list-style-type: none"> ESSFwv <11% ESSFmc <26% ICHmc <27% SBSmc <40%

⁴⁴ These are called core ecosystems for consistency with the Bulkley's Babine LUP

⁴⁵ From Steventon, 2002 for ESSF and SBS. From Biodiversity guidebook for ICH

⁴⁶ From Steventon, 2002 for ESSF and SBS. From Biodiversity guidebook for ICH

⁴⁷ From Steventon, 2002 for ESSF and SBS. From Biodiversity guidebook for ICH

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

	Babine LRUP Objectives	Babine LRUP Strategies	West Babine SRMP Objectives/Targets
Connectivity		<p><u>TU 1</u></p> <ul style="list-style-type: none"> • Maintain riparian ecosystems. • Maintain 70% of structure and function of all habitat types. • Maintain no-harvest reserve ~150m from water body. • Additional 50m from ridge break for deeply incised slopes. • Wherever possible, no permanent roads within 150 m. • All access temporary and deactivated after use. • Restrict harvesting to winter season. <p><u>TU 3</u></p> <ul style="list-style-type: none"> • Prevent habitat fragmentation. • Single tree selection logging. 	<p><u>Landscape Riparian Corridors</u></p> <ul style="list-style-type: none"> • At least 70% retention of structure within Landscape Riparian Corridors. • No alteration of fluvial or floodplain ecosystems⁴⁸ that may be subject to frequent or infrequent flooding.
Patch Size Distribution			<ul style="list-style-type: none"> • Table included under management considerations providing gap size targets ranging from small gaps (<1 ha) to very large gaps (>250 ha).
Stand Structure		<ul style="list-style-type: none"> • Areas identified as mature for seral stage retention to also have characteristics as identified in Appendix 2. <p><u>TU2 and TU3</u></p> <ul style="list-style-type: none"> • Areas may be replaced through time as suitable sites with attributes characteristic of BEC subzone (Appendix 2) become available. 	<ul style="list-style-type: none"> • % of cutblock area retained in wildlife tree patches (WTPs) over the rotation (Table 3).⁴⁹ • < 500m between wildlife tree patches.
Species Composition		<p><u>TU6</u></p> <ul style="list-style-type: none"> • On harvested sites maintain the range of naturally occurring tree species. 	
Rare Ecosystems			<ul style="list-style-type: none"> • Upper Shelagyote Wetlands protected with expanded Atna/Shelagyote SMZ. • No logging within Atna/Shelagyote SMZ. • No reduction in the functional area (ha) of known red- and blue-listed ecosystem polygons over time.

⁴⁸ A fluvial or floodplain ecosystem is one in which the floristic community is influenced by the flooding from an adjacent stream or river. This includes subsurface, periodic over-bank or annual over-bank flooding.

⁴⁹Note: amount of retention varies with BEC zone and the size of opening.

Babine LRUP Objectives	Babine LRUP Strategies	West Babine SRMP Objectives/Targets
Wildlife		
Wildlife	<ul style="list-style-type: none"> Identify and maintain important wildlife habitat 	
Grizzly Bear	<ul style="list-style-type: none"> Maintain present population. Manage for grizzly bear viewing opportunities identified along the Babine River Corridor. Identify and maintain grizzly movement corridors to and along the river and areas outside the river corridor. <p><u>TU4:</u></p> <ul style="list-style-type: none"> Minimize human-bear conflicts and preserve high-value grizzly habitat Roads should remain 150 m from high value habitats. 100 meter buffer should be provided adjacent to high-value habitats. <p><u>TU 4a:</u></p> <ul style="list-style-type: none"> Mix forest management utilizing selective harvest techniques. <p><u>TU 5:</u></p> <ul style="list-style-type: none"> Minimize road development and number and duration of entries. Single entry followed by a sustained period of inactivity Blocks up to 200 ha Where high-value habitat types (>2 ha) are identified, manage as TU 4 <p><u>TU 6</u></p> <ul style="list-style-type: none"> Integrated resource management. Where high-value habitat types (>2 ha) are identified, manage as TU 4 and maintain visual screening. <p><u>Babine SMZ</u></p> <ul style="list-style-type: none"> High value habitat and movement corridors, manage as TU 4. Sight distances along roads will not exceed 300 metres. 	<ul style="list-style-type: none"> Access management areas established for Sperry/Rosenthal, Shenismike West and Big Slide. <p><u>Shenismike Corridor</u></p> <ul style="list-style-type: none"> No roads <p><u>High-Value Grizzly Bear Habitat</u></p> <ul style="list-style-type: none"> No alteration of critical habitats, unless no practical alternative exists. Provide a 100m buffer of windfirm, functional forest cover adjacent to non-forested critical habitats. No permanent roads located within 150m of critical habitats.
Bull Trout		<ul style="list-style-type: none"> No bridge within 750m of known bull trout staging areas on the Shelagoyote mainstem.

Xsu gwin lik'l'inswx: West Babine Sustainable Resource Management Plan

Babine LRUP Objectives	Babine LRUP Strategies	West Babine SRMP Objectives/Targets
Water Quality/Hydrology		
Water Quality	<ul style="list-style-type: none"> • Maintain existing water quality, clarity and hydrologic stability of the Babine River and its tributaries 	<ul style="list-style-type: none"> • ECAs established for each mid-sized watershed (triggers vary from 15 - 30% based on D. Wilford, 2002. • Low Risk threshold set for sensitive, high-value watersheds.
Economic		
Forestry	<ul style="list-style-type: none"> • Manage the forest land base outside the wilderness zone • Obtain a positive economic return for the forested land base outside the wilderness zone • Plan harvesting activity in consideration of other resource values and in a manner which minimize the impact on these values. • Improve access to the watershed to protect and manage forest health (bark beetle infestations) and control fire outbreaks. • Distribute the harvest proportionately over the Bulkley and Kispiox Timber Supply areas. 	<ul style="list-style-type: none"> • To provide sustainable and economically viable access to timber supply.

	Babine LRUP Objectives	Babine LRUP Strategies	West Babine SRMP Objectives/Targets
Tourism	<ul style="list-style-type: none"> • Maintain wilderness quality of the Babine River wilderness corridor. • Maintain the Class 1 angling status of the river • Maintain fish habitat. 	<p><u>Wildness Zone</u></p> <ul style="list-style-type: none"> • No Logging. • Visual quality objectives along Babine River <p><u>Babine SMZ</u></p> <ul style="list-style-type: none"> • Protection of river based resource values. • Defer harvesting subject to preparation of plan regulating small-scale forest management activities. • Rotation period of 200 years >30% to be 140 years or greater partial cutting systems to used. • Clear cuts <15ha. • Winter only harvest • Unrestricted, permanent road access north of the Babine River Bridge will not be established. • All temporary access will remain at least 300 metres from wilderness zone boundary (except Big Slide). 	<p><u>Babine/Shelagvote Tourism Node</u></p> <ul style="list-style-type: none"> • No logging but does allow for a single road to pass through • Visual quality objectives from Babine River, Gunanoot Lake, Sicintine Lake, Lower Skeena River, Skeena River • Access Management Zone established for Shenismike/Shelagvote <p><u>Babine SMZ</u></p> <ul style="list-style-type: none"> • No permanent motorized access • All access to remain 300m from park boundary • Access control points where mainlines enter zone • Winter harvest only openings <15 ha30%>140 yrs sight distance less than 300m.