



**Ministry of
Forests, Lands,
Natural
Resource
Operations and
Rural
Development**

Kalum LRMP Practices Implementation Report

November 13, 2018

Foreword

The Kalum Land and Resource Management Plan (LRMP) Practices Implementation Report identifies and monitors consistency of operational plans and/or agency permitting and approval processes with LRMP management direction. Anne Harfenist originally compiled this report for the Ministry of Forests, Lands, Natural Resource Operations and Rural Development. It is an update of a draft 2008 report prepared by Denise Van Raalte. The intended audience includes provincial government agencies, First Nations, the Kalum Plan Implementation Committee (PIC) and the public.

The updates in this report are based on consultations with Natural Resource District and Regional provincial government staff. Agency affiliations for each contributor are listed in Appendix A. Some sections benefited from input from members of the Kalum PIC.

General comments regarding information contained in this report may be directed to FLNR at the address below. Specific questions on implementation should be directed to the lead agency.

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Executive Summary

In July 2017, the Minister of Forests, Lands, Natural Resource Operations and Rural Development was mandated to work alongside the Minister of Indigenous Relations, First Nations and communities to modernize land use planning in British Columbia.

Modernized land use planning is being developed in partnership between the Province and Indigenous governments. It aims to advance reconciliation efforts, promote economic opportunities through increased certainty for land management, respond to modern social and environmental conditions, and increase public confidence and trust in the stewardship of B.C.'s natural resources.

Land use planning will have a much more varied approach than historic processes. Planning will occur at a range of geographic scales in response to specific needs and new environmental challenges. Factors such as the implementation status and monitoring of existing plans will also be taken into consideration.

Assessing the implementation status of the Kalum Land and Resource Management Plan is a critical first step in any future LRMP modernization, and is guided by the draft *Framework for Monitoring Strategic Land and Resource Plans in BC (2008)* and its companion document, the draft *Procedures for Monitoring of Strategic Land and Resource Plans in BC (2008)*. This report is one of a suite of four reports intended to provide a comprehensive update on Kalum LRMP implementation. The report provides information on LRMP strategies related to ongoing activities, called Practices, that are implemented primarily through legislation, policy and/or professional reliance.

The Kalum LRMP describes 265 practices of which 240 fall within the jurisdiction of the provincial government. The remaining 25 are within federal or local government jurisdiction and are the responsibility of industry or are driven by proponent proposals.

Of the 240 practices within provincial jurisdiction, approximately 205 (85%) are currently being implemented. 40% of the 205 practices are being implemented through legal regulatory means, 44% through policy, 13% through professional reliance and 3% through outreach and extension.

Approximately 33-35 (13% - 15%) of identified Practices within provincial jurisdiction are not being implemented: 3%-5% because the condition described in the practice does not exist at this time and 10% because there are insufficient resources for implementation. All implementation statistics should be considered approximations as some practices are only partially implemented, some are implemented through a combination of regulatory and non-regulatory means and some are the responsibility of both the provincial and federal governments.

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1 Introduction and Background

Introduction

British Columbia's strategic land and resource management planning program began in the early 1990s, when it was developed as a tool to manage land use conflict and to deliver British Columbia's Protected Areas Strategy. The program was created to:

- improve land use certainty and economic stability;
- generate economic opportunities, investment and jobs;
- achieve healthy communities; and
- ensure the long-term viability of the environment.

The planning program resulted in a series of sub-regional consensus-based processes involving participation of parties with a key interest or stake in the plan areas. The products were land and resource management plans (LRMPs). The basic structure of LRMPs involves objectives and strategies for a series of resource values on the landscape:

- **Resource Values** are values on Crown land which may include, but are not confined to, biodiversity, air and water quality, timber, minerals and energy, cultural heritage, fish and wildlife, recreation and visual resources.
- **Objectives** set out the overarching desired future outcomes for resources or resource uses.
- **Strategies** provide the management direction to achieve those future outcomes.

Following Cabinet approval of LRMPs, the provincial government's role is to implement the approved direction and to report on the status of implementation through monitoring reports.

Monitoring of LRMP implementation is guided by the draft *Framework for Monitoring Strategic Land and Resource Plans in BC* (2008) and the companion document, the draft *Procedures for Monitoring of Strategic Land and Resource Plans in BC* (2008). The *Procedures* document outlines a suite of four reports meant to give a comprehensive update on the current status of implementation of LRMPs:

- 1) **Projects Report** that summarizes the completion of projects and/or milestones described in the LRMP;
- 2) **Practices Implementation Report** that outlines consistency of operational plans and/or agency permitting and approval processes with LRMP strategies and/or targets within individual tenure areas and lists enabling mechanisms for landscape-level practices;
- 3) **Strategic Practices Analysis Report** that analyzes resource conditions at a landscape scale; and
- 4) **Evaluation Report** that summarizes the overall state of plan implementation and validation monitoring and may suggest improvements and/or highlight issues raised during implementation.

This report is the 2018 Practices Implementation Report for the Kalum LRMP. It is an update of a 2008 draft report. The Kalum LRMP Projects Implementation Report was also updated in 2018; draft strategic practices analysis and evaluation reports for the Kalum were prepared in 2008 and 2009, respectively, but not finalized.

Background

The Kalum Land and Resource Management Plan (LRMP) provides land and resource management direction for the Kalum Timber Supply Area (TSA), Tree Farm License (TFL) 1, TFL 41 and Block 28 of the Pacific TSA (formerly part of TFL 41). The Kalum LRMP area covers approximately 2.2 million hectares in the Coast Mountains Natural Resource District. The plan was approved by Cabinet in 2001. Details on the process leading up to the approval of the Kalum LRMP as well as descriptions and maps of the plan area can be found in the introductory sections of the LRMP document and the accompanying map portfolio¹.

The Kalum Sustainable Resource Management Plan (SRMP) legally established some of the Kalum LRMP objectives under a Land Use Objectives Regulation Order for the Kalum SRMP area (excluding the Kowesas Landscape Unit). The Order was signed in 2006. Details on the process are provided in the SRMP document². Two amendments to the 2006 Order were made in 2017. One, the Kiteen amendment³, was made to fulfill the Gitanyow Recognition and Reconciliation Agreement (2012) between the B.C. government and the Gitanyow Hereditary Chiefs. The second, the Skeena Islands amendment⁴, was made to better protect the Skeena Islands. In addition, an Environmental Protection and Management Regulation order was established in 2017 under the Oil and Gas Activities Act for old growth management areas respecting oil and gas activities.

2 Content

The goals of this report are to:

- clearly articulate all practices identified in the LRMP (referenced by LRMP objective and strategy number) as a measurable or reportable statement;
- identify lead agencies responsible for ensuring that practices are implemented; and
- identify whether each practice is being implemented and, if so, how.

For ease of reporting, this report follows the layout of the LRMP. The Kalum LRMP Implementation Plan (Appendix B) indicates which LRMP strategies are associated with practices. The table below is a sample entry with direction to aid in its completion. For practices with more than one lead agency, the order in which agencies are listed is not meant to be indicative of their relative levels of responsibility.

Abbreviations that appear in the tables are defined in Appendix C.

¹ <https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/land-use/land-use-plans-objectives/skeena-region/kalum-lrmp>

² https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/skeena-region/kalum-srmp/kalum_srmp_plan.pdf

³ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/skeena-region/kalum-srmp/luor_order_kiteen.pdf

⁴ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/skeena-region/kalum-srmp/luor_order_skeena_islands_amendment.pdf

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>Includes objective and strategy numbers as per LRMP.</i>	<i>What area the practice refers to (Plan Area, SRMZ or other.)</i>	<i>Agency or agencies accountable for implementing the practice.</i>	<i>LRMP Objective.</i>	<i>LRMP strategy; restructured, if necessary, to be a measurable or reportable practice.</i>	<i>How is practice being implemented (legislation, policy, professional reliance etc.)?</i> <i>Additional relevant information.</i>

Implementation Information

Monitoring implementation of operational practices involves answering the following questions:

- Did we do what the plan said we should do?
- If so, how was this strategy or practice implemented?

Practices are implemented through legislation, agency policy and/or professional reliance. Examples of regulatory mechanisms are: land use objectives established by a Land Use Objectives Regulation (LUOR) Order under the *Land Act* for the purposes of *FRPA* and designations, features, measures and objectives established by a Government Action Regulation (GAR) Order under *FRPA*.

Objectives established under these regulations are legislated requirements that tenure holders must follow. Government policy is a non-regulatory mechanism: it is not enacted through legislation and will not necessarily be monitored as part of compliance and enforcement activities. Government policies include standard operating procedures; best management practices; and application, referral and approval processes and associated requirements.

Professional reliance is a regulatory model in which government sets the management objectives or results to be achieved and professionals decide how those objectives or results will be achieved. Individuals or companies proposing development activities are to consider LRMP direction. It is up to the discretion of the professional preparing the plan or application to incorporate the LRMP direction. These professionals are bound by the standards and codes of their associations and applicable regulations; oversight is by the professional association. In the following tables, professional reliance is recorded as Implementation Information when legislation or policy does not apply.

3 Practices Implementation Summary

The LRMP has a total of 120 General Resource Management objectives, with 398 associated strategies; 251 of the strategies provide management direction for 219 practices. There are also 33 Resource Management Zone objectives, with 102 associated strategies, 73 of which provide direction for 44 practices. In addition, there are 5 economic objectives with 32 strategies providing direction for 2 practices. Note that some LRMP strategies provide direction for both practices and projects.

Of the 265 practices described in the LRMP:

- 83 are enabled under current legislation or SRMP objectives;
- 89 are enabled through government policy;
- 27 are enabled solely through professional reliance;

- 25 are outside of the provincial government mandate or jurisdiction (e.g., within federal or municipal government jurisdiction; responsibility of industry or driven by proponent proposals);
- 6 relate to a condition that does not exist at this time or situations that have not yet arisen;
- 6 are implemented through outreach or extension, but are not mandated;
- 4 are rarely, if ever, implemented because legal regulations prevent the practice; and
- 25 are not being implemented due to lack of capacity and/or lack of resources.

When considering the summary above, it is important to note that the categories are not always distinct: some practices are only partially implemented, some are implemented through a combination of regulatory and non-regulatory means and some are the responsibility of both the provincial and federal governments. Furthermore, it can be difficult to assess the implementation of practices to “encourage” or “promote” certain activities. Thus, the figures presented should be considered approximations.

In cases where legislation identified in the LRMP is no longer applicable, but the apparent intent of the strategy is being met through other means, the strategy is considered implemented.

4 Practice Descriptions

4.1 General Resource Management Direction

Access Management

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.1, Access Management* in the Kalum LRMP (pp. 23 - 25). One of these has been subject to analysis as a landscape level practice in the draft *Kalum LRMP Strategic Practices Analysis Report* (see Appendix D).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.2	Plan	FLNR - Stewardship	Plan and manage access to Crown land and resources for the full range of commercial, industrial, and public user needs through development of integrated access management plans.	In the absence of access management plans, the types and degree of acceptable access will be determined through existing interagency review processes.	The types and degree of acceptable access are determined through existing interagency review. First Nations consultation occurs through Crown referral process
2.2, 2.3 and 2.4	Plan	FLNR - Stewardship	Minimize impacts of access on environmental, recreational and cultural heritage values.	Evaluate current and plan future road location, construction and deactivation activities to: <ul style="list-style-type: none"> • minimize negative impacts on sensitive species and terrain; and • minimize development of linear barriers to wildlife movement; and • restrict detrimental modes of access to sensitive species and terrain. 	Also direction for Project 1.1. Implemented through professional reliance. Objective to conserve wildlife habitat for species at risk, regionally important species and specified ungulate species is subject to Section 7, <i>FPPR</i> , enabled under <i>FRPA</i> . <i>FRPA</i> , <i>FPPR</i> , Part 4, Division 1 does address some terrain-related issues.
2.5	Plan	FLNR - Stewardship		Minimize construction of roads in riparian areas, wildlife habitat areas and forest ecosystem networks.	Also direction for Project 1.1. Implemented through professional reliance. Objectives and regulations regarding riparian areas can be found in <i>FRPA</i> , <i>FPPR</i> sections 8, 47 – 58. Forest ecosystem networks identified in the Kiteen area. UWRs and Coastal Tailed Frog WHAs established; Grizzly Bear WHA approval anticipated in fiscal 2018/19. The preceding include conditions on road construction. No forest ecosystem networks identified outside Kiteen area.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.6	Plan	FLNR - Stewardship		Standards for road location, construction and maintenance will reflect concerns for sensitive down slope fish habitat values.	Also direction for Project 1.1. Professional reliance.
2.9 Identical to Geological and Energy Resources strategy 1.3	Plan	MEMPR		In areas distant from roads encourage air access for early stages of exploration.	See policy in the Handbook for Mineral and Coal Exploration in BC, 2008/9 at https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/exploration-in-bc?keyword=handbook&keyword=for&keyword=mineral&keyword=and&keyword=coal&keyword=exploration

Agriculture

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.2, Agriculture* in the Kalum LRMP (pp. 26 - 27).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.4	Plan	FLNR – Land & Water / AGRI	Maintain and enhance access to and use of Crown land, water and vegetation resources for agricultural purposes.	Allow and encourage the development of non-traditional agricultural uses of Crown resources (e.g. agro-forestry uses such as mushroom harvesting).	Can be addressed through Crown Land Applications.
1.5	Plan	FLNR – Land & Water / Stewardship		Control noxious weeds by implementing noxious weed control plans.	Northwest Invasive Plant Council is active in education and support of control efforts. See http://nwipc.org Regulated under the <i>Weed Control Regulation</i> ⁵ . Licensees identify measures to address invasive plants in FSPs, under <i>FPPR, Part 2, 17</i> , and <i>FRPA section 47</i> . For Crown Land applications, addressed if brought up during referral process.

⁵ http://www.bclaws.ca/Recon/document/ID/freeside/10_66_85

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.1	Plan	FLNR – Fish & Wildlife/ Recreation Sites & Trails / AGRI	Minimize conflicts between wildlife and/or recreation enhancement uses and private agricultural operations.	Improve local public participation role in wildlife enhancement and recreational plans in livestock and agricultural areas.	<p>No wildlife enhancement projects at this time.</p> <p>No recreational plans at this time.</p> <p>AGRI involved on Agricultural Land Reserve areas if proposal comes to them through referral process.</p>
2.2	Plan	FLNR – Range / Land & Water		Reduce level of agriculture/wildlife/forestry land use conflicts by undertaking site assessments with respect to agricultural and grazing-related applications which attempt to identify: key habitats and biodiversity values, suitable arable soils, and existing forestry investment and potential woodlot opportunities.	<p>New application for a <i>Range Act</i> tenure (grazing) require an assessment to identify key habitats and biodiversity. If any special features or values are identified, or there are forest investments or existing woodlots, then these would be considered in the Range Use Plan.</p> <p>For Crown Land applications, rely on Status Report: issues are considered if raised by other agencies or planning table.</p>

Aquaculture and Marine Plant Harvesting

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.3, Aquaculture and Marine Plant Harvesting* and aquaculture-related practices in *Section 2.2.6, Coastal Management: Environmental Management: Fish and Wildlife* in the Kalum LRMP (pp. 27-31; 45).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>2.2.3 Aquaculture</i>					
1.1	Plan	AGRI	Provide and maintain opportunities for suitable and capable marine and terrestrial Crown Land for the growth & development of sustainable commercial aquaculture (finfish, shellfish and marine plant).	Encourage local government plans and bylaws to provide opportunity for environmentally sustainable aquaculture.	The Strengthening Farming ⁶ program promotes strong working relationships between local and provincial governments and the farming community, including aquaculture. Legislative context for the program rests in the <i>Farm Practices Protection (Right to Farm) Act</i> , the <i>Agricultural Land Commission Act</i> , <i>Land Act</i> (Crown Land tenures), <i>Fish and Seafood Act</i> (marine plant aquaculture and harvesting), <i>Water Sustainability Act</i> (water use permits), <i>Environmental Management Act</i> (waste discharge permits), <i>Wildlife Act</i> (jointly with Fisheries and Oceans for fish movement/transfer within the province), <i>Local Government Act</i> and <i>Land Title Act</i> .
1.3	Plan	AGRI - SDB		Encourage research and development of aquaculture technology to provide for both economic and environmental sustainability.	SDB works closely with industry providing outreach and assistance to producers to access funding programs for research and development and innovation for aquaculture (shellfish and finfish). Funding is from programs that are internal to AGRI and external (primarily DFO). Examples include Fisheries and Aquaculture Clean Technology Adoption Program and the Aquaculture Collaborative Research and Development Program.
1.4	Plan	--		Encourage sharing of skills, technology and existing infrastructure.	AGRI - SDB can implement this to some degree, but it is a multi-agency responsibility.
1.5	Plan	AGRI - SDB		Strive to meet and maintain industry infrastructure requirements including transportation.	Infrastructure requirements are responsibility of industry; SDB may take a minor advisory or coordinating role.

⁶ <http://www.al.gov.bc.ca/resmgmt/sf/index.htm>

2.3 and 2.8	Plan	DFO / AGRI – SDB / ENV – EP	Where the development of aquaculture enterprises occurs, address environmental sustainability through careful siting, management, monitoring and fine tuning of practices and technology.	If any fish farms or new shellfish aquaculture facilities are proposed for the Kalum plan area, the province will consult with local communities, and First Nations.	<p>The Canadian Constitution (Section 35 Aboriginal and Treaty rights) and BC's commitment to implement the United Nations Declaration on the Rights of Indigenous People inform policies, case law, statutes, and Engagement Agreements with First Nations that guide consultation⁷.</p> <p>For management and monitoring of industry practices, Fisheries and Oceans Canada takes a lead role; where environmental sustainability is concerned (dealing with discharge under the <i>Environmental Management Act</i> and applicable regulations), EP takes the lead role. SDB takes an advisory/coordinating role.</p> <p>Federal government must also consult.</p>
2.4 Identical to Coastal Management: Foreshore Settlement strategies 3.1 & 3.2	Plan	FLNR – Land & Water / DFO / AGRI – SDB		Require proponents of new facilities to plan, construct and maintain tenured improvements such that erosion hazard is minimized (i.e. littoral drift, etc.).	All new facilities are required to prepare and submit management plans that address these issues as part of the application process for an aquaculture licence and for a tenure ⁸ .
2.7	Plan	DFO		Subject to provincial policy requirements, and as part of the tenure application process, require proponents to provide development plans that include escape prevention and management plans to avoid potential negative impacts on indigenous fish stocks and their habitats.	<p>Is not included as part of the tenure application process. Is included as part of the aquaculture licence application process under the <i>Fisheries Act</i> (DFO).</p> <p>Note that following the Hinkson Decision⁹, the provincial Aquaculture Regulations and relevant sections of the <i>Fisheries Act</i> were removed. All aspects of the practice are covered under the federal <i>Fisheries Act</i> and primarily the <i>Pacific Aquaculture Regulations</i> and the <i>Aquaculture Activity Regulations</i> under that act.</p> <p>The province has an interest in ensuring sustainability and avoiding harmful impacts to wild fish and fish habitat, the federal government has primary responsibility.</p>

⁷ <https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations>

⁸ <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/fisheries-and-aquaculture/aquaculture>

⁹ http://www.millerthomson.com/assets/files/article_attachments/4368970_1_Issue%20194%20%28published%29%281%29.PDF

3.1	Plan	ENV – EP / Transport Canada	Upland and marine activities will not adversely impact existing aquaculture activities and strive to mitigate adverse impacts in areas of moderate to high aquaculture capability	Encourage the creation of no discharge zones for sewage from marine vessels and upland sources near areas of aquaculture activity or suitability.	<p>Based on the discharge volume threshold, either the local health authority or ENV is responsible for regulating the discharge of sewage into the upland receiving environment. Consult the <i>Public Health Act Sewerage System Regulation</i>¹⁰, <i>Environmental Management Act Waste Discharge Regulation</i>¹¹, and <i>Municipal Wastewater Regulation</i>¹² for the applicable legislation.</p> <p>Sewage from marine vessels is primarily the responsibility of the federal government. Under the Vessel Pollution and Dangerous Chemicals Regulations, enabled by the <i>Canada Shipping Act (CSA), 2001</i>, ‘no discharge zones’ can be designated. At this time, there are no zones designated in northern coastal waters.</p> <p>The discharge of untreated sewage into Canadian coastal waters within 1 nautical mile of land (ships less than 400 tons) and 12 miles of land (ships larger than 400 tons) is banned; caveats apply¹³.</p>
3.2	Plan	AGRI – SDB		Make local governments aware of the Farm Practices Protection (Right to Farm) Act as it relates to aquaculture.	<p>Strengthening Farming¹⁴ makes important linkages between farm practices protection and planning for agriculture, including aquaculture and focuses on relationship between local and provincial governments and farmers.</p> <p>SDB works with the BC Farm Industry Review Board to provide outreach on the <i>Farm Practices Protection (Right to Farm) Act</i> to industry and communities and also provides support (Knowledgeable Person) for complaint hearings/proceedings.</p>

¹⁰ http://www.bclaws.ca/Recon/document/ID/freeside/22_326_2004

¹¹ http://www.bclaws.ca/civix/document/id/complete/statreg/320_2004

¹² http://www.bclaws.ca/civix/document/id/lc/statreg/87_2012

¹³ <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2012-69/page-14.html#h-40>

¹⁴ <http://www.al.gov.bc.ca/resmgmt/sf/index.htm>

3.3	Plan	DFO		Rehabilitate and/or remediate the environment of contaminated shellfish culture areas (improve environmental quality).	DFO launched a Coastal Restoration Fund ¹⁵ in 2016 which provides funds to support projects that help to restore coastal aquatic habitats. To date, the fund has not been used to rehabilitate shellfish culture areas.
3.4	Plan	FLNR – Land & Water / DFO		Apply adequate setbacks of marine structures and upland developments from shellfish leases according to appropriate Provincial and Local Government Guidelines.	Addressed by existing referral process for new Crown Land applications. Crown Land tenures (provincial) require operational plans that are reviewed and approved; aquaculture licences (federal) require management plans, amongst other things. Documents guiding the application process have recently been updated and are available on-line ¹⁶ .
2.2.6 Coastal Management, Environmental Management: Fish and Wildlife					
8.1	Plan	Environment Canada / DFO	Maintain water quality in important recreational and commercial shellfish culture and harvesting areas.	Implement water quality monitoring programs to identify contaminated shellfish harvesting areas.	Covered under the provisions of the Canadian Shellfish Sanitation Program ¹⁷ .
8.3	Plan	ENV – EP / Transport Canada		Regulate sewage discharges from upland residences, floating accommodation, and commercial or industrial activities at or near shellfish harvest and aquaculture areas in order to avoid microbial contamination.	EP regulates marine water discharges from upland locations (see below) but not on Federal lands except if discharge is to provincial waters. Based on the discharge volume threshold, either the local health authority or ENV is responsible for regulating the discharge of sewage into the upland receiving environment. Consult the applicable regulations: <i>Public Health Act</i> Sewerage System Regulation ¹⁸ , <i>Environmental Management Act</i> Waste Discharge Regulation ¹⁹ , and <i>Municipal Wastewater Regulation</i> ²⁰ . Floating accommodations such as ships and barges are regulated federally under the <i>Canada Shipping Act 2001</i> by Transport Canada..

¹⁵ <http://dfo-mpo.gc.ca/oceans/crf-frc/index-eng.html>

¹⁶ https://www2.gov.bc.ca/.../pacific_shellfish_aquaculture_application_guide.pdf?

¹⁷ <http://www.inspection.gc.ca/food/fish-and-seafood/shellfish-sanitation/eng/1299826806807/1299826912745>

¹⁸ http://www.bclaws.ca/Recon/document/ID/freeside/22_326_2004

¹⁹ http://www.bclaws.ca/civix/document/id/complete/statreg/320_2004

²⁰ http://www.bclaws.ca/civix/document/id/lc/statreg/87_2012

8.4	Plan	DFO / Environment Canada / Canadian Food Inspection Agency / BC Centre for Disease Control		Where shellfish harvesting and aquaculture areas are closed to harvest due to microbial contamination, implement water quality remediation programs.	Covered under the provisions of the Canadian Shellfish Sanitation Program ²¹ . Sanitary and biotoxin closures of Kitimat Arm area for shellfish can be found on DFO website ²² . BC Centre for Disease Control has been involved with other contamination issues in recent years.
2.2.3 Marine Plant Harvesting					
1.2	Plan	--	Provide or enhance opportunities (underutilized and/or value added) for the harvest of marine plant/algae species to a level that ensures sustainability of stocks and the associated ecosystems.	Encourage the provision of new commercial harvesting permits to residents of communities within the plan area.	Industry driven. FLNR has legislative authority to issue harvest permits, but no mandate to actively encourage applications.
1.3	Plan	FLNR – Crown Lands & Resources		Encourage environmentally sustainable harvesting rates and methods of harvest to minimize the negative impacts to fish habitat and biodiversity.	<i>Fish and Seafood Act</i> ²³ and associated regulations ²⁴ address this. A harvesting licence is required to commercially harvest wild aquatic plants. Conditions of the licence may be more restrictive than examples listed in LRMP for Giant and Bull Kelp. No mechanical harvesting. No complete cut for any species of aquatic plant.
1.4	Plan	AGRI - SDB		Promote partnerships between industry and government for research and development of value-added products and marketing from marine plants and algae.	Industry driven. SDB works very closely with funding programs internal to AGRI for these types of projects.
1.5	Plan	AGRI - SDB		Optimize opportunities for the processing of harvested marine plants and algae in existing communities.	Industry driven.
2.2.6 Coastal Management: Cultural Heritage					

²¹ <http://www.inspection.gc.ca/food/fish-and-seafood/shellfish-sanitation/eng/1299826806807/1299826912745>

²² See Shellfish Closures page on the DFO website at <http://www.pac.dfo-mpo.gc.ca/fm-gp/contamination/biotox/index-eng.html>

²³ <http://www.bclaws.ca/civix/document/id/lc/statreg/15014>

²⁴ http://www.bclaws.ca/civix/document/id/loo101/loo101/261_2016

²⁵ http://www.bclaws.ca/civix/document/id/loo88/loo88/140_76

6.3	Plan	FLNR – Crown Lands & Resources	Provide or enhance opportunities (under utilized and/or value added) for the sustainable commercial harvest of marine aquatic species (e.g. kelp) with respect to the rights held by first nations.	Develop operational procedures to harvest kelp in a sustainable manner.	<i>Fish and Seafood Act</i> ²⁶ and associated regulations ²⁷ address this. A harvesting licence is required to commercially harvest wild aquatic plants. Conditions of the licence may be more restrictive than examples listed in LRMP for Giant and Bull Kelp. No mechanical harvesting. No complete cut for any species of aquatic plant.
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Biodiversity

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.4, Biodiversity* in the Kalum LRMP (pp. 32 - 38). Some of these, listed in Appendix D, have been subject to analysis as landscape level practices in the draft *Kalum LRMP Strategic Practices Analysis Report*.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>Section 2.2.4 Biodiversity</i>					
1.2, 1.3	Plan	FLNR - Stewardship	Maintain a range of seral stages across the landscape to meet the needs of a wide variety of species	Implement early seral stage targets through the described transition measure with the understanding that timber supply impacts will be minimized.	Legal objective established through Kalum SRMP Objective 1 for all areas except Kowesas. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans. Licensees are doing analysis on annual basis. Areas identified in North Coast Marine Plan ²⁹ effectively constrain operations in Kowesas. There has been no logging. Regular updates to seral analysis by Landscape Unit approximately every 3 years.
1.3iv	Plan	FLNR - Stewardship		Have a focused stand management program to support fibre flow and make mid-seral stands more conducive to understory vegetation.	Stewardship has an ongoing stand management program. In 2018, have put in proposal for spacing funding to Forest Enhancement Society of BC.

²⁶ <http://www.bclaws.ca/civix/document/id/lc/statreg/15014>

²⁷ http://www.bclaws.ca/civix/document/id/loo101/loo101/261_2016

²⁸ http://www.bclaws.ca/civix/document/id/loo88/loo88/140_76

²⁹ http://mappocean.org/wp-content/uploads/2016/07/MarinePlan_NorthCoast_WebVer_20151207_corrected.pdf

1.4	Plan	FLNR - Stewardship		Maintain some stands in mature age classes or extended rotations by limiting harvesting to selective removal of trees at periodic intervals.	<p>Legal objective established through Kalum SRMP Objective 1 except in Kowesas. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans. Licensees are doing analysis on annual basis.</p> <p>Areas identified in North Coast Marine Plan³⁰ effectively constrain operations in Kowesas. There has been no logging.</p> <p>Regular updates to seral analysis by Landscape Unit approximately every 3 years.</p>
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³⁰ http://mappocean.org/wp-content/uploads/2016/07/MarinePlan_NorthCoast_WebVer_20151207_corrected.pdf

2.1	Plan	FLNR - Stewardship	Managed forests are to have a mosaic of stands consisting of a range in patch sizes in an attempt to have some resemblance of the natural pattern of forest disturbances.	Provide for a range of opening sizes; meet large patch size percent forest area targets	Legal objective established through Kalum SRMP Objective 7 except in Kowesas. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans. Licensees complete analysis on annual basis. Areas identified in North Coast Marine Plan ³¹ effectively constrain operations in Kowesas. There has been no logging. Ongoing through patch seral analysis.
2.2, 2.3	Plan	FLNR - Stewardship		Provide ecologically representative leave areas in proximity to new openings or aggregations of openings. Emphasize retention areas to be included within larger openings.	Legal objective established through Kalum SRMP Objective 5 except in Kowesas. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans. Areas identified in North Coast Marine Plan ³² effectively constrain operations in Kowesas. There has been no logging
3.1, 3.2	Plan	FLNR - Stewardship	Maintain old growth forest attributes through the designations of old growth management areas (OGMAs) across the landscape.	Base establishment of old-growth management areas (OGMAs) on meeting the target percentage as provided by the FPC guidebooks (biodiversity & landscape planning unit) by biogeoclimatic variant by landscape unit.	Also direction for Project 4.2. Legal objective established through Kalum SRMP Objectives 3 and 4 except in Kowesas. Amendments to OGMAs guided by Skeena Region Old Growth Management Area Amendment Policy, 2010 ³³ . Areas identified in North Coast Marine Plan ³⁴ effectively constrain operations in Kowesas. There has been no logging. OGMAs were established under the <i>Oil and Gas Activities Act</i> to be consistent with those already established under the <i>Land Act</i> for the purposes of the <i>Forest and Range Practices Act</i> .
3.7	Plan	FLNR - Stewardship		The area visible from the Sue Channel/ Hawkesbury Island protected area (Map 6) will have a single tree or group selection silviculture system with a maximum opening size of 1 – 2 tree lengths.	Legal objective established through Kalum SRMP Objective 16. Operational implementation through the <i>FPPR</i> and Forest Stewardship Plans. Also reported in Visual Resources section of this report.

³¹ http://mappocean.org/wp-content/uploads/2016/07/MarinePlan_NorthCoast_WebVer_20151207_corrected.pdf

³² http://mappocean.org/wp-content/uploads/2016/07/MarinePlan_NorthCoast_WebVer_20151207_corrected.pdf

³³ <http://www.env.gov.bc.ca/wld/documents/frpa/2010%20OGMA%20Amendment%20Policy%20Skeena.pdf>

³⁴ http://mappocean.org/wp-content/uploads/2016/07/MarinePlan_NorthCoast_WebVer_20151207_corrected.pdf

4.3, 4.4	Plan	FLNR - Stewardship	To help conserve the natural species abundance and diversity, maintain the natural composition of dominant tree species across the landscape.	Regenerate stands using local seed. Retain indigenous species throughout the stand life.	<p>The <i>Chief Forester's Standards for Seed Use</i> under <i>FRPA</i> establishes criteria to maintain the identity, adaptability, diversity and productivity of the Provinces tree gene resources³⁵. The Chief Forester designated seed planning zones so that seeds used are ecologically appropriate for the site.</p> <p>Legal objective established through Kalum SRMP Objective 6: Maintain the natural composition of dominant tree species across each landscape unit and throughout the rotation. Operational implementation through Forest Stewardship Plans and stocking standards.</p>
5.2	Plan	Multi-agency	Develop practical approaches to minimize potential problems of fragmentation of habitats and populations.	Consult with interested parties outside of the LRMP area to address cross-boundary issues.	Ongoing on a case by case basis.
5.3	Plan	FLNR – Stewardship / Land & Water		During resource development activities maintain the structure and function, for continued wildlife movement, through the level pass between the Kiteen and Cedar drainages identified on Map 7 .	<p>Legal objective established through Kalum SRMP Objective 8. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.</p> <p>For non-forestry resource development, addressed through referral process.</p>
5.4	Plan	FLNR - Stewardship		In the low level pass between the Williams and Thomas/Clore watersheds facilitate wildlife movement by maintaining the structure and function of these wildlife opportunities.	Legal objective established through Kalum SRMP Objective 9. Operational implementation through the <i>FPPR</i> and Forest Stewardship Plans.
6.1	Plan	FLNR - Stewardship	In managed forest stands, provide or restore important structural attributes which contribute to habitat and species diversity.	Phase-in a variety of silviculture systems including even-aged and uneven aged management.	<p>Professional reliance; no legal requirements.</p> <p>Some licensees doing group selection silviculture system (uneven-aged management).</p> <p>Not a lot of uneven aged stands in district.</p>
6.3	Plan	FLNR - Stewardship		Encourage development and use of a variety of methods to retain or restore biodiversity at the stand level. (Examples provided in LRMP)	Professional reliance, n8.3:o legal requirements.
6.4	Plan	FLNR - Stewardship		Increase the use of manual practices in vegetation management to minimize use of herbicides.	<p>Professional reliance, no legal requirements.</p> <p>Herbicide use is managed under the federal Pest Control Products Act (2002), and the provincial <i>Integrated Pest Management Act</i>.</p> <p>At this time there is no herbicide use; manual brushing is common practice.</p>

³⁵ See <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/tree-seed/legislation-standards/chief-forester-s-standards-for-seed-use> for more details.

7.1	Plan	Multi-agency	Encourage extension services to assist private land owners, municipalities and regional districts in the management of biological resources.	Through consultation, public education and information dissemination, encourage property owners, municipalities and regional districts to maintain and enhance biological resources including habitat diversity.	FLNR – Fish and Wildlife has been involved in the multi-party Lakelse Sockeye Recovery Program. Under the <i>Wildlife Act</i> , Conservation Officers can issue a ‘dangerous wildlife protection order’ which requires the removal of wildlife attractants.
7.2	Plan	Multi-agency		LRMP line agencies to co-ordinate and prioritize the delivery of public education initiatives aimed at the maintenance and enhancement of biodiversity.	FLNR sets up information booths at local job fairs and trade shows. Local FLNR staff have given talks at schools. FLNR leads activities during National Forest Week.
8.3	Plan	FLNR - Ecosystems	Over time, inventory landscapes for biodiversity values and enhance or restore lowered values where appropriate.	Results of the inventories evaluated. Results incorporated into resource development plans and practices.	Inventories ongoing and up-to-date for various species. Ten Coastal Tailed Frog WHAs established based on representativeness, abundance, re-colonization, and benchmark populations. Moose UWR and Mountain Goat UWR established. Approval is anticipated by end of March 2019 for Grizzly Bear WHA. Based on field research from 2010 to 2015, the Coastal Tailed Frog Best Management Practices for riparian and forest ecosystems in the Skeena Region are in preparation and expected to be available by the end of 2018.
8.4	Plan	FLNR – Stewardship		Monitor the effectiveness of implementing the biodiversity recommendations on the ground.	Forest and Range Evaluation Program (FREP) ³⁶ is a multi-agency program established in part to evaluate whether practices under <i>FRPA</i> are meeting the intent of current <i>FRPA</i> objectives, but also to determine whether the practices and the legislation itself are meeting government’s broader intent for the sustainable use of resources. Landscape-level biodiversity and stand-level biodiversity monitored under <i>FREP</i> .

³⁶ <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/integrated-resource-monitoring/forest-range-evaluation-program>

9.1	Plan	FLNR - Stewardship	Provide opportunities to fulfill biodiversity objectives in key undeveloped watersheds within TFL 41.	Ecosystem-based land management approaches that are consistent with the KLRMP will be piloted in key undeveloped watersheds within TFL 41.	<p>Recommendation for an EBM approach in Kalum SRMP, section 2.1.2. Table 5 in the SRMP provides legally established targets for old seral stage forest in undeveloped watersheds.</p> <p>Ecosystem-based management not defined.</p> <p>Landscape-scale practice.</p> <p>Currently not implemented.</p>
<i>Kalum Sustainable Resource Management Plan</i>					
Objective 2	Undeveloped watersheds listed in Table 4	FLNR – Stewardship	Maintain old seral stage forest within each undeveloped watershed listed in Table 4 and shown on Map 3 consistent with Table 5		Legal objective established through Kalum SRMP Objective 2. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
<i>Section 2.2.6, Coastal Management, Fish and Wildlife</i>					

1.1	Plan	ENV – Land Remediation / Environment Canada	Conserve and manage estuaries recognizing their contribution to biological diversity and as critical habitat for many species.	Promote the restoration of contaminated estuaries and intertidal zones.	Coastal management is beyond the scope of ENV – Land Remediation Section; however, Land Remediation can get involved if there are specific land-based discharges that are contaminating the intertidal by requiring the responsible persons under the <i>Environmental Management Act</i> to remediate the contamination if it is high risk. E.g., the Spent Pot Liner landfill at the Alcan smelter in Kitimat The smelter is currently proposing a treatment system to render the discharge non-toxic. Once contamination is in the marine environment it is also within federal jurisdiction and they may also be involved.
1.2	Plan	FLNR – Stewardship / Ecosystems		Maintain critical habitats for red and blue listed species.	See project 17.4 for identified critical habitats. Dala-Kildala Rivers Estuaries Park was established in 2004 following recommendations of the LRMP. Legal objective established through Kalum SRMP Objective 10 to conserve rare plant communities. Objective amended in 2017. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans. FSPs include lists of red- and blue-listed plants and animals and describe how forest agreement holders will meet objectives set by government..
1.3	Plan	---		Adopt a no net loss of estuary habitat for the plan area and full rehabilitation following interim (short term) commercial or industrial use.	Practice not within mandate of any provincial agency.
Amendment to Land Use Objectives for Kalum SRMP (Skeena Islands) in 2017					

Objective 10 (a)	Skeena Islands	FLNR - Stewardship	Conserve rare plant community complexes on the Skeena Islands identified on Map 6	Within the High Conservation Areas ³⁷ , retain 100% of the Crown forested land.	Legal objective established through Skeena Islands amendment to Kalum SRMP Objective 10. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 10 (b)	Skeena Islands	FLNR - Stewardship		Outside the High Conservation Areas, retain a forested, harvest-free 50-metre buffer around all back channels.	Legal objective established through Skeena Islands amendment to Kalum SRMP Objective 10. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 10 (c)	Skeena Islands	FLNR - Stewardship		Outside the High Conservation Areas, retain a forested, harvest-free 50-metre buffer around coniferous stumps, logs, and snags greater than 50 cm in diameter and around live coniferous trees greater than 50 cm in diameter at breast height.	Legal objective established through Skeena Islands amendment to Kalum SRMP Objective 10. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 10 (d)	Skeena Islands	FLNR - Stewardship		Only where it is otherwise not practicable and the objective to conserve rare plant community complexes can be achieved, may new roads be constructed within the High Conservation Areas to access timber outside those areas.	Legal objective established through Skeena Islands amendment to Kalum SRMP Objective 10. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Amendment to Land Use Objectives for Kalum SRMP (Kiteen) in 2017					
Objective 9	Kiteen	FLNR - Stewardship		Maintain a landscape pattern of patchiness that, over the long term, reflects the natural disturbance pattern within the forested area of each Landscape Unit shown in Schedule C, as per Schedule C1.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

³⁷ For the area identified as “Salvus”, government-led research activities, including harvesting for research purposes, is allowed.

Objective 10	Kiteen	FLNR – Stewardship		Maintain or recruit structural diversity in managed stands by retaining at least 3.5% of each proposed cutblock and at least 12% of proposed cutblocks aggregated on an annual basis, as wildlife tree retention areas, over the rotation.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 11	Kiteen	FLNR – Stewardship		Retain 100% of the area and basal area of red-listed ecological communities ³⁸ as listed on Schedule D, except under listed conditions ³⁹ .	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 12	Kiteen	FLNR – Stewardship		Retain a windfirm, forested buffer around the red-listed ecological communities ¹ listed on Schedule D, as required to maintain the conditions of soil chemistry, moisture, temperature, and light that define and sustain the ecosystem except under listed conditions ⁴⁰ .	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 13	Kiteen	FLNR - Stewardship		Retain at least 70% of the area or basal area of each blue-listed ecological community ⁴¹ within a cutblock, as listed on Schedule E.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 14	Kiteen	FLNR – Stewardship		Maintain a diversity of coniferous and deciduous species that represent the natural species composition at the landscape and stand levels by ensuring that all cutblocks at the free-growing stage will have a diversity of species ecologically appropriate to the site.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 15	Kiteen	FLNR - Stewardship		Maintain a diversity of coniferous and deciduous species that represent the natural species composition at the landscape and stand levels by ensuring that where an area larger than one contiguous hectare is harvested and it is composed of more than 50% deciduous trees by basal area, it will either be regenerated with a similar deciduous stand or will be replaced at a different location on a similar site series by regenerating an existing coniferous stand with similar deciduous species.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

³⁸ The required minimum size of a red-listed ecological community is 0.25 ha. Where the community exists as the dominant component of a complex, the minimum size of the complex is 1 ha.

Objective 16	Kiteen	FLNR – Stewardship		Retain 100% of the forested area of the hydriparian zone within the Ecosystem Network.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 17	Kiteen	FLNR - Stewardship		Maintain structural connectivity in the Ecosystem Network except under listed conditions ⁴² .	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 18	Kiteen	FLNR – Stewardship		Retain a 200-metre wide buffer around the Ecosystem Network that meets listed conditions ⁴³ .	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

Botanical Forest Products

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.5, Botanical Forest Products* in the Kalum LRMP (pp. 38 - 41).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.2	Plan	FLNR – Research	Improve the knowledge and information base related to botanical forest product ecology.	Encourage ongoing “detection”, “evaluation”, and “research” monitoring programs for pine mushrooms.	Current activities of Research Branch include describing and mapping pine mushroom habitat in the northwest, see http://www.for.gov.bc.ca/hre/ntfp/#Current_Activities for more information.
1.6	Plan	FLNR – Research		Encourage research on the genetic diversity of Pine Mushrooms.	No research projects at this time.

³⁹ For conditions, see https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/skeena-region/kalum-srmp/luor_order_kiteen.pdf

⁴⁰ For conditions, see https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/skeena-region/kalum-srmp/luor_order_kiteen.pdf

⁴¹ The required minimum size of the blue-listed ecological community is 0.25 ha. Where the community exists as the dominant component of a complex, the minimum size of the complex is 1 ha

⁴² For conditions, see https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/skeena-region/kalum-srmp/luor_order_kiteen.pdf

⁴³ For conditions, see https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/skeena-region/kalum-srmp/luor_order_kiteen.pdf

3.1	Plan	FLNR – Stewardship	Reduce resource user and conservation conflicts between botanical forest product harvesting and forest management.	Pursue a coordinated approach to pine mushroom management between Kalum planning area and adjacent areas.	Handbook: <i>Compatible Management of Timber and Pine Mushrooms</i> ⁴⁴ . Stewardship will look at specific concerns identified through consultation.
3.2	Plan	FLNR - Stewardship		Allow the botanical forest product industry to have an opportunity for input into forest development, landscape unit and access management planning.	All FSP and SRMP plans require public review. Information-sharing allows participants in the Metlakatla conifer oil cottage industry to harvest conifer boughs.
<i>Amendment to Land Use Objectives for Kalum SRMP (Kiteen) in 2017</i>					
Objective 19	Kiteen	FLNR - Stewardship	.	Maintain at least 50% of the productive pine mushroom (<i>Tricholoma magnivelare</i>) sites, as identified in Schedule G, in forest ages ranging from 80 to 200 years	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

Coastal Management – Public Recreation

For practices found in the objectives and strategies of *Section 2.2.6, Coastal Management – Public Recreation* in the Kalum LRMP (pp. 42 - 43), see **Outdoor Recreation** of this report.

Coastal Management – Environmental Management: Fish and Wildlife

For practices found in the objectives and strategies of *Section 2.2.6, Coastal Management: Environmental Management: Fish and Wildlife* in the Kalum LRMP (pp. 43 - 45), see **Biodiversity** (objective 1), **Fish and Fish Habitat** (objectives 2 – 4), **Wildlife and Wildlife Habitats** (objectives 5, 7), and **Aquaculture** (objective 8) of this report.

Coastal Management – Foreshore Settlement

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.6, Coastal Management: Foreshore Settlement* in the Kalum LRMP (pp. 45 - 46).

⁴⁴ <https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/Lmh64.pdf>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.1	Plan	FLNR – Land & Water	Require all residential and public facility structures, that cross the foreshore to meet public safety, environmental regulations and guidelines.	Require tenures for all docks and piers constructed in tidal waters.	All commercial docks or piers located on the marine coastal foreshore require tenures. Private mooring facilities require General Permission ⁴⁵ as per the Private Moorage Policy.
1.2	Plan	FLNR – Land & Water		Minimize hazards or disruptions to marine navigation from any tenured improvements by complying fully with the provisions of the <i>Navigable Waters Protection Act</i> .	Tenure clause states that proponent must comply with current regulations which would include the <i>Navigation Protection Act</i> ⁴⁶ (supersedes the <i>Navigable Waters Protection Act</i>). Transport Canada administers the act.
1.3	Plan	FLNR – Land & Water		Require all aquatic crown land developments to conform with navigational, public access and zoning requirements of other agencies.	Tenure clause states that proponent must comply with current requirements of other agencies. Addressed by existing referral process for new Crown Land applications. Referrals go to local governments which oversee zoning.
2.1	Plan	FLNR – Compliance & Enforcement	Require all residential and public facility structures do not interrupt the full right of the public to access the foreshore.	Enforce trespass provisions (recommend closure of non-tenured recreational docks) where these unauthorized facilities are negatively impacting other resource values or activities and uses.	Trespass violations under the <i>Land Act</i> , sections 59, 60 or 96 relating to tenured facilities are managed by following the <i>Compliance and Enforcement Procedure</i> ⁴⁷ . Non-permanent recreational docks are not required to be tenured, but may not impede public access.
3.1, 3.2	Plan	FLNR – Land & Water	Minimize erosion hazard.	Prohibit construction of facilities that function as a breakwater or similar structure that may impede littoral drift. Require all residential and public facility structures to not negatively interrupt or divert the movement of water or material by water along the shoreline.	<i>Water Sustainability Act</i> where applicable: seldom invoked – there must be interaction with fresh water stream. Issue hasn't arisen in Crown Land applications to date.
4.1	Plan	FLNR – Land & Water	Minimize impacts from new residential and public facilities on habitats, water quality and public recreation.	Implement habitat protection measures (i.e. Department of Fisheries and Oceans Marina Siting Guidelines) when siting facilities in tidal and near tidal areas.	Addressed by existing referral process for new Crown Land applications. All tenured improvements required to comply with current regulations and policy.

⁴⁵ See Private Moorage Policy https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/private_moorage.pdf for more details.

⁴⁶ <http://laws-lois.justice.gc.ca/eng/acts/N-22/FullText.html>

⁴⁷ See https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/reporting/reporting-documents/environmental-enforcement-docs/ce_policy_and_procedure.pdf for more details.

5.1, 5.2	Plan	BC Environmental Assessment Office	Continue to provide opportunities for local communities to be involved in the Environmental Assessment Process of proposed new shipping terminals.	Provide opportunities for public involvement in the siting of new shipping terminals. Conduct environmental impact assessments on the expansion of existing or siting of new shipping facilities.	All application processes involve public review periods. Under <i>Reviewable Projects Regulation</i> , Part 8, <i>Environmental Assessment Act</i> ⁴⁸ , projects that involve modification to more than 1000 m of shoreline or 2 ha of foreshore or submerged land require impact assessment. Minister of Environment and Climate Change Strategy or proponent can also designate a project as reviewable.
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Coastal Management - Tourism

For practices found in the objectives and strategies of *Section 2.2.6, Coastal Management – Tourism* in the Kalum LRMP (p. 46), see **Tourism** of this report.

Coastal Management – Industrial Activities, Facilities and Access

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.6, Coastal Management: Industrial Activities, Facilities and Access* in the Kalum LRMP (pp. 47 - 48).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.4	Plan	DFO / EC	Maintain access for resource development.	Encourage research to identify long-term impacts of log dumps.	Research has been completed by DFO and EC which commissioned <i>Guidebook Environmentally Sustainable Log Handling Facilities in British Columbia April 2003</i> (http://www.dfo-mpo.gc.ca/Library/274124.pdf) .
1.5	Plan	FLNR – Land & Water		Rehabilitate existing log dump, where impacts are having a known negative effect on other resource values ⁴⁹ .	Putting logs in the water requires a <i>Land Act</i> tenure. Management plans include deactivation to rehabilitate, but primarily focus on mitigation of impacts. Professional reliance.

⁴⁸ http://www.bclaws.ca/civix/document/id/loo60/loo60/370_2002

⁴⁹ 2.2.6 Coastal Management: Industrial Activities, Facilities and Access, objective 1, strategy 1.5, p. 47.

2.1	Plan	ENV – EP / FLNR – Land & Water	New and existing facilities will protect marine water quality.	Require new facilities to plan for and adequately manage point and non-point marine aquatic discharges (sewage, oil and gas, faecal and other point and non-point discharges).	All applicants for new tenures required to submit a management plan that addresses potential discharges and how they will manage them. Discharges are regulated under the <i>Environmental Management Act</i> (single house dwellings or duplexes regulated under the Ministry of Health, Public Health Officer).
2.2	Plan	FLNR – Land & Water		Minimize erosion hazard by ensuring that any tenured improvements do not function as a breakwater, groin or similar structure that may impede littoral drift.	<i>Water Sustainability Act</i> where applicable (seldom) – there must be an interaction with fresh water stream. Addressed by existing referral process for new Crown Land applications.
2.3	Plan	DFO		Reduce effects of disturbing accumulated seabed toxins by scheduling dredging for new or upgraded terminals so that it does not occur during anadromous fish movement or affect rearing and rearing habitat.	Federal <i>Fisheries Act</i> regulations to prevent harmful alteration, disruption or destruction of fish habitat were weakened in last amendment; new amendment to restore habitat protection expected in 2018 ⁵⁰ . DFO may require an <i>Environmental Assessment</i> in accordance with the <i>Canadian Environmental Assessment Act</i> ⁵¹ .

Coastal Management – Cultural Heritage

For practices found in the objectives and strategies of *Section 2.2.6, Coastal Management: Cultural Heritage* in the Kalum LRMP (pp. 48 - 49), see the **Cultural Heritage** section of this report.

Cultural Heritage

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.6, Coastal Management: Cultural Heritage* and *Section 2.2.7, Cultural Heritage* in the Kalum LRMP (pp. 48 - 53).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice or Indicator	Implementation Information
<i>Section 2.2.6, Coastal Management: Cultural Heritage</i>					

⁵⁰ <http://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/index-eng.html>

⁵¹ See http://www.ceaa.gc.ca/010/basics_e.htm for details on when assessments are required and other facts about the assessment process.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice or Indicator	Implementation Information
1.2	Plan	FLNR – Archaeology / First Nations Relations	Through existing legislation protect archeological sites from human disturbance.	Encourage cooperative management (between Provincial Gov't and First Nations) of coastal and underwater archaeological sites with First Nations (e.g. Guardian program).	Archaeology sites protected by <i>Heritage Conservation Act</i> , s.13. FSPs consider cultural heritage consistent with Archaeology and Heritage Branches. Implemented through professional reliance.
2.2 Identical to Marine Plant Harvesting strategy 1.3	Plan	FLNR- Crown Lands & Resources	Recognize the specific rights of First Nations to sustainably harvest marine aquatic species (e.g. herring spawn on kelp) at traditional locations.	Minimize impacts to fish habitat by adopting environmentally suitable harvesting rates and methods.	<i>Fish and Seafood Act</i> ⁵² and associated regulations ⁵³ address this. A harvesting licence is required to commercially harvest wild aquatic plants. Conditions of the licence may be more restrictive than examples listed in LRMP for Giant and Bull Kelp. No mechanical harvesting. No complete cut for any species of aquatic plant.
3.2	Plan	DFO	Encourage measures that prevent contamination of First Nations traditional use areas for aboriginal food fisheries.	Encourage partnerships to increase testing for bioaccumulation of toxins in marine aquatic species used by First Nations for food.	Shellfish toxins are monitored by DFO: http://www.pac.dfo-mpo.gc.ca/fm-gp/contamination/biotox-eng.html Kelp monitored for contamination from Fukushima nuclear disaster: https://fukushimainform.ca/2016/08/04/update-2016-sampling-of-north-american-pacific-kelp-finds-no-signature-of-fukushima-contamination/
5.1	Plan	FLNR – First Nations Relations	The land development tenuring process will reflect identified First Nations traditional food sources and areas.	The land development tenure adjudication process will not unjustifiably infringe on the rights of First Nations to traditional food sources.	<i>Heritage Conservation Act</i> provides protection for heritage sites (defined as land, including land covered by water, which has heritage value to British Columbia, a community or an aboriginal people). Addressed by referral process for new and existing Crown Land applications.
5.2	Plan	FLNR – First Nations Relations		Request the appropriate agencies to consult with First Nations regarding potential damage to marine food harvest areas prior to development.	Addressed by existing referral process for new Crown Land applications.

⁵² <http://www.bclaws.ca/civix/document/id/lc/statreg/15014>

⁵³ http://www.bclaws.ca/civix/document/id/loo101/loo101/261_2016

⁵⁴ http://www.bclaws.ca/civix/document/id/loo88/loo88/140_76

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice or Indicator	Implementation Information
5.3	Plan	FLNR – First Nations Relations	Provide or enhance opportunities (under utilized and/or value added) for the sustainable commercial harvest of marine aquatic species (e.g. kelp) with respect to the rights held by First Nations.	Consult First Nations users prior to establishing commercial recreation tenures so that tenuring does not negatively affect cultural and traditional uses.	Addressed by referral process for new and existing Crown Land applications. Issues are identified through consultations and strategic land management initiatives with First nations.
6.2	Plan	FLNR – Crown Lands & Resources		Investigate the potential of experimental kelp farming.	Industry driven. Some work being done on west coast of Vancouver Island on integrated multi-trophic aquaculture (“polyculture”) involving cultivation of kelp alongside fish farms. See article: https://www.bcbusiness.ca/BC-kelp-farming-is-untapped-resource
6.3	Plan	FLNR – Crown Lands & Resources		Develop operational procedures to harvest kelp in a sustainable manner (examples listed).	<i>Fish and Seafood Act</i> ⁵⁵ and associated regulations ⁵⁶ address this LRMP strategy. A harvesting licence is required to commercially harvest wild aquatic plants. Conditions of the licence may be more restrictive than examples listed in LRMP for Giant and Bull Kelp. No mechanical harvesting. No complete cut for any species of aquatic plant.
Section 2.2.7, Cultural Heritage					

⁵⁵ <http://www.bclaws.ca/civix/document/id/lc/statreg/15014>

⁵⁶ http://www.bclaws.ca/civix/document/id/loo101/loo101/261_2016

⁵⁷ http://www.bclaws.ca/civix/document/id/loo88/loo88/140_76

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice or Indicator	Implementation Information
1.2	Plan	FLNR - Archaeology	Manage for archaeological resources.	Conduct Archaeological Impact Assessments prior to land altering activities in areas that contain or have the potential to contain archaeological sites (sites are protected under the provisions of the <i>Heritage Conservation Act</i>).	<p>Archaeology Branch oversees permitting for archaeological impact assessments (issued under s.14 of the <i>Heritage Conservation Act; HCA</i>).</p> <p>The Branch can require alteration permits in advance of impacts to a known archaeological site (issued under s.12 of the <i>HCA</i>).</p> <p>Only the Minister has the authority to require an Archaeological Impact Assessment under the <i>HCA</i>, although some other provincial approving officers (e.g., with Ministry of Transportation and Infrastructure, other branches within FLNR (like Lands, Forests) may require information regarding heritage prior to approval.</p> <p><i>FRPA – FPPR, Part 2, Section 10</i> legal objective for FSPs to consider impacts of development on archaeology.</p>
3.1	Plan	FLNR - Archaeology	Minimize negative impacts to cultural heritage resources associated with resource development.	Undertake appropriate impact management measures either through avoidance or completion of impact management requirements where avoidance is not possible. Sites protected under the <i>Heritage Conservation Act</i> can only be altered under permit.	<p>Archaeology Branch adjudicates Site Alteration Permit applications including the consideration of site management options to reduce or avoid impacts to protected archaeological sites (issued under s.12 of the <i>Heritage Conservation Act</i>).</p> <p><i>FRPA – FPPR, Part 2, Section 10</i> legal objective for FSPs to consider impacts of development on archaeology.</p> <p>Only the Minister has the authority to require an Archaeological Impact Assessment under the <i>HCA</i>, although some other provincial approving officers (e.g., with Ministry of Transportation and Infrastructure, other branches within FLNR (like Lands, Forests) may require information regarding heritage prior to approval.</p>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice or Indicator	Implementation Information
4.2	Plan	FLNR – First Nations Relations	Aboriginal rights and/or title will not be unjustifiably infringed upon by land and resource management activities of the Crown or its licensees.	Undertake consultation with aboriginal peoples, as per government policy, guidelines and protocols, for land and resource management activities that may affect aboriginal rights and/or title.	The Canadian Constitution (Section 35 Aboriginal and Treaty rights) and BC's commitment to implement the United Nations Declaration on the Rights of Indigenous People inform policies, case law, statutes, and Engagement Agreements with First Nations that guide consultation ⁵⁸ . FLNR – First Nations Relations provides consultation summaries to decision makers.
5.1	Plan	-----	Encourage development of cultural heritage interpretative facilities and programs.	Assess opportunities for the development of interpretative facilities and programs in co-operation with aboriginal peoples and local governments.	Proposal driven, not ministry led. FLNR – Heritage Branch does not currently administer any programs that would directly support the development of cultural heritage interpretative facilities and programs. The Kitselas Canyon National Historic Site is a cultural tourism initiative of the Kitselas First Nation ⁵⁹ .
<i>Amendment to Land Use Objectives for Kalum SRMP (Kiteen) in 2017</i>					
Objective 33	Kiteen	FLNR - First Nations Relations	Preserve cultural heritage resources and cultural sites, including culturally modified trees, trails, cache pits, house pits, grave sites, fishing sites, pictograph sites, smoke houses, cabins and camping sites		Archaeological sites protected by <i>Heritage Conservation Act</i> , s.13. Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 34	Kiteen	FLNR - First Nations Relations	Maintain a sustainable source of cedar for the applicable First Nation to practice their traditional, cultural and subsistence uses.		Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

Fish and Fish Habitat

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.6, Coastal Management: Environmental Management: Fish and Wildlife* and *Section 2.2.8, Fish and Fish Habitat* in the Kalum LRMP (pp. 43 – 45; 53 - 58).

⁵⁸ <https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations>

⁵⁹ See <http://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=10522> for more information.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>Section 2.2.6, Coastal Management: Fish and Wildlife</i>					
2.1	Plan	DFO	Maintain or enhance the diversity of salmon habitat.	Work towards a net gain in productive capacity for salmon habitat.	Federal <i>Fisheries Act</i> regulations to prevent harmful alteration, disruption or destruction of fish habitat were modified in last amendment; new amendment to restore habitat protection expected in 2018 ⁶⁰ . Exchamsiks Backchannel Rehabilitation project (2008) of Skeena Fisheries Commission (funding from the Pacific Salmon Commission) to restore access and capability of ~ 5 km of rearing habitat. Fish passage guidance documents available ⁶¹ .
2.2	Plan	ENV – EP / DFO / FLNR - Stewardship		Maintain and enhance water quality in known salmon habitat.	Federal <i>Fisheries Act</i> regulations to prevent harmful alteration, disruption or destruction of fish habitat were modified in last amendment; new amendment to restore habitat protection expected in 2018 ⁶² . <i>FRPA – FPPR, Part 2, Section 8</i> legal objective for FSPs. EP involved in regulating municipal and industrial discharges to marine aquatic environment.
3.2	Plan	DFO	The Province will work with the Department of Fisheries and	Avoid disturbance caused by industrial and commercial activity during herring spawning periods.	Siting guidelines require buffer around herring spawn areas. ⁶³

⁶⁰ <http://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/index-eng.html>

⁶¹ See document at <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/fish/fish-passage>

⁶² <http://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/index-eng.html>

⁶³ http://www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/docs/site-guide-direct-eng.html#siting_guidelines

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
3.3	Plan	DFO	Oceans to protect and maintain identified herring spawning areas.	No facility development will take place in herring spawning areas.	Addressed by existing referral process for new Crown Land applications. Federal <i>Fisheries Act</i> regulations to prevent harmful alteration, disruption or destruction of fish habitat were modified in last amendment; new amendment to restore habitat protection expected in 2018 ⁶⁴ .
4.2	Plan	FLNR – Fish & Wildlife / DFO	Protect and maintain identified oolichan spawning areas.	Avoid disturbance caused by industrial and commercial activity during oolichan spawning periods.	Federal <i>Fisheries Act</i> regulations to prevent harmful alteration, disruption or destruction of fish habitat were modified in last amendment; new amendment to restore habitat protection expected in 2018 ⁶⁵ . Eurocan pulp mill in Kitimat was closed in 2010. <i>FRPA – FPPR, Part 2, Section 8</i> legal objective for FSPs.
4.3	Plan	FLNR – Fish & Wildlife / DFO		Prevent facility development from taking place in oolichan spawning areas.	Addressed by existing referral process for new Crown Land applications if issue identified. Federal <i>Fisheries Act</i> regulations to prevent harmful alteration, disruption or destruction of fish habitat were modified in last amendment; new amendment to restore habitat protection expected in 2018 ⁶⁶ .
Section 2.2.8, Fish and Fish Habitat					
1.1	Plan	FLNR – Fish & Wildlife	Prevent or minimize the effects of development activities on fish populations and fish habitat.	Where development may affect fish or fish habitat, identify and evaluate presence of fish and fish habitat prior to development using current classification systems.	Addressed by existing referral or Environmental Assessment process for new Crown Land applications. Licensees required to meet FRPA objectives for fish and riparian. FREP monitoring evaluated. E.g., <i>Fish and Fish Habitat Investigations for the Proposed Kitimat-Summit Lake Natural Gas Pipeline Looping Project</i> ⁶⁷

⁶⁴ <http://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/index-eng.html>

⁶⁵ <http://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/index-eng.html>

⁶⁶ <http://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/index-eng.html>

⁶⁷ Available on-line at: <http://www.noelgyger.ca/H2O/Non-Tidal/Streams/KitimatRiver/KitimatRiverFishAndFishHabitatInvestigationsForNaturalGasPipeline.pdf>.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.2 Identical to Fresh Water strategy 2.1	Plan	FLNR – Fish & Wildlife		Where CWAPs are required apply appropriate remediative and mitigative measures to ensure maintenance of fish habitat attributes and water quality.	Also direction for Project 7.5. CWAPs are no longer required under FRPA. Licensees required to meet FRPA objectives for fish and riparian. Evaluated through FREP monitoring. Professional reliance.
1.3	Plan	FLNR – Fish & Wildlife		Apply joint federal/provincial guidelines to residential, commercial and industrial developments to mitigate their potential impacts on aquatic habitat.	Addressed by existing referral process for new Crown Land applications; or Environmental Assessment for major project development. See the <i>Land development guidelines for the protection of aquatic habitat</i> available at: http://www.dfo-mpo.gc.ca/Library/165353.pdf
1.4	Plan	FLNR – Land & Water		Where appropriate, identify in-stream operating work windows and/or protective measures where development activities may affect fish or fish habitat.	Best Management Practices for in-stream work ⁶⁸ required as condition of permit.
1.5	Plan	FLNR – Fish & Wildlife		Interpret and adopt policy that is reflective of the federal “no net loss of productive fish habitat” policy.	Currently no provincial policy. No longer a federal policy.
3.1	Plan	FLNR – Fish & Wildlife	Rehabilitate fish populations and/or habitat where degraded and, where appropriate, undertake enhancement projects.	Implement, monitor and evaluate plans for rehabilitation or enhancement.	Also direction for projects 7.8 and 7.9. Done on project by project basis. Exchamsiks Backchannel Rehabilitation project (2008) of Skeena Fisheries Commission (funding from the Pacific Salmon Commission) to restore access and capability of ~ 5 km of rearing habitat; <i>Lakelse Lake Sockeye Recovery Plan</i> ⁶⁹ ; work on Kalum River by Kitsumkalum.
4.1	Plan	--	Provide a range of opportunities for consumptive and non-consumptive use of fish.	In consultation with First Nations develop suitable fish spawning viewing areas with focused access points and educational opportunities.	Also direction for Project 7.13. Proposal driven.

⁶⁸ <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

⁶⁹ <http://www.dfo-mpo.gc.ca/Library/333613.pdf> . See also *Conserving Lakelse Fish and Their Habitat* – Skeena Fisheries Commission http://skeenafisheries.ca/images/uploads/documents/publication_Conserving-Lakelse-Fish-and-their-Habitat.pdf for more information

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
5.1	Plan	FLNR – Fish & Wildlife	Manage for a quality angling experience on classified waters (i.e. class 1 and class 2 water as defined in the fishing regulation).	Maintain good water quality with parameters set by BC Environment that are river specific and reflect the natural variances of turbidity and siltation events.	With respect to forestry, <i>FRPA – FPPR, Part 2, Section 8</i> legal objective for FSPs address water quality. In general, only temperature and volume monitored unless related to an event such as a spill or landslide.
5.2	Plan	FLNR – Fish & Wildlife		Maintain fish habitat in an effort to sustain angler success rate associated with classified waters to the satisfaction of recreational anglers.	Operational implementation through <i>FRPA-FPPR</i> (part 4) and Forest Stewardship Plans. Professional Reliance. Fish/Riparian is one of the 11 resource values identified under the <i>FRPA</i> and monitored through FREP.
5.3	Plan	FLNR – Fish & Wildlife		Maintain a perceived uncrowded angling experience.	Implementation through freshwater fishing regulations. Overview of Skeena Watershed Angling Management Plans: http://www.env.gov.bc.ca/skeena/fish/AMPs/Context AMP.pdf All plans have specific regulations to manage for angling experience.
5.5	Plan	FLNR – Fish & Wildlife		For class 1 water of the Zymoetz River, consider minimizing disturbance caused by resource development activities during the specified class 1 angling season.	Professional reliance through FSPs for forestry-related development activities. No known agreements in place to limit activities during season.
5.6	Plan	FLNR – Fish & Wildlife		Emphasize public recreational angling opportunities on Class 1 water, while maintaining opportunities for guided angling.	Overview of Skeena Watershed Angling Management Plans: http://www.env.gov.bc.ca/skeena/fish/AMPs/Context AMP.pdf All plans have specific regulations to manage for angling experience. Managed through the <i>Angling and Scientific Collection Regulation</i> ⁷⁰
Amendment to Land Use Objectives for Kalum SRMP (Kiteen) in 2017					

⁷⁰ http://www.bclaws.ca/civix/document/id/loo96/loo96/10_125_90

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
Objective 28	Kiteen	FLNR – Fish & Wildlife	Maintain habitat for indigenous fish populations.		Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 29	Kiteen	FLNR – Fish & Wildlife	Maintain the functional integrity of fish-bearing streams, rivers and lakes.		Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

Fresh Water

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.9, Fresh Water* in the Kalum LRMP (pp. 58 - 63).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.2	Plan	ENV - EP	Manage resource development activities to minimize negative impacts on surface and ground water quality for flora, fauna, domestic, commercial and industrial users.	Discourage the use of pesticides within identified sub-catchments (identified in strategy 1.1) and near water sources. NOTE: 'Identified sub-catchments' refer to water sources of licensed and non-licensed users outside of community watersheds.	Professional reliance, no legal requirements. Herbicide use is managed under the federal <i>Pest Control Products Act</i> ⁷¹ , and the provincial <i>Integrated Pest Management Act</i> ⁷² . The role of ENV is to ensure that regulations in the provincial act are followed. At this time there is no herbicide use; manual brushing is common practice.

⁷¹ <http://laws-lois.justice.gc.ca/eng/acts/P-9.01/page-1.html>

⁷² http://www.bclaws.ca/Recon/document/ID/freeside/00_03058_01

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.3	Plan	FLNR – Land & Water / ENV - EP		Encourage government to enact effective and achievable monitoring of ground and surface water through an achievable monitoring strategy.	<p>The Provincial Groundwater Observation Well Network⁷³ program collects, interprets and reports information about groundwater quantity and chemistry. The network is continuing to expand and Terrace is the next target.</p> <p>Most authorizations under <i>Environmental Management Act</i> have a monitoring component – if permit to discharge contaminants, must monitor contaminants are discharging.</p> <p>Federal/Provincial long-term monitoring program in place with site on the Skeena River at Usk⁷⁴. Lakelse Lake part of provincial lake monitoring network⁷⁵</p> <p>Water Quality Objectives available for Lakelse Lake⁷⁶ and Kitimat River and Kitimat Arm⁷⁷. Updating Kitimat River and Kitimat Arm currently under consideration.</p> <p>Working in partnership with Environment and Climate Change Canada, the provincial Canadian Biomonitoring Network (CABIN) program evaluates water quality by monitoring benthic macroinvertebrate communities⁷⁸.</p> <p>Managing for sediment is practice requirement under <i>FRPA – FPPR, Section 35 – 40</i>. Monitoring through FREP.</p>

⁷³ <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells/aquifers/groundwater-observation-well-network>

⁷⁴ <http://aquatic.pyr.ec.gc.ca/webdataonlinenational/>

⁷⁵ No weblink currently available.

⁷⁶ https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality/water-quality-objectives/wqo_tech_lakelse_lake.pdf

⁷⁷ https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality/water-quality-objectives/wqo_tech_low_kitimat_and_arm.pdf

⁷⁸ <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/monitoring-water-quality/cabin>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.4	Plan	FLNR – Land & Water / ENV - EP		Provide opportunities for the installation of water quality and quantity monitoring sites throughout the planning area.	<p>The Provincial Groundwater Observation Well Network ⁷⁹ program collects, interprets and reports information about groundwater quantity and chemistry.</p> <p>Most authorizations under <i>Environmental Management Act</i> have a monitoring component – if permit to discharge contaminants, must monitor contaminants are discharging.</p> <p>Federal/Provincial long-term monitoring program in place with site on the Skeena River at Usk⁸⁰. Lakelse Lake part of provincial lake monitoring network⁸¹</p> <p>Water Quality Objectives available for Lakelse Lake⁸² and Kitimat River and Kitimat Arm⁸³. Updating Kitimat River and Kitimat Arm currently under consideration.</p> <p>Other water quality sampling is done on a project by project basis.</p> <p>Working in partnership with Environment and Climate Change Canada, the provincial Canadian Biomonitoring Network (CABIN) program evaluates water quality by monitoring benthic macroinvertebrate communities⁸⁴.</p> <p>Landfill monitoring programs (surface and groundwater) are up to the authorized party.</p>

⁷⁹ <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells/aquifers/groundwater-observation-well-network>

⁸⁰ <http://aquatic.pyr.ec.gc.ca/webdataonlinenational/>

⁸¹ No weblink currently available.

⁸² https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality/water-quality-objectives/wqo_tech_lakelse_lake.pdf

⁸³ https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality/water-quality-objectives/wqo_tech_low_kitimat_and_arm.pdf

⁸⁴ <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/monitoring-water-quality/cabin>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.5	Plan	FLNR – Land & Water / ENV - EP		Encourage new programs that enhance water quality and quantity.	<p>The <i>Water Sustainability Act (WSA)</i> ⁸⁵ was brought into force in 2016 to ensure a sustainable supply of fresh, clean water.</p> <p>The Northwest Water Tool ⁸⁶ is a modelling program that helps inform licensing decisions.</p> <p>The provincial water portal⁸⁷ is a GIS-based tool that shows water quality and quantity.</p> <p>The provincial government is a partner of WaterBucket⁸⁸ which promotes sustainable approaches to water resources in BC.</p> <p>EP considers current water quality in waste discharge authorization decisions under the <i>Environmental Management Act</i>.</p> <p>EP might partner with others who are involved in this practice.</p>
1.6	Plan	FLNR – Land & Water		Encourage hydrological research of ground water flow.	The aquifer mapping project in the Terrace area is in its second year.
1.8 Identical to SRMZ – Upper Copper strategy 1.2	Plan	FLNR – Stewardship / Land & Water		Identify potential areas of concern with regards to terrain stability and surface erosion hazard through overview mapping.	<p>Best Management Practices required as condition of permit for in-stream work⁸⁹.</p> <p>Managing for sediment is practice requirement under <i>FRPA</i>, <i>FPPR</i> Sections 35 (4, 5, 7), 37, 38 and 82(4). Monitoring through FREP, water quality and riparian values.</p>
1.9	Plan	FLNR – Land & Water / Stewardship		Incorporate sediment control strategies into resource development plans.	<p>Best Management Practices for in-stream work⁹⁰ required as condition of permit.</p> <p>Managing for sediment is practice requirement under <i>FRPA</i> – <i>FPPR</i>, <i>Section 35</i> – 40. Monitoring through FREP.</p>

⁸⁵ <http://www.bclaws.ca/civix/document/id/lc/statreg/14015>

⁸⁶ <http://www.bcwatertool.ca/nwwt/#5/56.068/-126.726>

⁸⁷ <http://waterportal.geoweb.bcogc.ca/#5/56.208/-127.150>

⁸⁸ See <http://www.waterbucket.ca/> for more information.

⁸⁹ <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

⁹⁰ <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.10	Plan	ENV – EP / FLNR – Land & Water / Research		Conduct awareness training from the field to planning level about the preventative measures of sediment control and erosion events. The target audience includes forestry, CN, utility companies, highways personnel, and private landowners.	Best Management Practices for in-stream work ⁹¹ required as condition of permit. <i>Tackling Non-point Source Water Pollution in British Columbia</i> ⁹² is working to address pollution issues through education and training. Hazardous Terrain training given over the last couple of years (Land Management Handbooks 18 & 57 ⁹³ : hillslopes and fans).
2.1 Identical to Fish and Fish Habitat, Strategy 1.2.	Plan	FLNR – Land & Water / Fish & Wildlife	Manage human activities to maintain hydrological stability.	Where CWAPs are required apply appropriate remediative and mitigative measures to ensure maintenance of fish habitat attributes and water quality.	Also direction for Project 7.5. At the permit level, required for in-stream works through Best Management Practices ⁹⁴ CWAPs are no longer required under FRPA. Licensees required to meet FRPA objectives for fish and riparian. Evaluated by FREP monitoring.
2.2	Plan	FLNR – Land & Water / Stewardship		In watersheds (identified through the process identified in strategy 2.1) use appropriate methods (e.g. CWAP) to plan resource development and limit negative hydrological impacts.	Also direction for Project 8.4. At the permit level, required for in-stream works through Best Management Practices ⁹⁵ CWAPs are no longer required under FRPA. Done in community watersheds. Licensees required to meet FRPA objectives for water quality, fish and riparian. Evaluated by FREP monitoring. CWAP and IWAP methodology used to calculate clearcut equivalency.

⁹¹ <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

⁹² See http://www.env.gov.bc.ca/wat/wq/bmps/npsaction_action.html for more information.

⁹³ <https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/Lmh18.pdf> and https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/conservation-data-centre/field_manual_describing_terrestrial_ecosystems_2nd.pdf

⁹⁴ <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

⁹⁵ <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.4	Plan	ENV – EP / FLNR – Land & Water		Water quality, aquatic ecosystem and hydrological regime objectives will be defined in terms of measurable attributes that will serve as standards or goal posts so that the impact of development can be monitored and assessed. Monitoring and assessment of Lakelse Lake will be a priority.	<p>Also direction for Project 8.4.</p> <p>Requirement under the <i>Water Sustainability Act</i>⁹⁶ - environmental flow needs.</p> <p>Water Quality Objectives available for Lakelse Lake⁹⁷ and Kitimat River and Kitimat Arm⁹⁸. Updating Kitimat River and Kitimat Arm currently under consideration.</p> <p>Lakelse Lake part of provincial lake monitoring network⁹⁹</p> <p>Federal/Provincial long-term monitoring program in place with site on the Skeena River at Usk¹⁰⁰.</p> <p>Done on a project by project basis through Environmental Assessment process or through Water Discharge Authorizations.</p> <p>Working in partnership with Environment and Climate Change Canada, the provincial Canadian Biomonitoring Network (CABIN) program evaluates water quality by monitoring benthic macroinvertebrate communities¹⁰¹.</p>

⁹⁶ <http://www.bclaws.ca/civix/document/id/lc/statreg/14015>

⁹⁷ https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality/water-quality-objectives/wqo_tech_lakelse_lake.pdf

⁹⁸ https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality/water-quality-objectives/wqo_tech_low_kitimat_and_arm.pdf

⁹⁹ No weblink currently available.

¹⁰⁰ <http://aquatic.pyr.ec.gc.ca/webdataonlinenational/>

¹⁰¹ <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/monitoring-water-quality/cabin>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.6	Plan	FLNR – Strategic Initiatives		Undertake watershed restoration activities for impacted watersheds to restore hydrological stability and water quality.	Professional reliance. No formal agency-led programs at this time. Restoration work through Environmental Stewardship Initiative ¹⁰² is currently in planning stages. Lakelse Watershed rehabilitation projects are listed on Lakelse Watershed Stewards Society website ¹⁰³ . See also the Lakelse Lake Sockeye Recovery Plan ¹⁰⁴ . Exchamsiks Backchannel Rehabilitation project (2008) conducted by the Skeena Fisheries Commission ¹⁰⁵ .
2.7	Plan	FLNR – Stewardship		Harvest timber according to the priority spatial and temporal design recommendations in Watershed Assessment Procedures for identified watersheds.	CWAPs are no longer required under FRPA. Licensees required to meet FRPA objectives for water quality, fish and riparian. Monitored by FREP. CWAP and IWAP methodology used to calculate clearcut equivalency.
3.1	Plan	FLNR – Land & Water	Protect life and property from hydrological events.	Manage human activities to avoid increasing the effects of seasonal drought conditions.	BC Drought Response Plan ¹⁰⁶ Provincial Drought Management Team sets directive in response to droughts.
3.2	Plan	Regional District lead		Undertake future settlement of floodplains only when the appropriate floodplain prescriptions (e.g. set-backs, by-laws) derived from ENV floodplain standards are met.	Province does not undertake flood hazard mapping.
3.4	Plan	Regional District and Municipality lead		Where appropriate, floodplain mapping to be conducted prior to Crown Land alienation for development purposes.	Floodplain mapping is responsibility of regional districts and municipalities.

¹⁰² <https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations/environmental-stewardship-initiative>

¹⁰³ <http://lakelsewatershedsociety.com/>

¹⁰⁴ <https://www.psf.ca/document-library/recovering-lakelse-lake-sockeye-salmon-lakelse-lake-sockeye-recovery-plan-llsrp>

¹⁰⁵ <http://www.skeenafisheries.ca/>

¹⁰⁶ <https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/drought-info/drought-response-plan-update-june-2015.pdf>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
3.5	Plan	FLNR – Land & Water		Flood control and river erosion protection dykes built to BC Environment standards when development requires such mitigative measures.	All work in or around dikes, including new construction, is guided by the <i>Dike Maintenance Act</i> ¹⁰⁷ .
3.6	Plan	FLNR – Land & Water		Encourage establishment of local dyking authorities for the monitoring and maintenance of dykes.	All new dike proposals require establishment of local diking authority under the <i>Dike Maintenance Act</i> ¹⁰⁸ .
3.7	Plan	FLNR – Research		Require geomorphological surveys and reports to be prepared to the satisfaction of BC Environment prior to Crown Land alienation for development purposes on alluvial fans.	Geomorphological surveys and reports required in the existing referral process. ENV no longer the agency responsible for this work.
4.2 Identical to strategy 1.4	Plan	ENV – EP	Manage human activities to maintain or enhance water	Provide opportunities for the installation of water quality monitoring stations.	See implementation information for strategy 1.4.

¹⁰⁷ http://www.bclaws.ca/civix/document/id/lc/statreg/96095_01

¹⁰⁸ http://www.bclaws.ca/civix/document/id/lc/statreg/96095_01

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
4.3	Plan	ENV – Land Remediation / MEMPR	quality and minimize water pollution.	Support remediation projects on a priority basis.	<p>Clean-up of contaminated sites is not the responsibility of ENV – it is the Responsible Person as defined under the <i>Environmental Management Act</i> who must clean up the site. If there is a requirement to remediate a contaminated site, then the oversight can be either the Ministry, if it is deemed a high-risk site, or a Contaminated Sites Approved Professional.</p> <p>ENV – Crown Land Restoration Branch manages high-risk contaminated sites on provincial lands by providing site management policies, maintaining records of Crown Land contaminated sites and facilitating progress reporting.</p> <p>The only way to identify all of the contaminated sites within the Kalum plan area is to conduct a search via the Site Registry¹⁰⁹ (note applicable fees).</p> <p>Crown Contaminated Sites Program (FLNR) focusses on the remediation of historically contaminated sites on Crown land where there is no other responsible person (operator/polluter) or government agency (permit provider).</p> <p>MEMPR has a role in contaminated mine sites¹¹⁰.</p> <p>Rio Tinto Alcan conducted some on-site remediation as part of its modernization project.</p>
4.4	Plan	ENV – EP		Industrial and community water effluent treatment will meet or exceed existing standards.	<i>Environmental Management Act</i> – Waste Discharge Regulation ¹¹¹ and <i>Municipal Sewage Regulation</i> ¹¹²

¹⁰⁹ <https://www2.gov.bc.ca/assets/gov/environment/waste-management/hazardous-waste/hazardous-waste/resources/sir.pdf>

¹¹⁰ <https://www2.gov.bc.ca/assets/gov/environment/air-land-water/site-remediation/docs/fact-sheets/fs12.pdf>

¹¹¹ See details at http://www.bclaws.ca/civix/document/id/complete/statreg/320_2004

¹¹² See details at <https://www2.gov.bc.ca/gov/content/environment/waste-management/sewage/municipal-wastewater-regulation>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
4.5	Plan	ENV – EP / FLNR – Compliance and Enforcement		Provide for adequate enforcement where necessary.	<p>Enforcement of the <i>Water Sustainability Act</i> is carried out by FLNR – Natural Resource Officers.</p> <p>Enforcement of the <i>Environmental Management Act</i> is carried out by the Conservation Officer Service as potential violations become known.</p> <p>Environment Canada is responsible for enforcing <i>Fisheries Act</i> regulations about discharge of deleterious substance.</p>
<i>Amendment to Land Use Objectives for Kalum SRMP (Kiteen) in 2017</i>					
Objective 1	Kiteen	FLNR – Stewardship		Maintain the hydrologic stability of watersheds so that the Equivalent Clearcut Area threshold of 30% is not exceeded, except where a hydrologic assessment is completed by a qualified professional prior to any harvesting that would cause the thresholds to be exceeded and that subsequent activities are conducted in a manner that is consistent with the results of the assessment.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 2	Kiteen	FLNR – Stewardship		Maintain the ecological functioning of streams, rivers, wetland complexes and lakes, including those that do not support populations of fish.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 3	Kiteen	FLNR – Stewardship		Ensure that industrial forestry activity on all rivers and streams does not cause significant consequences for fish habitat or human water consumption from channel bank erosion, channel aggradation, degradation or dewatering, or change in channel morphology.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 4	Kiteen	FLNR – Stewardship		Maintain reserve zones and management zones around riparian features identified in Schedule B for all rivers, streams, lakes and wetlands.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 5	Kiteen	FLNR – Stewardship		Retain blowdown within riparian reserve zones and/or riparian management zones as large woody debris for all rivers, streams, lakes and wetlands.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
Objective 6	Kiteen	FLNR – Stewardship		Maintain naturally deposited large woody debris in rivers and streams in riparian classes S1 to S4, except where necessary to satisfy safety considerations	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 7	Kiteen	FLNR – Stewardship		Ensure that when new roads and trails are built, ground water is allowed to reach natural ground water receiving sites.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 8	Kiteen	FLNR – Stewardship		Maintain the functional integrity of all floodplains and alluvial fans.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 19	Kiteen Water Management Unit	FLNR – Stewardship		Ensure proper hydrological functioning of: a) each stream, wetland and lake within a Water Management Unit identified on Schedule I; and b) each local and downstream stream receiving water from a cutblock within a Management Unit identified on Schedule I.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 20	Kiteen Water Management Unit	FLNR – Stewardship		a) Retain 100% of the forested area of the hydriparian zone of each stream, wetland and lake within a Water Management Unit as shown on Schedule I, unless harvesting is required to address compelling forest health issues or as set out in b). b) Cutblocks may overlap a Water Management Unit as shown on Schedule I by no more than 200 metres or 50% of any individual cutblock area, whichever is less, provided that the riparian management practice applicable to the forest land base outside a Water Management Unit is maintained.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 21	Kiteen Water Management Unit	FLNR – Stewardship		To the extent practicable, maintain Water Management Units within the Order Area or restore them to a roadless state, including by: a) deactivating existing roads following completion of harvesting and silviculture obligations; and b) constructing no new roads for commercial forestry operations.	Legal objective established through Kiteen amendment to Kalum SRMP. Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

Geological and Energy Resources

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.10, Geological and Energy Resources* in the Kalum LRMP (pp. 63 – 67).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.3 Identical to Access Management strategy 2.9	Plan	MEMPR	Maintain opportunities for access to Crown land for potential development of geological and energy resources.	In areas distant from roads encourage air access for early stages of exploration.	See policy in the Handbook for Mineral and Coal Exploration in BC, 2008/9 at https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/exploration-in-bc?keyword=handbook&keyword=for&keyword=mineral&keyword=and&keyword=coal&keyword=exploration
2.1 & 2.2	Plan	MEMPR	Mineral and energy values will be integrated into all levels of planning.	Provide inventories and maps of mineral and energy values to planning processes. Make industry stakeholders aware of opportunities to participate in planning processes.	Addressed through existing referral process.
3.2	Plan	MEMPR	Maintain the opportunity to explore, acquire tenure, develop, produce, process and transport geological and energy resources, (including highway maintenance and construction aggregate), throughout the planning area (excluding Protected Areas).	Provide explorationists with local access to the information and government services needed to explore and acquire tenure.	Information available via: iMapBC , an online map viewer for British Columbia that gives access to a variety of datasets (including data from Mineral Titles). BC Access Centre – Mineral Tenures Officer and MEMPR office in Smithers.
3.3	Plan	MEMPR		Encourage studies to support opportunities for geological resource discovery and development, and informed resource management decision making.	BC Geological Survey ¹¹³ gathers information through geoscience field surveys and from industry assessment reports. Government is also partnered with Geoscience BC ¹¹⁴ , an industry-led organization that delivers applied geoscience.
3.4	Plan	MEMPR		Maintain and upgrade provincial geoscience databases for mineral and energy exploration, geotechnical activities, extraction and reclamation activities plus resource management needs.	Available via Map Place portal: http://www.empr.gov.bc.ca/Mining/Geoscience/Databases/Pages/default.aspx

¹¹³ See: <http://www.em.gov.bc.ca/mining/Geosurv/default.htm>

¹¹⁴ See more details at <http://www.geosciencebc.com/s/Home.asp>.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
4.1	Plan	MEMPR	Maximize social benefits and minimize environmental impacts of geological, aggregate and energy exploration and development.	<p>Exploration activities involving mechanical disturbance required to follow procedures that include:</p> <p>(a) interagency and intergovernmental referral including consultation with First Nations and the Regional District.</p> <p>(b) preparation of reclamation plans prior to permitted exploration (mineral) or extraction (aggregate) activities.</p> <p>Bonding required to ensure implementation and completion of approved reclamation plans.</p>	<p>See <i>Aggregate Operators Best Management Practices Handbook</i>¹¹⁵, <i>Health, Safety and Reclamation Code for Mines in BC, 2017</i>¹¹⁶, <i>Handbook for Mineral and Coal Exploration in BC, 2008/2009</i>¹¹⁷.</p> <p>For energy initiatives see <i>Petroleum and Natural Gas Act</i> and Regulations.¹¹⁸</p> <p>Implementation through application process and referral process.</p> <p>Social benefits aspect of Objective considered at Environmental Assessment level of project.</p>
4.2	Plan	MEMPR		<p>Development proposals for mines or energy resources will consider cumulative effects of development on the environment, taking steps to mitigate or alter project proposals to minimize effects and will involve appropriate interagency and public consultation.</p>	<p>Cumulative effects federally regulated by the <i>Federal Environmental Assessment Act</i> or CEEA.</p> <p>Addressed through the <i>Environmental Assessment Act of BC</i> process¹¹⁹ or, for small to medium proposals, via the Northwest Mine Development Review Process. ENV and FLNR involved in assessment of offsite impacts.</p>
4.3	Plan	MEMPR		<p>Encourage the mineral, oil and gas exploration and development industries, when active on “orphaned” or adjacent sites (i.e. no tenure holder) to reclaim these where the remains of past activity are unsightly, unsafe or have been disruptive on productive wildlife and fish habitat.</p>	<p><i>Health, Safety and Reclamation Code for Mines in BC, 2017</i>¹²⁰ outlines how reclamation is done. No requirement for proponent to reclaim orphaned sites.</p> <p>Not implemented.</p>

¹¹⁵ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/permitting/agg_bmp_hb_2002vol2.pdf

¹¹⁶ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/health_safety_and_reclamation_code_2017_rev.pdf

¹¹⁷ <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/exploration-in-bc>

¹¹⁸ See <http://www.empr.gov.bc.ca/OG/legislation/Pages/default.aspx> for links to act and regulations.

¹¹⁹ For more details on this process see http://www.eao.gov.bc.ca/ea_process.html.

¹²⁰ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/health_safety_and_reclamation_code_2017_rev.pdf

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
4.4	Plan	MEMPR		Encourage the provincial government, in cases of environmental hazard or public safety, to reclaim “orphaned” mineral, oil and gas exploration and development sites.	<i>Health, Safety and Reclamation Code for Mines in BC, 2017</i> ¹²¹ outlines how reclamation is done. No requirement for proponent to reclaim orphaned sites. Orphaned sites are a government liability. Not implemented.
4.5	Plan	MEMPR		Encourage the exploration and development industries, including sand and gravel, to take into account impacts on such values as scenic views, noise, water quality, fish and wildlife habitat when planning activities and access.	See <i>Aggregate Operators Best Management Practices Handbook</i> ¹²² , <i>Health, Safety and Reclamation Code for Mines in BC, 2017</i> ¹²³ , <i>Handbook for Mineral and Coal Exploration in BC, 2008/2009</i> ¹²⁴ .
5.1	Plan	MEMPR	Provide certainty of geological and energy resource tenures.	Encourage timely application of the compensation provisions should mineral tenures be expropriated by Protected Area establishment.	See the Mining Rights Compensation Regulation of the <i>Mineral Tenure Act</i> ¹²⁵ .
6.1	Plan	MEMPR	Provide for a timely, well defined and expeditious approval process for exploration and development which includes consideration of socio-economic, environmental and social values.	Apply expeditious interagency referral processes.	Addressed through MEMPR “Notice of Work” referral process. Oil and Gas Commission addresses all oil- and gas-related projects in BC.
6.2	Plan	MEMPR		During the Environmental Assessment and Northwest Mine Development Review processes, identify and give consideration to the cumulative effects of socio-economic restraints and of regulations on the development project. Where the cumulative affect is found to be too high, take steps to mitigate.	Addressed through the <i>Environmental Assessment Act of BC</i> process ¹²⁶ .

¹²¹ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/health_safety_and_reclamation_code_2017_rev.pdf

¹²² https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/permitting/agg_bmp_hb_2002vol2.pdf

¹²³ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/health_safety_and_reclamation_code_2017_rev.pdf

¹²⁴ <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/exploration-in-bc>

¹²⁵ http://www.bclaws.ca/civix/document/id/loo99/loo99/19_99

¹²⁶ <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/laws-rules/environmental-assessment-act>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
7.2	Plan	MEMPR	Increase public knowledge of geological and energy resources and maintain or enhance, where appropriate, access to Crown Land for public recreational use of geological and energy resources.	Avoid exploration drilling projects which have the potential to compromise the Mt. Layton recreational hotspring resource.	Addressed through the MEMPR 'Notice of Work' referral process.
9.1	Plan	FLNR – Heritage	When provincially significant fossil beds are encountered during resource development provide an opportunity for timely cataloguing and scientific research.	Encourage developers to give the scientific community an opportunity to study provincially significant fossil beds for natural history purposes prior to a resource development (e.g. roadbed) covering/tearing up a fossil occurrence.	<p>In 2005, the Mineral Definition Modification Regulation (BC Reg. 5/2005) under the <i>Mineral Tenure Act</i>, excluded fossils from the definition of "mineral" under the Act. The result of this amendment was to make fossils a resource that is administered under the <i>Land Act</i> (except those fossils subject to titles issued before January 12, 2005). When the tenure holders encounter fossils during road construction, development activities or during exploration work, they are asked to report their findings</p> <p>The Heritage Branch leads implementation of the <i>Fossil Management Framework</i>¹²⁷</p>

Grizzly Bear

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.11, Grizzly Bear* in the Kalum LRMP (pp. 67 – 77). Some of these, listed in Appendix D, have been subject to analysis as landscape level practices in the draft *Kalum LRMP Strategic Practices Analysis Report*.

¹²⁷ See <https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/land-use/fossil-management> for more details.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.1	Identified Watersheds Map 11	FLNR – Ecosystems	Maintain or restore grizzly bear habitats.	Achieve target effectiveness levels for each identified watershed.	Legal objective established through Kalum SRMP Objective 11, Table 8 (Grizzly Bear Stocking Standards). Consultation complete on draft Grizzly Bear WHA order; approval of Order anticipated in fiscal 2018/19. Licensees are honouring the draft WHA; since this is reflected in FSPs, the order is, in effect, implemented.
2.1	McKay-Davies & Copper Watersheds	FLNR – Stewardship	Provide an adequate supply of berry feeding.	Ensure that no more than 30% of the forested land base, excluding hardwoods, will be between 25 and 100 years old.	Also direction for Project 10.2. Legal objective established through Kalum SRMP Objective 11. Operational implementation through the FPPR and Forest Stewardship Plans. Grizzly stocking standards apply primarily on wet/rich sites.
2.2, 2.3, 2.4	Identified Watersheds Map 11	FLNR – Stewardship		Maintain natural level of forage supply for grizzly bears in identified watersheds (Map 11).	Also direction for Project 10.2. Legal objective established through Kalum SRMP Objective 11. Operational implementation through the FPPR and Forest Stewardship Plans.
2.5	Identified Watersheds Map 11	FLNR – Stewardship		Where opportunities exist on sites other than the wet or rich sites, apply mitigation measures aimed at achieving natural levels of forage supply.	Also direction for Project 10.5. Professional reliance – licensee responsibility.
3.1	Plan	FLNR – Ecosystems		Develop appropriate prescriptions for the protection or restoration of critical habitat and integrate these requirements with the normal process of FSP approval.	Also direction for Projects 10.1, 10.3 – 10.5. Draft Grizzly Bear WHA in Fiddler-Nelson, Kildala and Dala and Kitimat, Clore, Kalum, Douglas-Gardner and Kitimat River West Landscape Units.
5.1	Plan	FLNR – Fish & Wildlife	Bear mortality from all human causes will not exceed 4% of the estimated population, that less than 30% of the kill is female and that	Monitor grizzly bear mortality and adjust legal mortality levels accordingly.	Fish and Wildlife does this as part of regular course of grizzly bear management. At this time, province-wide ban on grizzly bear hunting in effect.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
5.2	Plan	ENV – EP / FLNR – Fish & Wildlife	the Total kill is not area-concentrated.	Bear-human conflict minimized through education and enforcement activities, to reduce “problem” bear mortality, provide human safety and reduce property damage.	Conservation Officers and Fish and Wildlife staff work together on this each year. Under the <i>Wildlife Act</i> , Conservation Officers can issue a ‘dangerous wildlife protection order’ which requires the removal of wildlife attractants.
6.1	Plan	FLNR – Fish & Wildlife	Provide hunter harvest opportunities.	Wildlife Branch to assess opportunities for hunter harvest and consult with stakeholders during establishment of safe harvest levels.	Annual setting of hunting regulations and consultation via Skeena Hunter Advisory Committee process. At this time, province-wide ban on grizzly bear hunting in effect.
7.2 – 7.3	Plan	FLNR – Fish & Wildlife	Monitor the overall effectiveness of applying the Grizzly Bear Best Management Practices.	Long term field inventory and monitoring program established for bears and their habitats. Over time, evaluate the effectiveness of these Best Management Practices and this combination of objectives and strategies. Based on inventory and evaluation results, adjust Best Management Practices under adaptive management.	Legal Notice ¹²⁸ (under <i>Forest Planning and Practices Regulation</i> 7(2) and <i>Woodlot Licence Planning and Practices Regulation</i> 9(3)) with general wildlife measures for grizzly bears direct licensee. No effectiveness monitoring has occurred.

Outdoor Recreation

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.6, Coastal Management – Public Recreation* and *Section 2.2.12, Outdoor Recreation* in the Kalum LRMP (pp. 42 – 43; 78 – 80).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>Section 2.2.6, Coastal Management: Public Recreation</i>					
2.1	Plan	ENV – BC Parks / FLNR – Recreation Sites & Trails	Minimize noise from marine-based commercial and industrial facilities to avoid disturbing recreational users in areas identified in the Recreation Activities Map (Map 9).	In areas important to marine recreation, identified in the Recreation Activities Map, minimize noise from marine based commercial and industrial facilities to avoid disturbing recreational users.	BC Parks is lead for protected areas. Many key areas and facilities are now protected and are now being managed by BC Parks. At present, BC Parks receives only limited referrals - if proposed development overlaps park boundaries. Not implemented.

¹²⁸ See notice located at <http://www.env.gov.bc.ca/wld/frpa/notices/>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
3.1 also 2.2.12 Outdoor Recreation Strategy 1.3	Plan	FLNR – Recreation Sites & Trails	Minimize conflict with public recreation activity.	Consult public recreation users prior to establishing commercial recreation tenures so that commercial recreation does not displace public recreation.	Referral process for new applications includes referral to Recreation Sites and Trails BC as well as public advertising.
4.2	Plan	ENV – BC Parks / FLNR – Recreation Sites & Trails	Minimize impacts to dive sites from other activities.	Manage dive sites in order to maintain dive site characteristics and features (e.g. biophysical, archeological and cultural characteristics).	BC Parks has operational plans for parks that include dive sites.
5.1, 5.2 also 2.2.12 Outdoor Recreation Strategies 1.6 and 2.3	Plan	FLNR – Recreation Sites & Trails / ENV – BC Parks	<p>Prevent degradation (through recreational overuse) of recreation sites and features identified in the Recreation Activities Map (Map 9).</p> <p>Retain the existing known outdoor recreation opportunities identified on the Recreation Activities map (Map 9).</p> <p>Manage for opportunities to experience regionally significant recreation biophysical features such as views, trails and cultural amenities.</p>	<p>Monitor levels of recreational use and associated impacts (e.g. Limits of Acceptable Change, Visitor Impact Management models) and wherever necessary apply appropriate management applied (e.g. site hardening, site design, use limits).</p> <p>Manage existing recreation opportunities such that sites and trails are not degraded due to over use.</p> <p>Conserve the identified recreation sites and features and manage for the associated recreation values.</p>	<p>BC Parks is lead for protected areas.</p> <p>Stewardship of recreation resources is central to the work of Recreation Sites & Trails and BC Parks.</p> <p>Adventure Tourism Policy requires recording of client-days as condition of adventure tourism tenures https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/adventure_tourism.pdf.</p> <p>FS 0172 form is filled out by maintenance personnel on each visit to a Forest Service recreation site to record use levels and maintenance requirements. Facilities are upgraded as needed.</p> <p>New sites were developed on the Copper River.</p>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
6.2	Plan	FLNR/ AGRI / DFO	Maintain or enhance water quality in important recreational shell-fish harvest areas.	Regulate commercial or industrial tenures at or near identified recreational shell-fish harvest areas.	All development required to produce management plans that follow appropriate guidelines as part of the application process for an aquaculture licence (DFO) and for a tenure (FLNR). Ministry of Agriculture issues licences under the <i>Fish and Seafood Act</i> and <i>Fish and Seafood Licensing Regulation</i> for certain activities. Nature of work requires cooperative approach with federal agencies, including DFO and Canadian Food Inspection Agency. Siting guidelines require all fin-fish aquaculture tenures to be at least 300 m from inter-tidal shellfish harvest areas and at least 125 m from all wild shellfish beds ¹²⁹ .
<i>Section 2.2.12 Outdoor Recreation</i>					
1.1	Plan	FLNR – Recreation Sites & Trails / ENV – BC Parks	Retain the existing known outdoor recreation opportunities identified on the Recreation Activities map (Map 9).	Provide opportunities for recreational activities and experiences ranging from roaded to primitive, at both area-based and site-based scales throughout the planning area with linkages to areas of similar recreation activities where appropriate.	Also direction for Project 1.1. BC Parks is lead for protected areas. Ongoing by both ministries – no master plan. Opportunities have been developed as they are identified.
1.3	Plan	FLNR – Recreation Sites & Trails		First Nations included in consultation opportunities such that First Nations rights are upheld. Recreational users included in consultation such that commercial recreation operations are developed collaboratively that do not displace public recreation activities.	First Nations consulted and involved in proposals for new recreation sites, trails or facilities. Referral process for new applications includes opportunities for public input.
1.5	Plan	FLNR – Recreation Sites & Trails / ENV – BC Parks / MTAC		As appropriate, government may prepare more detailed recreation plans to manage the resource and to identify potential recreation areas and activities that address local, regional and destination requirements.	Province is developing 19 destination management plans to promote tourism. See: https://www.destinationbc.ca/Programs/Regions-Communities-and-Sectors/Destination-Development-Planning.aspx BC Parks has operational plans for Parks; recreation is one of the primary values in most cases.

¹²⁹ <http://www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/docs/site-guide-direct-eng.html>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.6 Duplicate strategy to 2.2.6 Coastal Management Public Recreation Strategy 5.1.	Plan	FLNR – Recreation Sites & Trails / ENV – BC Parks		Manage existing recreation opportunities such that sites and trails are not degraded due to over use.	<p>BC Parks is lead agency for protected areas.</p> <p>Priority for both agencies; ongoing.</p> <p>Some areas maintained via partnerships with clubs (e.g., cross country ski trails with Snow Valley Nordic Ski Club) or First Nations (e.g. cabins on Douglas Channel).</p> <p>Adventure Tourism Policy requires recording of client-days as condition of adventure tourism tenures https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/adventure_tourism.pdf.</p> <p>FS 0172 form is filled out by maintenance personnel on each visit to a FS recreation site to record use levels and maintenance requirements. Facilities are upgraded as needed.</p>
2.2	Plan	FLNR – Stewardship	Manage for opportunities to experience regionally significant recreation biophysical features such as viewsapes.	Manage for a variety of natural viewsapes by utilizing visual landscape management in the course of development planning.	<p>SRMP Section 5.1.</p> <p>Under the <i>Forest and Range Practices Act</i>, Section 180 and 181, scenic areas and objectives established or continued under the FPC are continued as visual quality objectives under FRPA. In addition, under the <i>Government Actions Regulation</i>, Section 17, existing scenic areas with recommended visual quality classes are continued under FRPA as visual quality objectives.</p> <p>Scenic areas and VQOs established.</p> <p>E.g. Copper River VQOs.</p> <p>Areas are developed with this strategy in mind; e.g. Clearwater Trails.</p>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.3 Duplicate strategy to 2.2.6 Coastal Management – Public Recreation strategy 5.1	Plan	FLNR – Recreation Sites & Trails / ENV – BC Parks		Conserve the identified recreation sites and features and manage for the associated recreation values.	BC Parks is lead for protected areas. Stewardship of recreation resources is central to the work of Recreation Sites & Trails and BC Parks. Ongoing. FSPs are required to identify and maintain recreation values.
3.2	Plan	FLNR – Recreation Sites & Trails	Provide and enhance opportunities for outdoor recreation activities through the development of new and the enhancement of existing infrastructure such as recreation trails and sites.	To the extent possible, take advantage of existing and future resource developments to enhance recreation infrastructure.	Developed new sites on Copper River, additional trails (5km) at Onion Lake Ski Trails and mountain bike trails on Thornhill Mt. and Terrace Mt Opportunities taken to develop recreation through companies including LNG Canada and Pacific Trails Pipeline.
4.1	Plan	FLNR – Recreation Sites & Trails	Provide and enhance opportunities for outdoor education through the development of demonstration and community forests.	Enhance outdoor education at the Red Sand Demonstration Forest (MOF) and in future community forests through the use of interpretative signs, brochures, self-guided hiking trails and interpretative programs.	Interpretive Trail maintained at Redsand Lake Demonstration Forest. City of Terrace and regional district promoting and advertising recreation facilities throughout the district.

Timber Harvesting and Silviculture

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.13, Timber Harvesting and Silviculture* in the Kalum LRMP (pp. 80 – 83).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.1	Plan	FLNR –BC Timber Sales	Provide opportunities for value-added manufacturing, wood based cottage industries, cultural uses of wood, and woodcraft.	Increase access to timber for value-added manufacturers, cultural users, woodcraft users and cottage industries.	Since the Kalum LRMP was approved, the Terrace Community Forest has been established and a total of nine harvesting tenures have been issued to First Nations. In addition, BC Timber Sales now has 20% of the timber apportionment in the plan area due to the <i>Bill 28</i> re-allocation. For these reasons, and the removal of appurtenancy requirements for timber licenses, there are now more opportunities to acquire timber for a variety of uses.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.4	Plan	Ministry of Jobs, Trade and Technology		Encourage government and industry partnerships to develop marketing strategies for value-added wood products.	Forestry Innovation Investments (FII) funds Business Innovation Partnership, a program launched in December 2007 to provide business development services to the value-added wood products industry in British Columbia. ¹³⁰ FII is accountable to the Ministry of Jobs, Trade and Technology. BC Wood ¹³¹ is a not-for-profit trade association (est. 1989 as a partnership between industry and government) that provides marketing programs to value-added manufacturers.
3.1, 3.3	Plan	FLNR – Stewardship	Maintain and where possible enhance the productivity of the forest landbase.	Encourage the use of new technology that reduces soil compaction and erosion. Utilize harvest systems that maintain soil properties, water and nutrients such as: harvesting at different seasons; use of terra mats to minimize soil compaction.	Professional reliance, driven by economic considerations. <i>FRPA</i> , FPPR Section 35 addresses soil disturbance limits.
3.2 Identical to strategy 8.2	Plan	FLNR – Stewardship		Use long term planning to locate and rehabilitate roads and landings.	Also direction for Project 1.1. Under <i>Forest Act</i> ¹³² , contractual obligations – conditions under cutting permits in terms of deactivation of roads. Professional reliance. <i>FRPA</i> , FPPR Section 35 addresses soil disturbance limits.
4.1, 4.3	Plan	FLNR – Stewardship	Manage second growth stands to produce a variety of products.	On medium to high growing sites, implement incremental silviculture regimes that have the potential to increase value per hectare in consideration of other resource values. Procure funding to implement incremental silviculture activities.	In District, government and forest licensees produced <i>Guiding Principles for Second Growth Forest</i> ¹³³ . FSPs must consider guiding principles. Professional reliance. Stewardship has (2018) submitted proposal for spacing funding to Forest Enhancement Society of BC.

¹³⁰ See website at <https://www.bcfii.ca/>

¹³¹ See website at <http://www.bcwood.com/>

¹³² http://www.bclaws.ca/Recon/document/ID/freeside/96157_00

¹³³ Available at: <https://www.for.gov.bc.ca/dkm/#first>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
5.1	Plan	FLNR – Stewardship	Maintain long-term ecological values such as a diversity of age classes and stand structures.	Identify areas suitable for uneven aged management and where appropriate implement silviculture treatments to maintain some multi-storied stands.	Also direction for Project 12.2. Professional reliance, driven by economic considerations. Some licensees are doing with respect to group selection. Few multi-storied stands in district.
8.1, 8.2	Plan	FLNR – Stewardship	Minimize the loss of productive forest land.	Where possible, design harvesting systems with fewer roads and landings. Where appropriate rehabilitate landings after harvesting.	Also direction for Project 1.1. Professional reliance, driven by economic considerations. <i>FRPA</i> , FPPR Section 35 addresses soil disturbance limits. Rehabilitation of landings not being occurring.
8.3	Plan	FLNR – Stewardship		Harvest in a manner that maintains productivity in environmentally sensitive areas.	Professional reliance, driven by economic considerations. <i>FRPA</i> , FPPR Sections 6, 16, 44-46 require maintenance or enhancement of wood supply and stocking standards for harvested areas. Harvesting methods that diminish productivity make it difficult to meet these requirements. Addressed on Skeena Islands through Skeena Islands amendment to SRMP in 2017.
8.4	Plan	FLNR – Stewardship		Where possible rehabilitate and regenerate degraded sites.	Professional reliance, driven by economic considerations, stocking standards and legal obligations to establish free to grow stands (<i>FRPA</i> , FPPR Sections 6, 16, 44-46). Ministerial responsibility to do silviculture in backlog (pre-1987) blocks or where there are bankrupt licensees.
10.1	Plan	FLNR – Stewardship	Strive to increase stand volume and value in stands identified for incremental silviculture opportunities.	Where ecologically appropriate and in acceptable proportions, regenerate stands to higher value species.	District cedar management strategy has been initiated and is ongoing. Professional reliance, driven by economic considerations and legal obligations to establish free to grow stands (<i>FRPA</i> , FPPR Sections 6, 16, 44-46).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
10.2	Plan	FLNR – Stewardship		Prescribe and implement appropriate incremental silviculture treatments such as juvenile spacing, pruning, site rehabilitation, conifer release, fertilization, commercial thinning, and final harvesting.	Professional reliance, driven by economic considerations and legal obligations to establish free to grow stands (FRPA, FPPR Sections 6, 16, 44-46). No obligation after Free to Grow requirements met. Terrace Community Forest is doing commercial thinning. Stewardship has submitted (2018) proposal for spacing funding from Forest Enhancement Society of BC. Conifer release implemented if ministerial obligation.
10.3	Plan	FLNR – Stewardship		Harvest identified stands at the optimal rotation age based on maximizing growth rates and/or economic return.	In District, government and forest licensees produced <i>Guiding Principles for Second Growth Forest</i> ¹³⁴ . FSPs must consider guiding principles. Professional reliance, driven by economic considerations.

¹³⁴ Available at: <https://www.for.gov.bc.ca/dkm/#first>

Tourism

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.14, Tourism* in the Kalum LRMP (pp. 83 – 86).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.1	Plan	MTAC / FLNR – Recreation Sites & Trails BC	Identify recreation/tourism features, facilities and activities, and evaluate opportunities.	Maintain as a priority up to date inventories of recreation/tourism resources, facilities and uses to identify resources of importance to recreation/tourism. Incorporate inventories into development, planning, and tenuring processes of all agencies.	Also direction for Project 13.1. Recreation Sites and Trails website has interactive map: http://www.sitesandtrailsbc.ca/ <i>Recommendations for Recreation Vehicle Park Development in British Columbia</i> ¹³⁵ was completed in Feb. 2008 and identifies gaps in facilities and measures to promote RV parks. Destination Development Planning, a tourism planning process run by Destination BC, will focus on northwest BC in 2018/19. There is a change of focus from marketing to planning. At present, no single up-to-date inventory.
1.2	Plan	Local government		Conduct community-scale analysis of resource opportunities and constraints for recreation/tourism activities and incorporate results into development, planning, and tenuring processes of all agencies.	Also direction for Project 13.2. Community-scale analysis is initiative of local governments. Terrace Community Tourism Plan prepared in 2016. Destination Development Planning, a tourism planning process run by Destination BC, will focus on northwest BC this year. There is a change of focus from marketing to planning.
1.3	Plan	MTAC		Encourage the Ministry of Small Business, Tourism and Culture, in consultation with interested stakeholders, to prioritize tourism resource values.	Portfolio reassigned to MTAC. Destination Development Planning, a tourism planning process run by Destination BC, will focus on northwest BC this year. There is a change of focus from marketing to planning.

¹³⁵ See report at http://www.llbc.leg.bc.ca/public/pubdocs/bcdocs/437672/rv_park_development_in_bc.pdf.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.1	Plan	FLNR – Recreation Sites & Trails / ENV – BC Parks	Maintain recreation/ tourism features, facilities and activities identified in the Recreation Activities map, FRTOS (features only) and Commercial Recreation tenures (BCAL).	Manage development of identified site-specific recreation/tourism resources to avoid impairing those resources.	Adventure Tourism tenures include tenure management plans. This is a priority for operations by BC Parks (in protected areas) and Recreation Sites and Trails. Public recreation facility use monitored through use of FS0172 ¹³⁶ forms filled out by maintenance personnel on each visit to a FS recreation site. Related to visual landscape inventory (4.1).
2.2	Plan	FLNR – Recreation Sites & Trails / Land & Water		Refer Forest Stewardship Plans to MOFR Recreation specialist/officer for analysis of potential impacts to recreation. In the event negative impacts to recreation resource features appear likely, advise affected tourism and recreation user groups and provide opportunities for input.	FSPs are referred to Recreation Officer for review. Licensees are aware of recreation sites and trails and work around them.
2.3	Plan	FLNR – Recreation Sites & Trails / Land & Water		For commercial and recreation development proposals provide opportunities for public comment.	Adventure Tourism applications require public advertising during referral process. All new proposals undergo referral process including stakeholders and public review. Often advertised in local newspapers.
3.1	Plan	Multi agency	Provide opportunities for recreation/tourism use in both frontcountry and backcountry settings.	Manage resource development and recreation/tourism activities to maintain a mixture of frontcountry and backcountry facility-based, dispersed, and low-impact activities.	Interagency review processes for development projects (mining, forestry, tourism etc.) allow for consideration of all resource values. All tourism development projects require proponent to complete studies that show they will not negatively impact resource. Destination Development Planning, a tourism planning process run by Destination BC, will focus on northwest BC this year. There is a change of focus from marketing to planning.

¹³⁶ See <https://www.for.gov.bc.ca/hfp/publications/00201/appen01/appen01.htm> for form and more details about its use.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
3.2	Plan	MTAC / FLNR – Recreation Sites & Trails / ENV – BC Parks		Manage recreation/tourism and other development activities in frontcountry areas and primary travel corridors so as to enhance opportunities for a range of recreation/tourism uses and infrastructure development.	<p>BC Parks is lead for protected areas.</p> <p>Referral process and advertising for new proposals allows interagency and public comment for all projects.</p> <p>Destination Development Planning, a tourism planning process run by Destination BC, will focus on northwest BC this year. There is a change of focus from marketing to planning.</p>
3.3	Plan	FLNR – Recreation Sites & Trails / MTAC		Focus and encourage development of tourism facilities within existing settlement areas ('frontcountry' areas), and in appropriate adjacent areas, to allow existing communities to serve as 'gateways' to tourism resources of the Plan Area.	<p>Destination Development Planning, a tourism planning process run by Destination BC, will focus on northwest BC this year. There is a change of focus from marketing to planning.</p> <p>Northern BC Tourism Association contracts to Destination BC – develops, coordinates & delivers tourism marketing programs.</p> <p>Specific development proposals addressed through application referral process. All proposals undergo a referral process that allows for local and regional governments, stakeholders and public to provide input.</p> <p>Organizations of note:</p> <ul style="list-style-type: none"> Nisga'a Tourism Limited Partnership: http://npvlp.ca/news/lisims-backcountry-adventures-inc Kermodei Tourism Society: http://www.visitterrace.com/stage.php/info/kermodei-tourism Regional District of Kitimat Stikine (Economic Development): http://www.rdks.bc.ca/category/subject-tags/economic-development
4.1	Plan	FLNR - Stewardship	Maintain visual resources of importance to recreation/tourism.	Maintain an updated visual landscape inventory of scenic resources. Inform affected agencies of inventories.	<p>Visual landscape inventories completed in 2006.</p> <p>Updating the inventory planned for 2018. Requires compiling all known inventories and establishing updated inventory priority areas.</p> <p>Public consultation will be part of this process.</p>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
4.3	Plan	FLNR – Stewardship		Manage development activities and target rehabilitation to restore visual quality in Known Scenic Areas not currently up to the standards, so as to restore visual quality to the desired levels.	Visual Quality Objectives have been established under <i>FRPA</i> , Section 180 and 181 and GAR Section 17.

Trapping

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.15, Trapping* in the Kalum LRMP (pp. 87 – 88).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.1	Plan	FLNR – Fish & Wildlife	Maintain trapping opportunities for the trapping industry.	Maintain a system that provides trappers with certainty for the industry and for sustainable distribution of activity across the land base.	No changes to existing system proposed.
1.2	Plan	FLNR – Fish & Wildlife		Encourage resource management decisions that enhance the viability of the trapping industry.	Forest licensees consult with all licenced users – under <i>FRPA</i> and Biodiversity Guidelines. During consultations with tenure holders, concessions may be made to trappers if development overlaps trapline.
1.3	Plan	FLNR – Fish & Wildlife		Improve communication and consultation between government resource agencies, major timber tenure holders and trapping tenure holders through operational plan referral, dialogue, planning participation and review forums.	Opportunity to review FSPs by individuals whose rights may be affected as required under <i>FRPA</i> , FPPR Section 21c and d. FLNR to provide contact info when appropriate.
1.4	Plan	FLNR – Fish & Wildlife		Encourage the identification of camps, cabins, trap line trails, trapping caches, and valuable use areas for consideration in planning resource development activities, recognizing the potential confidentiality of location information.	<i>FRPA</i> , FPPR Section 21c and d obligation to consult. No database exists to record this information. Consultation between developers and registered trapline holders is the best way to address this issue.
2.1	Plan	FLNR – Fish & Wildlife	Maintain the viability of fur bearer populations through habitat management.	Within a cut block, use riparian management areas, wildlife tree patches and reserves where they occur to provide furbearer movements across the cut block.	Professional reliance – <i>FRPA</i> , FPPR Sections 7 – 10, 66, 68, 69 give general guidance to wildlife and biodiversity objectives, WTPs and CWD and sections 47 – 57 to riparian management but not with specific intent of providing for furbearer movements.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.2	Plan	FLNR – Fish & Wildlife		Within second growth stands, provide for a range of stand densities including thickets.	Regulations around stocking standards and free-to-grow often prevent this practice.
2.3	Plan	FLNR – Fish & Wildlife		Where appropriate, encourage deciduous growth following harvesting for promotion of fur bearer prey species (rabbits, birds, grouse, voles etc.).	Regulations around stocking standards and free-to-grow often prevent this practice.
2.5	Plan	FLNR – Fish & Wildlife		In areas identified by trappers as high value fur bearer habitat, consider reducing log salvage, planting and competitive vegetation control activities.	Also direction for Project 14.2. Rarely achieved due to regulations (waste management, scaling and burning).
2.6	Plan	FLNR – Fish & Wildlife		For furbearer winter habitat, particularly marten, establish and implement guidelines for the presence and distribution of course woody debris piles.	Also direction for Project 14.2. Rarely achieved due to regulations (waste management, scaling and burning). Professional reliance – <i>FRPA</i> , FPPR Section 68 outlines minimum requirements for CWD retention in cutblocks.
3.1	Plan	FLNR – Fish & Wildlife	Strive for the continuance of the social and cultural aspects of trapping, and recognize the cultural history associated with the trapping industry, for both First Nations and non-aboriginal peoples.	Undertake consultation with individual tenure holders prior to resource development activities to identify and mitigate conflicts between development activities and valuable use areas within individual trapping tenures.	Opportunity to review FSPs by individuals whose rights may be affected as required under <i>FRPA</i> , FPPR Section 21c and d.
3.2	Plan	FLNR – Fish & Wildlife		Recognize existing rights of trapping tenures for both First Nations and non-aboriginal peoples.	FLNR continues to manage trapline tenures as authorized under <i>BC Wildlife Act</i> .
3.3	Plan	FLNR – Fish and Wildlife		Incorporate the social value associated with trapping tenures, for both First Nations and non-aboriginal peoples, as part of comparative resource valuation when assessing the importance of commercial resource industries.	The social value of trapping is included in socioeconomic assessments. No new socioeconomic assessments initiated since completion of LRMP.

Ungulate Winter Range

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.16, Ungulate Winter Range* in the Kalum LRMP (pp. 88 – 94).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>Mountain Goat</i>					
2.1, 2.2, 2.3	Goat Winter Range	FLNR – Ecosystems	Minimize human disturbances to goats on their winter range.	<p>Where possible, locate roads parallel to goat winter travel routes to avoid blocking winter movements.</p> <p>Do not construct roads unless there is no other practical option for road location. Deactivate new nonpermanent roads after use.</p> <p>Where possible, adjacent to goat winter range, schedule road building and resource extraction activities (timber, aggregate, mineral and fossil fuels) for June through October. Where not possible, use management techniques to minimize disturbance.</p>	<p>Also direction for Project 1.1.</p> <p>Goat UWR designated Nov. 2005 (Order UWR#U-6-001 under GAR) with amendments in 2006, 2010 and 2014.</p> <p>Based on effectiveness monitoring and audit on goat winter range, Ecosystems will be pursuing an amendment to better capture winter range.</p>
2.4	Goat Winter Range	FLNR – Ecosystems		Manage human access and winter recreational activities to minimize disturbance of wintering goats with the exception of limited entry hunting.	<p>Also direction for Project 1.1.</p> <p>Local heliskiing companies in compliance with Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in BC. (May 2006)¹³⁷. Obligated to do operational reporting on flight data and compliance monitored</p> <p>Identification of existing roads that pose high risk to goat winter range will be looked at through effectiveness monitoring this winter (2018).</p> <p>Licensees consulting to deactivate identified roads.</p>
<i>Moose</i>					
1.2 – 1.5, 2.1, 3.1 – 3.3, 4.1 – 4.4, 5.1 – 5.6	Moose Winter Range	FLNR – Ecosystems	Five objectives and 18 associated strategies give direction to manage primary and secondary moose winter range to provide thermal, security and forage supply to sustain over-wintering moose populations (Total of 18 practices in addition to project direction) ¹³⁸ .		<p>Also direction for Project 15.4.</p> <p>Moose UWR designated in May 2015 (Order UWR#U-6-009).</p>

¹³⁷ See <http://www.env.gov.bc.ca/wld/twg/index.html> for more details.

¹³⁸ See Implementation Plan for more specific details on strategy numbers.

Visual Resources

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.17, Visual Resources* in the Kalum LRMP (pp. 95 – 97). Also included is a visual resource strategy found in the Biodiversity section.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.1	Plan	FLNR – Stewardship	Manage the landscape in areas of importance to local and First Nation communities, tourism and recreation to retain existing scenic values.	Maintain existing Known Scenic Areas and continue to evaluate the need for new and additional Scenic Areas.	Under <i>FRPA</i> , Section 180 and 181, scenic areas and objectives established or continued under the <i>FPC</i> are continued as visual quality objectives under <i>FRPA</i> . In addition, under the Government Actions Regulation, Section 17, existing scenic areas with recommended visual quality classes are continued under <i>FRPA</i> as visual quality objectives. The legal visual landscape inventory has not yet been updated since it was established. New inventories have been completed but have not been made legal. Through a GAR order, changes to the existing inventory can be made and new inventories can be added.
1.5	Plan	Lead agency = office authorizing the development		During the planning for non-forest industry development (i.e. rock quarries, utility corridors, industrial development etc.) undertake a visual impact analysis.	Non-forestry linear disturbances (pipelines/powerlines) are exempt from VQO: they are not required to follow regulations on visual impacts. See memo: https://www.for.gov.bc.ca/dkm/2014_Memo_Utility_Corridors.pdf Visual quality concerns considered through MEMPR 'Notice of Work' application process; visual barriers as mitigation may be condition of permit.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.6	Plan	ENV – EP		Manage slash burning and other industrial activities to maintain air clarity in major valleys.	<p>Professional reliance.</p> <p>Under <i>Environmental Management Act, Open Burning Smoke Control Regulation</i>, a permit is not required if the conditions of the regulation are met¹³⁹, if conditions cannot be met, an application for a permit to burn must be submitted to ENV and additional restrictions can be placed on it to achieve air clarity.</p> <p>Under the <i>Wildfire Act</i> and Regulations, one must register all burns with FLNR, but a permit is not required.</p> <p>See the BC Air Quality website for more information¹⁴⁰.</p> <p>Air quality monitoring stations in Terrace and Kitimat.</p>
2.1	Plan	FLNR – Stewardship	Within existing Known Scenic Areas integrate the management of scenic resources with other resource values and uses such that the Established Visual Quality Objectives are met.	In areas of high visual sensitivity (i.e. recreational waterways, major travel corridors, etc.) conduct resource development in a manner which minimizes visual disturbance over time.	<p>Under <i>FRPA</i>, Section 180 and 181, scenic areas and objectives established or continued under the <i>FPC</i> are continued as visual quality objectives under <i>FRPA</i>. In addition, under the Government Actions Regulation, Section 17, existing scenic areas with recommended visual quality classes are continued under <i>FRPA</i> as visual quality objectives.</p> <p>Under <i>FRPA</i>, the ministry has delegated this role to professional reliance.</p>
2.2	Plan	FLNR - Stewardship		Through the use of visual landscape design techniques create harvesting openings within Known Scenic Areas to reflect and blend in with the natural topography.	<p>Under <i>FRPA</i>, Section 180 and 181, scenic areas and objectives established or continued under the <i>FPC</i> are continued as visual quality objectives under <i>FRPA</i>. In addition, under the Government Actions Regulation, Section 17, existing scenic areas with recommended visual quality classes are continued under <i>FRPA</i> as visual quality objectives.</p> <p>Under <i>FRPA</i> the ministry has delegated this role to professional reliance.</p>

¹³⁹ See <http://www.env.gov.bc.ca/air/particulates/agttobsc.html> for more details on conditions of OBSCR.

¹⁴⁰ <https://www2.gov.bc.ca/gov/content/environment/air-land-water/air>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.3	Plan	FLNR – Stewardship		Where visual quality and wildlife management concerns intersect, maintain visual quality objectives to the extent that they do not compromise wildlife management objectives.	Professional reliance, except where specific wildlife objectives have been established (i.e. WHAs, UWRs).
2.4	Plan	FLNR – Stewardship		Wherever possible, incorporate areas of high visual sensitivity into old growth management areas and other areas of constraint (i.e. riparian reserve zones, wildlife tree patches etc.)	Also direction for Project 4.2. The OGMA co-location project is ongoing and may or may not incorporate areas of visual sensitivity.
3.3	Upper Kitimat; Onion Lake Ski Trails; Terrace to Kitimat Rail route; West side of Lakelse Lake; Fur-long Beach	FLNR - Stewardship	Evaluate and, where deemed necessary, manage the landscape on a site-specific basis.	Through the use of visual landscape design techniques, create openings to reflect and blend in with the natural topography.	Professional reliance under FRPA to meet the government objectives.
2.2.4 Biodiversity					
3.7	Area visible from Sue Channel/Ha wkesbury I. protected area	FLNR – Stewardship	Maintain old growth forest attributes through the designations of old growth management areas (OGMAs) across the landscape.	Area (Map 6) will have a single tree or group selection silviculture system with a maximum opening size of 1 – 2 tree lengths.	Legal objective established through Kalum SRMP Objectives 3 and 4 (OGMAs) and Objective 16 (visual quality). In 2017, OGMAs were established under the <i>Oil and Gas Activities Act</i> to be consistent with those already established under the <i>Land Act</i> for the purposes of the <i>Forest and Range Practices Act</i> .. Operational implementation through the FPPR and Forest Stewardship Plans.

Wildlife and Wildlife Habitats

The following table summarizes the practices found in the objectives and strategies of *Section 2.2.18, Wildlife and Wildlife Habitats* and *Section 2.2.6, Coastal Management: Environmental Management: Fish and Wildlife* in the Kalum LRMP (pp. 97 – 100; 43 – 45).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
Section 2.2.6 Coastal Management: Fish and Wildlife					
5.1	Plan	DFO	Protect and maintain known high value marine mammal habitats (e.g. congregation sites).	Encourage education regarding the location and timing of marine mammal congregation to avoid disturbance.	Federal responsibility of DFO. How to Watch Marine Wildlife guidelines available ¹⁴¹ .
5.2	Plan	DFO		Provide for the conservation of identified “hot spots” (significant known locations) of marine mammal activity.	See Project 17.2 for identified “hot spots”. Federal responsibility of DFO. Where ‘hot spots’ coincide with provincial protected areas, direction has been provided to manage for the identified values.
7.1	Plan	Environment Canada	Maintain identified migratory waterfowl and seabird (Appendix F) nesting and staging sites.	Minimize disturbance to migratory waterfowl and seabirds while on nesting/staging areas.	Federal responsibility.
7.2	Plan	Environment Canada		Provide for the conservation of identified “hot spots” (significant known locations) of migratory sea-bird activity.	See Project 17.3 for identified “hot spots”. Federal responsibility. Where ‘hot spots’ coincide with provincial protected areas, direction has been provided to manage for the identified values.
7.3	Plan	ENV – BC Parks		Maintain natural hydrological regimes and water quality of Foch Lagoon in order to preserve wintering habitat for Barrow’s Golden Eye.	Foch Lagoon is part of the Foch-Gilttoyees Provincial Park and Protected Area and as such is protected under the <i>Park Act</i> .
Section 2.2.18 Wildlife and Wildlife Habitats					
1.4	Plan	FLNR – Fish & Wildlife	Maintain naturally occurring species and their habitats, including plant communities.	Encourage continued research and information gathering on Kermode bears. Apply appropriate measures to maintain the white (Kermode) colour phase in the <i>Ursus americanus</i> gene pool and to manage their habitats.	No known research at this time.

¹⁴¹ Guidelines available at any DFO location, at <http://www.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/viewing-observation-eng>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.5	Plan	FLNR - Ecosystems		Prescribe measures to manage for functional habitats for wildlife species and plant communities.	Ecosystem networks established in Kiteen; not established elsewhere in plan area. Discussion about amendments to OGMAs for better co-location with other areas constrained from timber harvesting.
1.6	Plan	FLNR – Fish & Wildlife		Evaluate wildlife values found in areas where wildfires have occurred prior to approving silvicultural activities.	Wildfires in the Kalum are a minor issue. Silvicultural activities are a licensee's responsibility – professional reliance.
1.7	Plan	FLNR – Fish & Wildlife		Manage for natural predator-prey relationships.	Ongoing management under the <i>Wildlife Act</i> , <i>Hunting Regulation</i> ¹⁴² which regulates hunting seasons and limits.
1.8	Plan	FLNR – Ecosystems		Apply human access management measures to avoid displacement of wildlife species.	Also direction for Project 1.1. UWRs identify measures to avoid displacement. Draft Grizzly Bear WHA has access provision. No specific measures at this time outside of these areas.
1.9	Plan	FLNR – Stewardship		Manage riparian areas so that their physical and biological attributes are perpetuated over time. This may require reclamation or rehabilitation for approved development activities.	Licensees to address riparian issues in FSP as per <i>FRPA</i> Section 150.5, and <i>FPPR</i> Sections 8, 47-58. Ecosystem Network in Kiteen in 2017. Skeena Islands amendment to Kalum SRMP in 2017. Rehabilitation work is ongoing through First Nations initiatives. For Environmental Stewardship Initiative ¹⁴³ , First Nations propose project and Stewardship reviews from a technical perspective. FREPs routine riparian effectiveness evaluations occur at a strategic level. This is a relatively low intensity evaluation useful for identifying management trends or issues that may require more detailed evaluations. ¹⁴⁴

¹⁴² See Wildlife Act and associated regulations at http://www.qp.gov.bc.ca/statreg/list_statreg_w.htm

¹⁴³ <https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations/environmental-stewardship-initiative>

¹⁴⁴ See more details at <http://www.for.gov.bc.ca/hfp/frep/indicators/table.htm#fish>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.10	Plan	FLNR partnership		Through inventory and consultation with public and stakeholders, apply adequate management practices such that non-threatened habitat types do not fall into the threatened and endangered categories as a result of resource development activities and Crown Land alienation.	Also direction for Project 17.8. Ongoing from a regional perspective; specific to regional operations and not necessarily LRMP perspective. Includes Coastal Tailed Frog, Northern Goshawk, marten, fisher habitat.
1.11	Plan	FLNR – Ecosystems		Encourage wildlife habitat enhancement projects.	No known enhancement projects at this time in the Kalum.
2.1	Plan	FLNR – Ecosystems	Conserve vulnerable (blue listed), rare, threatened and endangered (red listed) species and their habitat and plant communities	Conserve vulnerable, rare, threatened and endangered habitats.	Also direction for Project 17.4. 2017 amendment to Objective 10 of the 2006 Land Use Objectives Regulation Order associated with the Kalum SRMP to better protect the Skeena Islands and bring into force the best management practices for the area as directed by the Kalum SRMP. Operational implementation through the FPPR and Forest Stewardship Plans. Ten Coastal Tailed Frog WHAs established (WHA#6-058 to 6-067 ¹⁴⁵) to protect representative habitat, abundant populations, recolonization sources and to maintain a benchmark. Based on field research from 2010 to 2015, Coastal Tailed Frog Best Management Practices for riparian and forest ecosystems in the Skeena Region are in preparation and expected to be available by end of 2018. In 2017, old growth management areas were established under the <i>Oil and Gas Activities Act</i> to be consistent with those already established under the <i>Land Act</i> for the purposes of the <i>Forest and Range Practices Act</i> .

¹⁴⁵ See legal orders at <http://www.env.gov.bc.ca/wld/frpa/notices/sar.html#ka>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.3	Plan	FLNR – Ecosystems		Manage critical habitats and plant communities for vulnerable, rare, threatened and endangered wildlife species and plant communities where resource development is planned.	<p>Also direction for Project 17.4.</p> <p>2017 amendment to Objective 10 of the 2006 Land Use Objectives Regulation Order associated with the Kalum SRMP to better protect the Skeena Islands and bring into force the best management practices for the area as directed by the Kalum SRMP. Operational implementation through the FPPR and Forest Stewardship Plans.</p> <p>Ten Coastal Tailed Frog WHAs established (WHA#6-058 to 6-067¹⁴⁶) to protect representative habitat, abundant populations, recolonization sources and to maintain a benchmark.</p> <p>Based on field research from 2010 to 2015, Coastal Tailed Frog Best Management Practices for riparian and forest ecosystems in the Skeena Region are in preparation and expected to be available by end of 2018.</p> <p>In 2017, old growth management areas were established under the <i>Oil and Gas Activities Act</i> to be consistent with those already established under the <i>Land Act</i> for the purposes of the <i>Forest and Range Practices Act</i>.</p>
2.5	Plan	FLNR – Ecosystems		Enhance rare, threatened and endangered species habitats where appropriate.	No habitat enhancement projects at this time.
3.2	Plan	FLNR – Stewardship	Maintain a diversity of habitats.	Evaluate the need for and where appropriate allow for natural successional processes to occur for designated areas such as burns and “nonsatisfactory stocked” areas.	<p>Burns are going through natural successional processes. Areas in Backlog Non-satisfactorily Restocked may be going through natural successional processes.</p> <p>Amendments to Reporting Silviculture Updates and Land Status Tracking System (RESULTS) may define non-commercial brushing; may result in natural succession.</p>

¹⁴⁶ See legal orders at <http://www.env.gov.bc.ca/wld/frpa/notices/sar.html#ka>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
4.1	Plan	FLNR – Ecosystems	Maintain linkages and connectivity within and between watersheds.	Provide suitable conditions to accommodate wildlife movement, including seasonal travel.	Legal objective to maintain connectivity between Kiteen (Ksi Gahl't'in) and Cedar drainages and between Williams and Thomas/Clore watersheds established through Kalum SRMP Objectives 8 and 9. Ecosystem Network established in Kiteen ¹⁴⁷ Draft Grizzly Bear WHA includes connectivity. Operational implementation through the FPPR and Forest Stewardship Plans; managing for biodiversity and connectivity.
6.1	Plan	--	There should be consistency among strategic plans.	Work with adjacent sub-regional and regional plans to ensure consistency in approach to management of cross-jurisdictional wildlife issues.	Planning participants, agencies and industries overlap between plans.
<i>Amendment to Land Use Objectives for Kalum SRMP (Kiteen) in 2017</i>					
Objective 19	Kiteen	FLNR – Fish & Wildlife	Minimize impacts to known high value fisher and wolverine habitats.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through FPPR and Forest Stewardship Plans.
Objective 20	Kiteen	FLNR – Fish & Wildlife	Maintain known fisher and wolverine denning sites		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through FPPR and Forest Stewardship Plans.
Objective 21	Kiteen	FLNR – Fish & Wildlife	Maintain nesting and post-fledging habitats at known goshawk nest areas, in order to support continued use of and reproduction in those areas.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through FPPR and Forest Stewardship Plans.
Objective 22	Kiteen	FLNR – Fish & Wildlife	Maintain all known goshawk nest and post-fledging areas		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through FPPR and Forest Stewardship Plans.

¹⁴⁷ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/skeena-region/kalum-srmp/luor_order_kiteen.pdf

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
Objective 23	Kiteen	FLNR – Fish & Wildlife	Between February 15 and August 15, around any active goshawk nest, maintain a 500-metre buffer in which there are no mechanized activities allowed. Mechanized activities means road construction and timber harvesting/mechanized silviculture activities.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 24	Kiteen	FLNR – Fish & Wildlife	Between February 15 and August 15, around any active goshawk nest, maintain a 200-metre buffer in which there are no forestry-related human activities allowed, unless no practicable alternative exists. Forestry-related human activities include log hauling and those activities not identified as mechanized activities.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 25	Kiteen	FLNR – Fish & Wildlife	Maintain foraging habitat around known goshawk nest and post-fledging areas.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 26	Kiteen	FLNR – Fish & Wildlife	Maintain foraging habitat around known goshawk nest and post-fledging areas.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
Objective 27	Kiteen	FLNR – Fish & Wildlife	Maintain at least 30% of the perimeter around known goshawk nests and post-fledging areas so that it is directly connected by mature or old forests to a comparable forest in the foraging area. A foraging area is the hunting territory typically used by a pair of goshawks. Where the perimeter is less than 30%, forests that are available will be used, and the most suitable adjacent forest will be allowed to mature over time to provide connectivity, as determined by a qualified professional.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 28	Kiteen	FLNRORD – Fish & Wildlife	Maintain $\geq 60\%$ mature and old forest structure and function within determined foraging areas around known goshawk nest and post-fledging areas. Where at least 60% does not currently exist, forests that are available will be used. Suitable forest areas adjacent to foraging areas must be maintained as recruitment areas to provide the mature and old structure and function over time.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.
Objective 29	Kiteen	FLNRORD – Fish & Wildlife	Maintain effectiveness ¹⁴⁸ of riparian habitats adjacent to wetlands in polygons identified as Special Habitats for General Wildlife on Schedule H.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

¹⁴⁸ Effectiveness means the continued use of a habitat by the species that historically utilized it.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
Objective 30	Kiteen	FLNRORD – Fish & Wildlife	Retain 100% of the forested area of the hydriparian zone for each polygon identified as Special Habitats for General Wildlife on Schedule H, except where no practicable alternative access exists to access or harvest timber that is outside the hydriparian zone; to mitigate a safety concern; or where required to negate impacts on adjacent forest values from a compelling forest health issue.		Legal objective established through Amendment to Land Use Objectives for the Kalum SRMP (Kiteen Area Only). Operational implementation through <i>FPPR</i> and Forest Stewardship Plans.

4.2 Resource Management Zone Direction

Protection Zone

The following table summarizes the practices found in the objectives and strategies of *Section 3.1.1, Protection Zone* in the Kalum LRMP (pp. 101 – 106).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
3.1.1	Protection Zone	ENV – BC Parks	Eight objectives and associated strategies and Appendix J give direction regarding park planning, existing tenures, natural disturbances, ecosystem representation and integrity, protection of key species and their habitats, maintenance of recreation opportunities and cultural heritage values. <i>(Total of 23 practices in addition to project direction).</i>		Also direction for Projects 18.1 – 18.3. <i>Park Act</i> ¹⁴⁹ . Management Direction Statements were developed for protected areas and were awaiting final approval in 2006. Drafts were not finalized. BC Parks moved to a new Management Plan template rather than use the Management Direction Statements.

¹⁴⁹ http://www.bclaws.ca/civix/document/id/complete/statreg/96344_01

Settlement Zones

The following table summarizes the practices found in the objectives and strategies of *Section 3.1.2, Settlement Zones* in the Kalum LRMP (pp. 106 – 109).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.1	Settlement Zone	FLNR – Land & Water	Maintain opportunities for settlement, utility, communication, and other site-specific uses of Crown land.	In response to individual proposals, or through proactive marketing methods, suitable Crown land parcels will continue to be allocated for a variety of uses.	<i>Land Act</i> ¹⁵⁰ – Application process for Crown Land tenure is open to all proponents.
1.2	Settlement Zone	FLNR – Land & Water		The allocation of Crown Land for settlement purposes will primarily, although not exclusively, be delivered through the designated provincial land management agency within municipal boundaries, Regional District official community plan areas, and existing settlement corridors.	<i>Land Act</i> ¹⁵¹ – allocation of Crown Land for settlement is delivered through Land and Water.
1.3	Settlement Zone	Multi-Agency		Provincial agencies will, as appropriate, participate in official community planning processes and regional growth management strategies initiated by local governments to ensure that appropriate information on Crown land suitability for settlement and settlement-related purposes is incorporated.	Provincial agencies participate where appropriate.
1.6	Settlement Zone	Environmental Assessment Office		Site-specific development proposals will be evaluated through appropriate environmental assessment and/or inter-agency referral processes.	Addressed by existing referral process for new Crown Land applications. The <i>Environmental Assessment Act, Reviewable Projects Regulation</i> ¹⁵² , identifies all projects that require an environmental assessment.

¹⁵⁰ http://www.bclaws.ca/civix/document/id/complete/statreg/96245_01

¹⁵¹ http://www.bclaws.ca/civix/document/id/complete/statreg/96245_01

¹⁵² http://www.bclaws.ca/Recon/document/ID/freeside/13_370_2002

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.1	Settlement Zone	FLNR – Land & Water	Recognize environmental conservation and other land use and resource management objectives when making decisions on the disposition of Crown land for settlement and other purposes.	Proposals for allocating Crown land for settlement purposes will be reviewed on an integrated co-ordinated basis with all interested agencies. Where possible, allocations will be directed away from significant environmental or resource values, such as: <ul style="list-style-type: none"> • connectivity corridors, • key wildlife habitats, • natural and cultural heritage features, • scenic and recreation features, and • high capability agricultural or forest lands. 	Addressed by existing referral process for new Crown Land applications.
2.2	Settlement Zone	_____		Encourage landowners to return to First Nations those aboriginal artifacts discovered in the course of land settlement and development.	Provincial government has no authority over artifacts discovered on private land.
2.3	Settlement Zone	FLNR – Land & Water		A co-ordinated approach to siting utility/transportation corridors will be promoted, particularly with respect to connectivity corridors, to minimize linear barriers to wildlife movement.	Addressed by existing referral process for new Crown Land applications.
2.4	Settlement Zone	ENV – EP / local governments		Recycling is encouraged in order to minimize the need for expansion of existing or creation of new landfill sites.	BC recycling initiatives available at: https://www2.gov.bc.ca/gov/content/environment/waste-management/recycling/product-stewardship/ At municipal level, usually dealt with through Official Community Plans.
2.5	Settlement Zone	ENV – EP		The siting of new landfills will respect management requirements for wildlife (such as black and grizzly bears) and the protection of water quality.	As part of the standard application process for a landfill authorization, the application and supporting technical information on the design, operations and closure of such a facility is usually referred to other relevant agencies for comment and consideration. FLNR Ecosystems and/or Fish & Wildlife Sections receive such referrals. The <i>Landfill Criteria for Municipal Solid Waste</i> (2016) is available at: https://www2.gov.bc.ca/gov/content/environment/waste-management/garbage/landfills

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.6	Settlement Zone	FLNR – Land & Water		Discourage fee simple sale or lease of upland Crown land immediately adjacent to Lakelse Lake.	The current management direction for land adjacent to Lakelse Lake is that no new applications are being accepted and no land has been sold.

Special Resource Management Zone – Backcountry Recreation

The following table summarizes the practices found in the objectives and strategies of *Section 3.1.3, Special Resource Management Zone – Non-motorized and Marine* in the Kalum LRMP (pp. 111 – 114).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>Non-motorized Backcountry Recreation</i>					
1.1, 1.3, 1.4	SRMZ – Back-country Recreation	FLNR – Recreation Sites & Trails / Land & Water	Provide a variety of non-motorized and/or non-tenured commercial heli-ski/hike backcountry recreation opportunities. NOTE: ‘non-tenured commercial’ may be a trespass if non-guided; see Adventure Tourism land use policy for exceptions ¹⁵³ .	Manage Mount William Brown to Mount Morris area (excluding Shames Mt. Ski Area tenure) for non-motorized recreation. Tenured commercial recreation activities permitted, including heli-ski and hike. (For exceptions to motorized access see p. 112 LRMP).	LRMP direction is followed by Recreation Sites & Trails and Land & Water. All of the One Status Reports (associated with new applications) look at the feature Objective – Backcountry Recreation Management Area). There has been renewed interest in heli – ski-touring; the Kalum PIC provided input into discussion about this type of activity.
1.2, 1.3, 1.4	SRMZ – Back-country Recreation	FLNR – Land & Water / Recreation Sites & Trails		Manage area east of Shroud Mountain and Mount Remo for non-motorized recreation opportunities. Tenured commercial activities permitted, excluding heli-ski and heli-hike. (For exceptions to motorized access see p. 112 LRMP).	LRMP direction is followed by Recreation Sites & Trails and Land & Water. A cabin has been built in the Mount Remo area by the Mount Remo Backcountry Society ¹⁵⁴

¹⁵³ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/adventure_tourism.pdf

¹⁵⁴ <http://www.mtremo.ca/>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.5	SRMZ – Back-country Recreation	FLNR – Recreation Sites & Trails BC/ ENV – BC Parks		In Sleeping Beauty Mountain and Maroon Mountain south to Glacier Peak, restrict motorized access from June 1 to October 31 to the developed roads only. (For exceptions to off road motorized access see p. 113 LRMP).	<p>Sleeping Beauty Mountain established as Provincial Park following direction of LRMP.</p> <p>LRMP direction is followed by Recreation Sites & Trails.</p> <p>Addressed by existing referral process for new Crown Land applications.</p> <p>No known use of motorized recreational use in Maroon Mountain area. Helicopter use related to commercial activities in Larson Ridge non-motorized area was addressed with helicopter companies and no additional complaints have been received.</p>
1.6	SRMZ – Back-country Recreation	FLNR – Land & Water		In the Maroon Mountain and Mount Garland areas fly in cabins may be built for the purposes of commercial backcountry recreation.	LRMP direction is followed by Land & Water.
1.7	SRMZ – Back-country Recreation	FLNR – Land & Water / Fish & Wildlife / Recreation Sites & Trails / Ecosystems		In areas where increased helicopter activity may occur (as the result of increased recreation activity) near goat populations, FLNR will be consulted to assist in the determination of flight paths.	<p>Local heli-skiing companies in compliance with <i>Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in BC (May 2006)</i>¹⁵⁵</p> <p>Flight lines are covered in the agreement with the Mount Remo Backcountry Society.</p> <p>New helicopter-based applications referred to Ecosystems by Land & Water.</p>
2.1 – 2.4	SRMZ – Back-country Recreation	FLNR – Mountain Resorts / Recreation Sites & Trails	Maintain opportunities for the operation and expansion of the Shames Mountain ski area.	Four practices related to expansion or closing of Shames Mountain ski facility.	Not applicable at this time.

¹⁵⁵ See <http://www.env.gov.bc.ca/wld/twg/> for more details.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
3.1	SRMZ – Back-country Recreation	MEMPR	Maintain mineral exploration and development opportunities.	Prospecting, blasting and staking associated with mineral and oil and gas exploration, development and testing activities will continue in the non-motorized recreation zone.	Section 14 of the <i>Mineral Tenure Act</i> ¹⁵⁶ establishes the ‘two zone’ system where mineral exploration and development are acceptable (subject to the usual laws that regulate mining) throughout the whole of the province (the mineral zone) except for parks, ecological reserves and lands where mining is prohibited under the <i>Environment and Land Use Act</i> ¹⁵⁷ (the protected zone). Review through community consultation process.
<i>Marine Backcountry Recreation</i>					
1.1	SRMZ – Back-country Recreation	FLNR – Recreation Sites & Trails / ENV – BC Parks	Provide opportunities for a marine backcountry recreation experience.	In Jesse Lake and Lower Sue Channel Narrows, design, construct and/or rehabilitate landings and log dumps to minimize visual impact from the water.	Also direction for Projects 16.2, and 16.3. Recreation Sites and Trails lead for Jesse Lake; BC Parks lead for Sue Channel Narrows and Jesse Falls. Addressed to some degree by existing referral process for new Crown land applications. Limited referrals to BC Parks unless proposed development overlaps protected area boundaries. Licensee responsibility – professional reliance.
1.2	SRMZ – Back-country Recreation	FLNR – Recreation Sites & Trails / ENV – BC Parks		Potential future development of large commercial and industrial facilities should not compromise the semi-primitive experience in: <ul style="list-style-type: none"> • Jesse Lake • Sue Channel (both upper and lower) 	Recreation Sites and Trails lead for Jesse Lake; BC Parks lead for Sue Channel Narrows and Jesse Falls. Addressed to some degree by existing referral process for new Crown land applications and in FSPs for logging. Limited referrals to BC Parks unless proposed development overlaps protected area boundaries. Note: Kitimat LNG Project (Liquified Natural Gas) in Bish Cove north of Jesse Lake has approved EA certificate.

¹⁵⁶ http://www.bclaws.ca/Recon/document/ID/freeside/00_96292_01

¹⁵⁷ http://www.bclaws.ca/civix/document/id/complete/statreg/96117_01

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.3	SRMZ – Back-country Recreation	FLNR – Land & Water		Where potential industrial development sites have been identified (i.e. Miskatla Inlet) and commercial or industrial development does not occur, manage for a marine backcountry recreation experience. If development does occur, manage marine backcountry recreation values to the greatest extent possible.	Addressed by existing referral process for new Crown land applications: active commercial backcountry applications or tenures considered. No proactive management – dealt with as applications submitted.

Special Resource Management Zone – Community Watersheds

The following table summarizes the practices found in the objectives and strategies of *Section 3.1.3, Special Resource Management Zone – Community Watersheds* in the Kalum LRMP (pp. 115 – 117).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.3	SRMZ – Community Watershed	ENV – EP / FLNR – Land & Water	Maintain water quality to meet Canadian Drinking Water Standards through minimizing water turbidity, sediment, and other contaminants.	Establish water quality/quantity monitoring programs for all community watersheds.	Also direction for Project 20.5. <i>Water Sustainability Act</i> ¹⁵⁸ deals with water allocation. Water Survey of Canada hydrometric network is run by the federal government ¹⁵⁹ . No new stations are being set up in the Kalum. Government programs to monitor water quality do not specifically monitor the effectiveness of forest and range practices to protect drinking water quality generally or in community watersheds ¹⁶⁰ . Monitoring programs are done on an as needed basis.

¹⁵⁸ <http://www.bclaws.ca/civix/document/id/lc/statreg/14015>

¹⁵⁹ See <https://wateroffice.ec.gc.ca/>

¹⁶⁰ <https://www.bcfpb.ca/wp-content/uploads/2016/04/SIR40-Community-Watersheds-From-Objectives-to-Results-on-the-Ground.pdf>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.4	SRMZ – Community Watershed	ENV – EP / FLNR – Land and Water / Northern Health Authority		Where monitoring programs show unacceptable water quality or quantity take appropriate remedial action.	<p>Also direction for Project 20.5.</p> <p>If source of contaminant is under <i>Environmental Management Act</i> authorization, could amend authorization to decrease amount allowed in discharge.</p> <p>EP could refer issue to another agency – response would depend on the specific contaminant (e.g. whether be forestry-related or agriculture-related).</p> <p>Northern Health Authority assists in follow-up if unacceptable water quality found.</p> <p>A study completed for the North Terrace neighbourhoods helped support the City of Terrace to propose expanding the municipal water system.</p>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.5	SRMZ – Community Watershed	ENV – EP / FLNR – Land & Water / MEMPR		Water quality and watershed protection are primary considerations when development and/or resource extraction activities are proposed in areas adjacent to licensed domestic water supply sources.	See <i>the Health, Safety and Reclamation Code for Mines in BC, 2017 (Part 9)</i> ¹⁶¹ and the <i>Handbook for Mineral and Coal Exploration in BC</i> . ¹⁶² Mineral exploration will undergo similar process as a forest operator. <i>FRPA</i> , <i>FPPR</i> Section 8.2. Forest licensees also consult with licenced users while developing FSPs. Water Sustainability Act ¹⁶³ Northwest Water Tool ¹⁶⁴ allows access to information about water availability, existing water users and monitoring data. Drinking Water Protection Act ¹⁶⁵ , Section 23 has the most strength in this case. EP considers current water quality in waste discharge authorization decisions under the Environmental Management Act.
1.6	SRMZ – Community Watershed	FLNR – Land & Water		Using existing referral systems so that appropriate licensees, resource specialists, and agencies are informed of, and provide input to, plans for resource extraction and other development activities.	Addressed by existing referral system.
1.7	SRMZ – Community Watershed	FLNR – Land & Water / Stewardship		Over time maintain/restore stream corridors, shorelines and other riparian areas to reduce erosion and sedimentation and to protect water channel stability.	Land & Water is involved in approval of restoration projects that would be considered “Changes in and About a Stream” as defined in the <i>Water Sustainability Act</i> . Legal objective established through Kalum SRMP Objective 17. Operational implementation through the FPPR and Forest Stewardship Plans.

¹⁶¹ See https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/health_safety_and_reclamation_code_2017_rev.pdf for details.

¹⁶² See <https://community.intelx.com/library/peer-resources/handbook-mineral-and-coal-exploration-british-columbia-working-field-guide> for details.

¹⁶³ See <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/laws-rules/water-sustainability-act> for details.

¹⁶⁴ <http://www.bcwatertool.ca/nwwt/#5/56.068/-126.726>

¹⁶⁵ See http://www.bclaws.ca/civix/document/id/lc/statreg/01009_01 for details.

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.3	SRMZ – Community Watershed	FLNR – Range	Manage access into Community Watersheds to maintain water quality.	Domestic grazing will not be permitted in community watersheds.	There are no range tenures in the Kalum plan area at this time.
3.1	SRMZ – Community Watershed	FLNR – Stewardship	Maintain the quantity and flow of water in community watersheds within their natural range.	Maintain natural flow regimes to the extent possible by ensuring a clear-cut equivalency of less than 20% of the watershed area in sub-basins larger than 250 hectares.	Legal objective established through Kalum SRMP Objective 17. Operational implementation through the FPPR and Forest Stewardship Plans. CWAP and IWAP methodology used to calculate clear-cut equivalency.
3.2	SRMZ – Community Watershed	FLNR – Land & Water / Stewardship		<p>Manage runoff and volume of water extracted to maintain summer low flows and to minimize high freshet flows through:</p> <ul style="list-style-type: none"> • Where necessary establishing a minimum summer low flow indicator below which water extraction is restricted • Intercepting sub-surface flows (creating cross drains in roads) • Wet season inspection of roads • Effective and timely road deactivation • Annual road deactivation inspections so that hydrological requirements are achieved • Expeditious removal of landslide deposits 	<p>The Northwest Water Tool¹⁶⁶ provides relevant information. Low flow indicators and restrictions are done source by source. A designation of ‘water restriction’ or ‘fully recorded’ may be applied to a stream which restricts the ability to grant licences in the future.</p> <p>Managing freshet flows is partially a function of managing roads but largely a function of managing vegetation (i.e. forests) and is largely impacted by level of cut.</p> <p><i>FRPA</i>, FPPR Part 5 addresses road building, maintenance and deactivation. FSPs speak to wet season inspection of roads; effective and timely road deactivation linked to cutting permits; road permits speak to maintenance.</p> <p>Freshets are only managed through dams. At an emergency level, managed via the BC Flood Plan¹⁶⁷.</p> <p>Diking authorities manage their infrastructure.</p>

Special Resource Management Zone – Grizzly Bear Benchmark and Linkages

The following table summarizes the practices found in the objectives and strategies of *Section 3.1.3, Special Resource Management Zone – Grizzly Bear Benchmark and Linkages* in the Kalum LRMP (pp. 117 – 119).

¹⁶⁶ <http://www.bcwatertool.ca/nwwt/#5/56.068/-126.726>

¹⁶⁷ https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/provincial-emergency-planning/bc_flood_response_plan-final.pdf

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>Skeena and Kitimat Linkage Grizzly Bear Management Areas</i>					
1.1	SRMZ – Linkages	FLNR – Fish & Wildlife	Prevent population fragmentation and genetic isolation by designating and managing a Skeena Linkage Grizzly Bear Management Area and a Kitimat Linkage Grizzly Bear Management Area through SRMZ.	Prohibit hunting of grizzly bears within the Linkage Areas.	Grizzly bear hunting was banned province-wide in 2017.

Special Resource Management Zone – Site Specific

The following table summarizes the practices found in the objectives and strategies of *Section 3.1.3, Special Resource Management Zone – Lakelse River, Upper Kitsumkalum, Kowesas, Ascapus, Upper Copper, Miligit Valley* in the Kalum LRMP (pp. 119 – 126).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
<i>Lakelse River</i>					
1.1	SRMZ Subzone 1	FLNR – Fish & Wildlife	Maintain the productive capacity of fish habitat.	Maintain stream bank integrity, adjacent sources of large organic debris, vegetative cover, fish food producing materials and organisms for the stream.	Legal objective established through Kalum SRMP Objective 12. Operational implementation through the <i>FPPR</i> and Forest Stewardship Plans. No harvest zone.
1.2	SRMZ Subzone 1	ENV – EP		Maintain good water quality with parameters set by BC Environment that are river specific and reflect the natural variances of turbidity and siltation events.	Oversight of water quality concerns responsibility of EP. Professional reliance under FRPA for forestry, licensees responsible to ensure practices do not negatively impact fish habitat. Lakelse Lake is part of the provincial lake monitoring network: sampling done twice a year; turbidity included. Lakelse Lake Water Quality Objectives ¹⁶⁸ : occasionally will monitor to determine attainment of Water Quality Objectives for Lakelse.

¹⁶⁸ https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality/water-quality-objectives/wqo_tech_lakelse_lake.pdf

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
2.1	SRMZ Subzone 1	FLNR – Fish & Wildlife	Maintain a high quality angling/recreational experience.	Maintain fish habitat in an effort to maintain fish populations to sustain angler success rate to the satisfaction of recreational anglers.	No active projects.
2.3	SRMZ Subzone 1	FLNR – Stewardship		The Lakelse main logging road, on the south-west side of the river, should be managed in such a manner as to prevent it from becoming a circle route.	Also direction for Project 20.6. There is no circle route.
3.1, 3.2	SRMZ Subzone 1	FLNR – Stewardship	Maintain wildlife habitat and biodiversity.	No harvesting of timber or blowdown salvage to occur.	Legal objective established through Kalum SRMP Objective 12. Operational implementation through the <i>FPPR</i> and Forest Stewardship Plans.
1.1	SRMZ Subzone 2	FLNR – Stewardship	Manage for characteristics that maintain the integrity of old growth forest conditions within Subzone 1 (e.g. preventing blowdown).	Early seral stage target is a maximum of 27%. Maximum opening size will be 15 hectares. There shall be a minimum 15% retention within the cut-block to add structural diversity. In any 5 year planning cycle at least 50% of the timber volume harvested shall be by selection silviculture systems.	Legal objective established through Kalum SRMP Objective 12. Operational implementation through the <i>FPPR</i> and Forest Stewardship Plans.
Kowesas					
1.1	Kowesas SRMZ	FLNR – BC Timber Sales	Protect and maintain identified oolichan spawning areas.	In the Kowesas watershed road building will be restricted, where physically feasible, to outside of 100 metres of the river. Road building will not occur during the oolichan spawning period.	Areas identified in North Coast Marine Plan ¹⁶⁹ effectively constrain operations. There has been no logging.
1.2	Kowesas SRMZ	FLNR – BC Timber Sales		No ground skidding will occur within the Kowesas watershed.	Areas identified in North Coast Marine Plan ¹⁷⁰ effectively constrain operations. There has been no logging.
Upper Copper					
1.2	Upper Copper SRMZ	FLNR – Land & Water / Stewardship	Maintain natural water quality by ensuring that human induced soil erosion, turbidity and sedimentation is prevented, mitigated and closely monitored.	Identify potential areas of concern with regards to terrain stability and surface erosion hazard through overview mapping.	Best Management Practices required as condition of permit for in-stream work ¹⁷¹ . Managing for sediment is practice requirement under <i>FRPA</i> , <i>FPPR</i> Sections 35 (4, 5, 7), 37, 38 and 82(4). Monitoring through <i>FREP</i> , water quality and riparian values.

¹⁶⁹ http://mappocean.org/wp-content/uploads/2016/07/MarinePlan_NorthCoast_WebVer_20151207_corrected.pdf

¹⁷⁰ http://mappocean.org/wp-content/uploads/2016/07/MarinePlan_NorthCoast_WebVer_20151207_corrected.pdf

¹⁷¹ <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1.3	Upper Copper SRMZ	FLRN – Land & Water / Stewardship		Incorporate sediment control strategies into resource development plans.	Best Management Practices required as condition of permit for in-stream work ¹⁷² . Managing for sediment is practice requirement under <i>FRPA</i> , FPPR Sections 35 (4, 5, 7), 37, 38 and 82(4). Monitoring through FREP, water quality and riparian values.
1.4 Identical to 2.2.9 Freshwater strategy 2.6	Upper Copper SRMZ	FLNR – Strategic Initiatives		Undertake watershed restoration activities for impacted watersheds to restore hydrological stability and water quality.	No formal agency-led programs at this time. Restoration work through Environmental Stewardship Initiative ¹⁷³ is currently in planning stages.
2.1	Upper Copper SRMZ	FLNR – Fish & Wildlife	Maintain and improve the exceptional fisheries available to the angling community.	Monitor angler success rate for indications of trend over time and recommend/conduct corrective measures when and where appropriate.	Surveys conducted in 2013-2015 through the Quality Waters Guardian Program – included the Copper River.
4.2	Upper Copper SRMZ	ENV – EP	Manage for a pristine or near pristine river viewscape as part of the desired resource attribute associated with Class 1 Water.	Strive to reduce slash and pile burning in the greater valley basin during the classified season to provide for desired air clarity.	Professional reliance. Under <i>Environmental Management Act</i> , <i>Open Burning Smoke Control Regulation</i> , a permit is not required if the conditions of the regulation are met ¹⁷⁴ . If conditions cannot be met, an application for a permit to burn must be submitted to ENV and additional restrictions can be placed on it to achieve air clarity.
5.1	Upper Copper SRMZ	MEMPR / FLNR – Stewardship	Minimize industrial noise disturbance during the classified season.	Consider minimizing disturbance caused by resource development activities during the specified Class 1 angling season.	Proponents informed of LRMP direction through MEMPRs 'Notice of Work' application process; implementation based on professional reliance. Licensee responsibility – professional reliance.

¹⁷² <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

¹⁷³ <https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations/environmental-stewardship-initiative>

¹⁷⁴ See <http://www.env.gov.bc.ca/air/particulates/agttobsc.html> for more details on conditions of OBSCR.

4.3 Jobs, Communities and Quality of Life

The following table summarizes the practices found in the objectives and strategies of *Section 4.1, Jobs, Communities and Quality of Life* in the Kalum LRMP (pp. 127 – 130).

LRMP Reference	Applicable Area	Lead Agency	LRMP Objective	Description of Practice	Implementation Information
1, bullet 4	Plan	FLNR – Stewardship / Regional Economic Development	Investigate opportunities for maintaining existing and creation of new economic activity in the forest products sector.	Encourage commercial thinning of second growth forests through: <ul style="list-style-type: none"> • providing small scale salvage opportunities for small diameter wood, • reducing administrative impediments of commercial thinning, • promotion of small diameter wood processing opportunities to local business through the SBFEP program, • increase salvage opportunities for under-utilized waste wood through reducing stumpage and coordinating access. 	Also direction for Project 21.1. Small scale salvage opportunities have been made available; however, there is no current market for small wood in district.
1, bullet 16	Plan	FLNR – Regional Economic Development		Provide a range of employment opportunities by providing a range of tenure types across the landbase (e.g. forest Licenses, woodlot licenses, etc.)	Also direction for Project 21.1. Range of tenure types exist. Ongoing.

5 Appendices

Appendix A: Agency Representatives

Ministry of Agriculture:

Sector Development (Smithers)
(Victoria)

John Stevenson
Myron Roth

Ministry of Energy, Mines and Petroleum Resources:

Mining Operations (Smithers)
Mineral Titles (Vancouver)

Justin Schroff
Mark Messmer
Tracy Martin

Ministry of Environment and Climate Change Strategy

BC Parks (Smithers)
(Terrace)
Environmental Protection (Smithers)

Nancy White
Shannon McFadyen
Eric Pierce
Greg Tamblyn
Remi Odense

Land Remediation (Victoria)

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Archaeology (Victoria)
Crown Lands and Resources (Courtney)
Ecosystems (Smithers)
Engineering (Terrace)
First Nations Relations (Terrace)
Fish and Wildlife (Smithers)
Heritage (Victoria)
Land and Water (Smithers)

(Terrace)
Marine and Coastal Resources (Victoria)
(Queen Charlotte)
Range (Smithers)
Recreation Sites and Trails (Terrace)
Regional Economic Operations (Terrace)
Regional Executive Director – Skeena (Smithers)
Regional Initiatives (Smithers)
Research (Smithers)
(Victoria)
(Nanaimo)
Resource Stewardship (Smithers)
Stewardship (Terrace)

Paula Thorogood
Nichole Prichard
Len Vanderstar
Brian Ness
Rosalind Barabash
Troy Larden
Paulina Csicsai
Emily Bulmer
Darren Witt
Mary Moran
Kristin Worsley
Berry Wijdeven
Marc Schuffert
Bryan Last
Marc von der Gonna
Eamon O'Donoghue
Laura Bolster
Matt Sakals
Marty Kranabetter
Melissa Todd
Paddy Hirshfield
Aaron Benterud
Jesse Fraser
Bruce La Haie
Tara Salmon
Czeslaw Koziol

Tenures (Terrace)

Ministry of Tourism, Arts and Culture

Tourism (Victoria)

Bruce Whyte

Appendix B: Kalum LRMP Implementation Plan

		Classification of Implementation					
LRMP Reference	Resource Value	Objective	Strategy	Project #	Operational Practice	Non-measurable	Comments
2.2.1	Access Management	1	1.1	1.1			
2.2.1	Access Management		1.2	1.1	yes		
2.2.1	Access Management		1.3	1.1			Identical to Access Management strategy 3.4
2.2.1	Access Management	2	2.1	1.1, 5.6, 7.7, 8.4, 8.6, 10.7			Broad strategy involving multiply resource values.
2.2.1	Access Management		2.2	1.1	yes		
2.2.1	Access Management		2.3	1.1	yes		
2.2.1	Access Management		2.4	1.1	yes		
2.2.1	Access Management		2.5	1.1	yes		
2.2.1	Access Management		2.6	1.1	yes		
2.2.1	Access Management		2.7	1.1			
2.2.1	Access Management		2.8	1.1			
2.2.1	Access Management		2.9		yes		
2.2.1	Access Management		2.10				Direction to follow existing regulations
2.2.1	Access Management	3	3.1	1.1			
2.2.1	Access Management		3.2	1.1			
2.2.1	Access Management		3.3	1.1			
2.2.1	Access Management		3.4	1.1			Identical to Access Management strategy 1.3

2.2.2	Agriculture	1	1.1			Direction to follow existing regulations
2.2.2	Agriculture		1.2			Direction to follow existing regulations
2.2.2	Agriculture		1.3			Direction to follow existing policy/regulations
2.2.2	Agriculture		1.4		yes	
2.2.2	Agriculture		1.5		yes	
2.2.2	Agriculture	2	2.1		yes	
2.2.2	Agriculture		2.2		yes	Strategy much broader than objective; not well linked
2.2.2	Agriculture		2.3	2.1 & 2.2		
2.2.2	Agriculture	3	3.1			Direction to follow existing regulations
2.2.3	<i>Aquaculture</i>	1	1.1		yes	
2.2.3	<i>Aquaculture</i>		1.2	3.1		
2.2.3	<i>Aquaculture</i>		1.3		yes	
2.2.3	<i>Aquaculture</i>		1.4		yes	
2.2.3	<i>Aquaculture</i>		1.5		yes	
2.2.3	<i>Aquaculture</i>	2	2.1	3.2		
2.2.3	<i>Aquaculture</i>		2.2			Direction to follow existing policy/legislation
2.2.3	<i>Aquaculture</i>		2.3		yes	
2.2.3	<i>Aquaculture</i>		2.4		yes	Identical to CM: Foreshore Settlement strategy 3.1, 3.2
2.2.3	<i>Aquaculture</i>		2.5	3.5		
2.2.3	<i>Aquaculture</i>		2.6	numbering error; strategy does not exist		
2.2.3	<i>Aquaculture</i>		2.7		yes	
2.2.3	<i>Aquaculture</i>		2.8		yes	
2.2.3	<i>Aquaculture</i>	3	3.1		yes	Identical to CM: Fish and Wildlife strategy 8.3
2.2.3	<i>Aquaculture</i>		3.2		yes	
2.2.3	<i>Aquaculture</i>		3.3		yes	

2.2.3	Aquaculture		3.4				Direction to follow existing policy
2.2.3	Marine Plant Harvesting	1	1.1	3.3			
2.2.3	Marine Plant Harvesting		1.2		yes		
2.2.3	Marine Plant Harvesting		1.3		yes		
2.2.3	Marine Plant Harvesting		1.4		yes		
2.2.3	Marine Plant Harvesting		1.5		yes		
2.2.4	Biodiversity	1	1.1	4.1			
2.2.4	Biodiversity		1.2			yes	Summary of detailed strategy 1.3.
2.2.4	Biodiversity		1.3		yes		
2.2.4	Biodiversity		1.3iv		yes		
2.2.4	Biodiversity		1.4		yes		
2.2.4	Biodiversity	2	2.1		yes		
2.2.4	Biodiversity		2.2		yes		
2.2.4	Biodiversity		2.3		yes		
2.2.4	Biodiversity	3	3.1	4.2			
2.2.4	Biodiversity		3.2	4.2			
2.2.4	Biodiversity		3.3	4.10			
2.2.4	Biodiversity		3.4	4.2			
2.2.4	Biodiversity		3.5	4.2			
2.2.4	Biodiversity		3.6	4.2			
2.2.4	Biodiversity		3.7		yes		Covered in Visual Resources section of Practices Report
2.2.4	Biodiversity	4	4.1	4.3			Landscape level
2.2.4	Biodiversity		4.2	4.4			
2.2.4	Biodiversity		4.3		yes		
2.2.4	Biodiversity		4.4		yes		
2.2.4	Biodiversity	5	5.1	4.5			
2.2.4	Biodiversity		5.2			yes	"Consult with ..."
2.2.4	Biodiversity		5.3	4.5	yes		

2.2.4	Biodiversity		5.4	4.5	yes		
2.2.4	Biodiversity	6	6.1		yes		
2.2.4	Biodiversity		6.2			yes	A description to be used in following strategies
2.2.4	Biodiversity		6.3		yes		
2.2.4	Biodiversity		6.4		yes		
2.2.4	Biodiversity	7	7.1		yes		
2.2.4	Biodiversity		7.2		yes		
2.2.4	Biodiversity	8	8.1	4.6			
2.2.4	Biodiversity		8.2	4.7			
2.2.4	Biodiversity		8.3		yes		
2.2.4	Biodiversity		8.4		yes		Landscape-level practice
2.2.4	Biodiversity	9	9.1		yes		Landscape-level practice
2.2.5	Botanical Forest Products	1	1.1	5.4			
2.2.5	Botanical Forest Products		1.2		yes		
2.2.5	Botanical Forest Products		1.3	5.2			
2.2.5	Botanical Forest Products		1.4	5.3			
2.2.5	Botanical Forest Products		1.5	5.1			
2.2.5	Botanical Forest Products		1.6		yes		
2.2.5	Botanical Forest Products	2	2.1	5.5, 5.6 & 5.7			
2.2.5	Botanical Forest Products		2.2	5.6			
2.2.5	Botanical Forest Products		2.3	5.6			
2.2.5	Botanical Forest Products		2.4	5.6			
2.2.5	Botanical Forest Products	3	3.1		yes		
2.2.5	Botanical Forest Products		3.2		yes		
2.2.5	Botanical Forest Products		3.3	5.1			
2.2.5	Botanical Forest Products	4	4.1	5.7			
2.2.5	Botanical Forest Products		4.2	5.6			

2.2.6	CM - Public Recreation	1	1.1	11.4 & 11.5		
2.2.6	CM - Public Recreation		1.2	11.4		
2.2.6	CM - Public Recreation		1.3	16.1, 16.2 & 16.3		
2.2.6	CM - Public Recreation	2	2.1		yes	
2.2.6	CM - Public Recreation	3	3.1		yes	Identical to Outdoor Recreation strategy 1.3
2.2.6	CM - Public Recreation	4	4.1	11.6		
2.2.6	CM - Public Recreation		4.2		yes	
2.2.6	CM - Public Recreation	5	5.1		yes	Identical to Outdoor Recreation strategy 1.6 & 2.3
2.2.6	CM - Public Recreation		5.2		yes	
2.2.6	CM - Public Recreation	6	6.1	3.2		
2.2.6	CM - Public Recreation		6.2		yes	
2.2.6	CM - Env. Management: Fish and Wildlife	1	1.1		yes	
2.2.6	CM - Env. Management: Fish and Wildlife		1.2	17.4	yes	
2.2.6	CM - Env. Management: Fish and Wildlife		1.3		yes	
2.2.6	CM - Env. Management: Fish and Wildlife		1.4	4.8 & 4.9		
2.2.6	CM - Env. Management: Fish and Wildlife		1.5			yes Gives direction to another jurisdiction
2.2.6	CM - Env. Management: Fish and Wildlife	2	2.1		yes	
2.2.6	CM - Env. Management: Fish and Wildlife		2.2		yes	
2.2.6	CM - Env. Management: Fish and Wildlife		2.3	7.1		
2.2.6	CM - Env. Management: Fish and Wildlife		2.4	7.2		
2.2.6	CM - Env. Management: Fish and Wildlife	3	3.1	7.3		
2.2.6	CM - Env. Management: Fish and Wildlife		3.2		yes	
2.2.6	CM - Env. Management: Fish and Wildlife		3.3		yes	
2.2.6	CM - Env. Management: Fish and Wildlife	4	4.1	7.4		
2.2.6	CM - Env. Management: Fish and Wildlife		4.2		yes	
2.2.6	CM - Env. Management: Fish and Wildlife		4.3		yes	

2.2.6	CM - Env. Management: Fish and Wildlife	5	5.1		yes
2.2.6	CM - Env. Management: Fish and Wildlife		5.2	17.2	yes
2.2.6	CM - Env. Management: Fish and Wildlife	6	6.1	4.8 & 4.9	
2.2.6	CM - Env. Management: Fish and Wildlife		6.2	4.8	
2.2.6	CM - Env. Management: Fish and Wildlife	7	7.1		yes
2.2.6	CM - Env. Management: Fish and Wildlife		7.2	17.3	yes
2.2.6	CM - Env. Management: Fish and Wildlife		7.3		yes
2.2.6	CM - Env. Management: Fish and Wildlife	8	8.1		yes
2.2.6	CM - Env. Management: Fish and Wildlife		8.2	3.2	
2.2.6	CM - Env. Management: Fish and Wildlife		8.3		yes
2.2.6	CM - Env. Management: Fish and Wildlife		8.4		yes
2.2.6	CM - Foreshore Settlement	1	1.1		yes
2.2.6	CM - Foreshore Settlement		1.2		yes
2.2.6	CM - Foreshore Settlement		1.3		yes
2.2.6	CM - Foreshore Settlement	2	2.1		yes
2.2.6	CM - Foreshore Settlement	3	3.1		yes
2.2.6	CM - Foreshore Settlement		3.2		yes
2.2.6	CM - Foreshore Settlement	4	4.1		yes
2.2.6	CM - Foreshore Settlement	5	5.1		yes
2.2.6	CM - Foreshore Settlement		5.2		yes
2.2.6	CM - Tourism	1	1.1	13.6 & 14.1	
2.2.6	CM - Tourism		1.2	13.4	
2.2.6	CM - Tourism	2	2.1	13.5	see also CM - Env. Management strategy 8.3 and Aquaculture strategy 3.1
2.2.6	CM - Tourism		2.2	13.5	
2.2.6	CM - Industrial Activities, Facilities and Access	1	1.1	12.8	
2.2.6	CM - Industrial Activities, Facilities and Access		1.2	12.9	

2.2.6	CM - Industrial Activities, Facilities and Access		1.3	1.1			
2.2.6	CM - Industrial Activities, Facilities and Access		1.4		yes		numbering error: 1.4 appears twice
2.2.6	CM - Industrial Activities, Facilities and Access		1.4	12.8			numbering error: 1.4 appears twice
2.2.6	CM - Industrial Activities, Facilities and Access		1.5		yes		Reported as Project 12.10 in 2008 implementation monitoring reports
2.2.6	CM - Industrial Activities, Facilities and Access	2	2.1		yes		
2.2.6	CM - Industrial Activities, Facilities and Access		2.2		yes		Identical to CM - Foreshore Settlement strategy 3.1
2.2.6	CM - Industrial Activities, Facilities and Access		2.3		yes		
2.2.6	CM - Cultural Heritage	1	1.1	6.2 & 6.3			
2.2.6	CM - Cultural Heritage		1.2		yes	yes	"Encourage ..."
2.2.6	CM - Cultural Heritage	2	2.1	6.4			
2.2.6	CM - Cultural Heritage		2.2		yes		Identical to Marine Plant Harvesting strategy 1.3
2.2.6	CM - Cultural Heritage	3	3.1	13.5		yes	"Encourage ..."
2.2.6	CM - Cultural Heritage		3.2		yes	yes	"Encourage ..."
2.2.6	CM - Cultural Heritage		3.3	13.5			
2.2.6	CM - Cultural Heritage	4	4.1	6.4			
2.2.6	CM - Cultural Heritage	5	5.1		yes		
2.2.6	CM - Cultural Heritage		5.2		yes		
2.2.6	CM - Cultural Heritage		5.3		yes		
2.2.6	CM - Cultural Heritage	6	6.1			yes	"Promote"
2.2.6	CM - Cultural Heritage		6.2		yes		
2.2.6	CM - Cultural Heritage		6.3		yes		Reported as Project 3.4 in 2008 implementation monitoring reports
2.2.7	Cultural Heritage	1	1.1	6.1			
2.2.7	Cultural Heritage		1.2		yes		
2.2.7	Cultural Heritage	2	2.1	6.1 & 6.3			
2.2.7	Cultural Heritage	3	3.1		yes		

2.2.7	Cultural Heritage	4	4.1	6.4	
2.2.7	Cultural Heritage		4.2		yes
2.2.7	Cultural Heritage		4.3	6.1	
2.2.7	Cultural Heritage	5	5.1		yes
2.2.8	Fish and Fish Habitat	1	1.1		yes
2.2.8	Fish and Fish Habitat		1.2	7.5	yes
2.2.8	Fish and Fish Habitat		1.3		yes
2.2.8	Fish and Fish Habitat		1.4		yes
2.2.8	Fish and Fish Habitat		1.5		yes
2.2.8	Fish and Fish Habitat	2	2.1	7.6	
2.2.8	Fish and Fish Habitat		2.2	7.6	
2.2.8	Fish and Fish Habitat		2.3	7.7	
2.2.8	Fish and Fish Habitat	3	3.1	7.8 & 7.9	yes
2.2.8	Fish and Fish Habitat	4	4.1	7.13	yes
2.2.8	Fish and Fish Habitat		4.2	1.1	
2.2.8	Fish and Fish Habitat		4.3	7.10	
2.2.8	Fish and Fish Habitat		4.4	7.11	
2.2.8	Fish and Fish Habitat	5	5.1		yes
2.2.8	Fish and Fish Habitat		5.2		yes
2.2.8	Fish and Fish Habitat		5.3	7.12	yes
2.2.8	Fish and Fish Habitat		5.4	16.2 & 16.3	
2.2.8	Fish and Fish Habitat		5.5		yes
2.2.8	Fish and Fish Habitat		5.6		yes
2.2.9	Fresh Water	1	1.1	8.1	
2.2.9	Fresh Water		1.2		yes
2.2.9	Fresh Water		1.3		yes
2.2.9	Fresh Water		1.4	20.5	yes
2.2.9	Fresh Water		1.5		yes

2.2.9	Fresh Water		1.6		yes		
2.2.9	Fresh Water		1.7	8.3			
2.2.9	Fresh Water		1.8		yes		Reported as Project 8.2 in 2008 implementation monitoring reports. Identical to SRMZ - Upper Copper strategy 1.2
2.2.9	Fresh Water		1.9		yes		
2.2.9	Fresh Water		1.10.		yes		
2.2.9	Fresh Water	2	2.1	7.5	yes		Identical to Fish & Fish Habitat strategy 1.2
2.2.9	Fresh Water		2.2	8.4	yes		
2.2.9	Fresh Water		2.3	8.4			
2.2.9	Fresh Water		2.4	8.4	yes		
2.2.9	Fresh Water		2.5	7.7 & 8.4			
2.2.9	Fresh Water		2.6		yes		
2.2.9	Fresh Water		2.7		yes		
2.2.9	Fresh Water	3	3.1		yes		
2.2.9	Fresh Water		3.2		yes		
2.2.9	Fresh Water		3.3			yes	Gives direction to another jurisdiction
2.2.9	Fresh Water		3.4		yes		
2.2.9	Fresh Water		3.5		yes		
2.2.9	Fresh Water		3.6		yes		
2.2.9	Fresh Water		3.7		yes		
2.2.9	Fresh Water	4	4.1	8.5			
2.2.9	Fresh Water		4.2		yes		
2.2.9	Fresh Water		4.3		yes		
2.2.9	Fresh Water		4.4		yes		
2.2.9	Fresh Water		4.5		yes		
2.2.9	Fresh Water		4.6			yes	Gives direction to other jurisdictions
2.2.9	Fresh Water	5	5.1	8.6			

2.2.9	Fresh Water		5.2	8.6		
2.2.10	Geological and Energy Resources	1	1.1	1.1		
2.2.10	Geological and Energy Resources		1.2	1.1		
2.2.10	Geological and Energy Resources		1.3		yes	Identical to Access Management strategy 2.9
2.2.10	Geological and Energy Resources	2	2.1		yes	
2.2.10	Geological and Energy Resources		2.2		yes	
2.2.10	Geological and Energy Resources	3	3.1	9.3		
2.2.10	Geological and Energy Resources		3.2		yes	
2.2.10	Geological and Energy Resources		3.3		yes	
2.2.10	Geological and Energy Resources		3.4		yes	
2.2.10	Geological and Energy Resources	4	4.1		yes	
2.2.10	Geological and Energy Resources		4.2		yes	
2.2.10	Geological and Energy Resources		4.3		yes	
2.2.10	Geological and Energy Resources		4.4		yes	
2.2.10	Geological and Energy Resources		4.5		yes	
2.2.10	Geological and Energy Resources	5	5.1		yes	
2.2.10	Geological and Energy Resources	6	6.1		yes	
2.2.10	Geological and Energy Resources		6.2		yes	
2.2.10	Geological and Energy Resources	7	7.1	9.1		
2.2.10	Geological and Energy Resources		7.2		yes	
2.2.10	Geological and Energy Resources	8	8.1	9.2		
2.2.10	Geological and Energy Resources	9	9.1		yes	
2.2.11	Grizzly Bear	1	1.1		yes	
2.2.11	Grizzly Bear	2	2.1	10.2	yes	
2.2.11	Grizzly Bear		2.2	10.2	yes	
2.2.11	Grizzly Bear		2.3	10.2	yes	
2.2.11	Grizzly Bear		2.4	10.2	yes	
2.2.11	Grizzly Bear		2.5		yes	

2.2.11	Grizzly Bear	3	3.1	10.1, 10.3, 10.4 & 10.5	yes	
2.2.11	Grizzly Bear		3.2	10.5		
2.2.11	Grizzly Bear		3.3	10.5		
2.2.11	Grizzly Bear		3.4	10.5		
2.2.11	Grizzly Bear		3.5	10.5		
2.2.11	Grizzly Bear		3.6	10.5		
2.2.11	Grizzly Bear	4	4.1	10.8		
2.2.11	Grizzly Bear	5	5.1		yes	
2.2.11	Grizzly Bear		5.2		yes	
2.2.11	Grizzly Bear	6	6.1		yes	
2.2.11	Grizzly Bear	7	7.1	10.1, 10.8 & 10.10		
2.2.11	Grizzly Bear		7.2		yes	Landscape-level
2.2.11	Grizzly Bear		7.3		yes	
2.2.12	Outdoor Recreation	1	1.1	1.1	yes	
2.2.12	Outdoor Recreation		1.2	1.1		
2.2.12	Outdoor Recreation		1.3		yes	
2.2.12	Outdoor Recreation		1.4	11.1 & 13.1		
2.2.12	Outdoor Recreation		1.5		yes	
2.2.12	Outdoor Recreation		1.6		yes	Identical to CM - Public Recreation strategy 5.1
2.2.12	Outdoor Recreation	2	2.1	11.1		
2.2.12	Outdoor Recreation		2.2		yes	
2.2.12	Outdoor Recreation		2.3		yes	Identical to CM - Public Recreation strategy 5.1
2.2.12	Outdoor Recreation	2	3.1	11.2		
2.2.12	Outdoor Recreation		3.2		yes	
2.2.12	Outdoor Recreation		3.3	11.3		

2.2.12	Outdoor Recreation	4	4.1		yes		
2.2.13	Timber Harvesting and Silviculture	1	1.1		yes		
2.2.13	Timber Harvesting and Silviculture		1.2	12.4			
2.2.13	Timber Harvesting and Silviculture		1.3	12.5			
2.2.13	Timber Harvesting and Silviculture		1.4		yes		
2.2.13	Timber Harvesting and Silviculture	2	2.1	12.1			
2.2.13	Timber Harvesting and Silviculture	3	3.1		yes	yes	"Encourage..."
2.2.13	Timber Harvesting and Silviculture		3.2		yes		Identical to Timber Harvesting strategy 8.2
2.2.13	Timber Harvesting and Silviculture		3.3		yes		
2.2.13	Timber Harvesting and Silviculture	4	4.1		yes		
2.2.13	Timber Harvesting and Silviculture		4.2	12.6			
2.2.13	Timber Harvesting and Silviculture		4.3		yes		
2.2.13	Timber Harvesting and Silviculture	5	5.1	12.2	yes		
2.2.13	Timber Harvesting and Silviculture	6	6.1			yes	Not a strategy
2.2.13	Timber Harvesting and Silviculture		6.2	12.3			
2.2.13	Timber Harvesting and Silviculture	7	7.1	18.4			
2.2.13	Timber Harvesting and Silviculture		7.2	18.4			
2.2.13	Timber Harvesting and Silviculture	8	8.1	1.1	yes		
2.2.13	Timber Harvesting and Silviculture		8.2		yes		
2.2.13	Timber Harvesting and Silviculture		8.3		yes		Very general strategy
2.2.13	Timber Harvesting and Silviculture		8.4		yes		
2.2.13	Timber Harvesting and Silviculture	9	9.1	12.6			
2.2.13	Timber Harvesting and Silviculture		9.2	12.6			
2.2.13	Timber Harvesting and Silviculture	10	10.1		yes		
2.2.13	Timber Harvesting and Silviculture		10.2		yes		
2.2.13	Timber Harvesting and Silviculture		10.3		yes		
2.2.14	Tourism	1	1.1	13.1	yes		
2.2.14	Tourism		1.2	13.2	yes		

2.2.14	Tourism		1.3		yes		
2.2.14	Tourism	2	2.1		yes		
2.2.14	Tourism		2.2		yes		
2.2.14	Tourism		2.3		yes		
2.2.14	Tourism	3	3.1		yes		
2.2.14	Tourism		3.2		yes		
2.2.14	Tourism		3.3		yes		
2.2.14	Tourism		3.4	1.1			
2.2.14	Tourism	4	4.1		yes		
2.2.14	Tourism		4.2	16.2			
2.2.14	Tourism		4.3		yes		
2.2.14	Tourism		4.4	16.2			
2.2.15	Trapping	1	1.1		yes		
2.2.15	Trapping		1.2		yes	yes	"Encourage..."
2.2.15	Trapping		1.3		yes		
2.2.15	Trapping		1.4		yes	yes	"Encourage..."
2.2.15	Trapping	2	2.1		yes		
2.2.15	Trapping		2.2		yes		
2.2.15	Trapping		2.3		yes		
2.2.15	Trapping		2.4	14.1			
2.2.15	Trapping		2.5	14.2	yes		
2.2.15	Trapping		2.6	14.2	yes		
2.2.15	Trapping	3	3.1		yes		
2.2.15	Trapping		3.2		yes		
2.2.15	Trapping		3.3		yes		
2.2.16	<i>UWR - Mountain Goat</i>	1	1.1	15.1			
2.2.16	<i>UWR - Mountain Goat</i>		1.2	15.1			
2.2.16	<i>UWR - Mountain Goat</i>		1.3	15.2			

2.2.16	<i>UWR - Mountain Goat</i>		1.4	15.3	
2.2.16	<i>UWR - Mountain Goat</i>	2	2.1	1.1	yes
2.2.16	<i>UWR - Mountain Goat</i>		2.2	1.1	yes
2.2.16	<i>UWR - Mountain Goat</i>		2.3	1.1	yes
2.2.16	<i>UWR - Mountain Goat</i>		2.4	1.1	yes
2.2.16	<i>UWR - Moose</i>	1	1.1	15.4	
2.2.16	<i>UWR - Moose</i>		1.2	15.4	yes
2.2.16	<i>UWR - Moose</i>		1.3	15.4	yes
2.2.16	<i>UWR - Moose</i>		1.4	15.4	yes
2.2.16	<i>UWR - Moose</i>		1.5	15.4	yes
2.2.16	<i>UWR - Moose</i>		1.6	15.5	
2.2.16	<i>UWR - Moose</i>	2	2.1	15.4	yes
2.2.16	<i>UWR - Moose</i>		2.2	15.4	
2.2.16	<i>UWR - Moose</i>	3	3.1	15.4	yes
2.2.16	<i>UWR - Moose</i>		3.2	15.4	yes
2.2.16	<i>UWR - Moose</i>		3.3	15.4	yes
2.2.16	<i>UWR - Moose</i>	4	4.1	1.1	yes
2.2.16	<i>UWR - Moose</i>		4.2	1.1	yes
2.2.16	<i>UWR - Moose</i>		4.3		yes
2.2.16	<i>UWR - Moose</i>		4.4		yes
2.2.16	<i>UWR - Moose</i>	5	5.1		yes
2.2.16	<i>UWR - Moose</i>		5.2		yes
2.2.16	<i>UWR - Moose</i>		5.3		yes
2.2.16	<i>UWR - Moose</i>		5.4		yes
2.2.16	<i>UWR - Moose</i>		5.5		yes
2.2.16	<i>UWR - Moose</i>		5.6		yes
2.2.17	Visual Resources	1	1.1		yes
2.2.17	Visual Resources		1.2	16.1, 16.2 & 16.3	

2.2.17	Visual Resources		1.3	16.1	
2.2.17	Visual Resources		1.4	16.3	
2.2.17	Visual Resources		1.5		yes
2.2.17	Visual Resources		1.6		yes
2.2.17	Visual Resources		1.7	16.1	
2.2.17	Visual Resources	2	2.1		yes
2.2.17	Visual Resources		2.2		yes
2.2.17	Visual Resources		2.3		yes
2.2.17	Visual Resources		2.4		yes
2.2.17	Visual Resources	3	3.1	16.1	
2.2.17	Visual Resources		3.2	16.1	
2.2.17	Visual Resources		3.3		yes
2.2.18	Wildlife and Wildlife Habitats	1	1.1	10.1 & 15.1	
2.2.18	Wildlife and Wildlife Habitats		1.2	17.7	
2.2.18	Wildlife and Wildlife Habitats		1.3	17.1	
2.2.18	Wildlife and Wildlife Habitats		1.4		yes
2.2.18	Wildlife and Wildlife Habitats		1.5		yes
2.2.18	Wildlife and Wildlife Habitats		1.6		yes
2.2.18	Wildlife and Wildlife Habitats		1.7		yes
2.2.18	Wildlife and Wildlife Habitats		1.8	1.1	yes
2.2.18	Wildlife and Wildlife Habitats		1.9		yes
2.2.18	Wildlife and Wildlife Habitats		1.10.	7.7 & 17.8	yes
2.2.18	Wildlife and Wildlife Habitats		1.11.		yes
2.2.18	Wildlife and Wildlife Habitats	2	2.1	17.4	yes
2.2.18	Wildlife and Wildlife Habitats		2.2	17.4	
2.2.18	Wildlife and Wildlife Habitats		2.3	17.4	yes
2.2.18	Wildlife and Wildlife Habitats		2.4	17.5	
2.2.18	Wildlife and Wildlife Habitats		2.5		yes

2.2.18	Wildlife and Wildlife Habitats	3	3.1			Direction to Biodiversity; not a separate strategy
2.2.18	Wildlife and Wildlife Habitats		3.2		yes	
2.2.18	Wildlife and Wildlife Habitats	4	4.1			Direction to Biodiversity; not a separate strategy
2.2.18	Wildlife and Wildlife Habitats	5	5.1	1.1		
2.2.18	Wildlife and Wildlife Habitats		5.2	17.6		
2.2.18	Wildlife and Wildlife Habitats	6	6.1		yes	
3.1.1	Protection Zone	1	1.1		yes	
3.1.1	Protection Zone		1.2		yes	
3.1.1	Protection Zone		1.3		yes	
3.1.1	Protection Zone	2	2.1		yes	
3.1.1	Protection Zone		2.2		yes	
3.1.1	Protection Zone	3	3.1		yes	
3.1.1	Protection Zone		3.2		yes	
3.1.1	Protection Zone		3.3		yes	
3.1.1	Protection Zone	4	4.1		yes	
3.1.1	Protection Zone		4.2	18.3		
3.1.1	Protection Zone		4.3	18.3	yes	
3.1.1	Protection Zone	5	5.1	18.3		
3.1.1	Protection Zone		5.2	18.3		
3.1.1	Protection Zone		5.3	18.3		
3.1.1	Protection Zone		5.4		yes	
3.1.1	Protection Zone		5.5	18.2		
3.1.1	Protection Zone	6	6.1		yes	
3.1.1	Protection Zone		6.2		yes	
3.1.1	Protection Zone		6.3		yes	
3.1.1	Protection Zone		6.4		yes	
3.1.1	Protection Zone		6.5		yes	

3.1.1	Protection Zone		6.6		yes
3.1.1	Protection Zone	7	7.1		yes
3.1.1	Protection Zone		7.2		yes
3.1.1	Protection Zone		7.3		yes
3.1.1	Protection Zone	8	8.1		yes
3.1.1	Protection Zone		8.2		yes
3.1.1	Protection Zone		8.3		yes
3.1.2	Settlement Zones	1	1.1		yes
3.1.2	Settlement Zones		1.2		yes
3.1.2	Settlement Zones		1.3		yes
3.1.2	Settlement Zones		1.4	18.4	yes
3.1.2	Settlement Zones		1.5	19.1	
3.1.2	Settlement Zones		1.6		yes
3.1.2	Settlement Zones	2	2.1		yes
3.1.2	Settlement Zones		2.2		yes
3.1.2	Settlement Zones		2.3		yes
3.1.2	Settlement Zones		2.4		yes
3.1.2	Settlement Zones		2.5		yes
3.1.2	Settlement Zones		2.6		yes
3.1.3	<i>SRMZ - Non-motorized Backcountry Recreation</i>	1	1.1		yes
3.1.3	<i>SRMZ - Non-motorized Backcountry Recreation</i>		1.2		yes
3.1.3	<i>SRMZ - Non-motorized Backcountry Recreation</i>		1.3		yes
3.1.3	<i>SRMZ - Non-motorized Backcountry Recreation</i>		1.4		yes
3.1.3	<i>SRMZ - Non-motorized Backcountry Recreation</i>		1.5		yes
3.1.3	<i>SRMZ - Non-motorized Backcountry Recreation</i>		1.6		yes
3.1.3	<i>SRMZ - Non-motorized Backcountry Recreation</i>		1.7		yes
3.1.3	<i>SRMZ - Non-motorized Backcountry Recreation</i>	2	2.1		yes

3.1.3	SRMZ - Non-motorized Backcountry Recreation		2.2		yes	
3.1.3	SRMZ - Non-motorized Backcountry Recreation		2.3		yes	
3.1.3	SRMZ - Non-motorized Backcountry Recreation		2.4		yes	
3.1.3	SRMZ - Non-motorized Backcountry Recreation	3	3.1		yes	
3.1.3	SRMZ - Marine Backcountry	1	1.1	16.2 & 16.3	yes	Part of strategy reported as Project 20.1 in 2008 implementation monitoring reports. Strategy not well linked to objective.
3.1.3	SRMZ - Marine Backcountry		1.2		yes	
3.1.3	SRMZ - Marine Backcountry		1.3		yes	
3.1.3	SRMZ - Community Watersheds	1	1.1	20.2		
3.1.3	SRMZ - Community Watersheds		1.2	20.3 & 20.4		
3.1.3	SRMZ - Community Watersheds		1.3	20.5	yes	
3.1.3	SRMZ - Community Watersheds		1.4	20.5	yes	
3.1.3	SRMZ - Community Watersheds		1.5		yes	
3.1.3	SRMZ - Community Watersheds		1.6		yes	
3.1.3	SRMZ - Community Watersheds		1.7		yes	
3.1.3	SRMZ - Community Watersheds	2	2.1	1.1		
3.1.3	SRMZ - Community Watersheds		2.2	1.1		
3.1.3	SRMZ - Community Watersheds		2.3		yes	
3.1.3	SRMZ - Community Watersheds	3	3.1		yes	
3.1.3	SRMZ - Community Watersheds		3.2		yes	
3.1.3	SRMZ - GBMA - Skeena-Nass Benchmark	1	1.1	10.6 & 10.7		
3.1.3	SRMZ - GBMA - Skeena-Nass Benchmark		1.2	10.6 & 10.9		
3.1.3	SRMZ - GBMA - Skeena and Kitimat Linkages	1	1.1	10.6 & 10.9	yes	
3.1.3	SRMZ - GBMA - Skeena and Kitimat Linkages		1.2	10.6		
3.1.3	SRMZ - Lakelse River -Subzone 1	1	1.1		yes	
3.1.3	SRMZ - Lakelse River -Subzone 1		1.2		yes	

3.1.3	SRMZ - Lakelse River -Subzone 1	2	2.1		yes	
3.1.3	SRMZ - Lakelse River -Subzone 1		2.2	20.6		
3.1.3	SRMZ - Lakelse River -Subzone 1		2.3	20.6	yes	
3.1.3	SRMZ - Lakelse River -Subzone 1	3	3.1		yes	
3.1.3	SRMZ - Lakelse River -Subzone 1		3.2		yes	
3.1.3	SRMZ - Lakelse River - Subzone 2	1	1.1		yes	
3.1.3	SRMZ - Upper Kitsumkalum	1	1.1	20.7		
3.1.3	SRMZ - Kowesas	1	1.1		yes	
3.1.3	SRMZ - Kowesas		1.2		yes	
3.1.3	SRMZ - Kowesas	2	2.1	20.8		
3.1.3	SRMZ - Ascaphus	1	1.1	20.7		
3.1.3	SRMZ - Upper Copper	1	1.1	20.10		
3.1.3	SRMZ - Upper Copper		1.2		yes	Reported as Project 8.3 in 2008 implementation monitoring reports. Identical to Fresh Water strategy 1.8.
3.1.3	SRMZ - Upper Copper		1.3		yes	
3.1.3	SRMZ - Upper Copper		1.4		yes	
3.1.3	SRMZ - Upper Copper		1.5	7.5		
3.1.3	SRMZ - Upper Copper		1.6	8.4		
3.1.3	SRMZ - Upper Copper	2	2.1	20.9	yes	
3.1.3	SRMZ - Upper Copper		2.2	20.9		
3.1.3	SRMZ - Upper Copper	3	3.1	20.9		
3.1.3	SRMZ - Upper Copper		3.2	20.9		
3.1.3	SRMZ - Upper Copper		3.3	20.9		
3.1.3	SRMZ - Upper Copper		3.4	20.9		
3.1.3	SRMZ - Upper Copper	4	4.1	16.2		
3.1.3	SRMZ - Upper Copper		4.2		yes	overlap with Visual Resources strategy 1.6
3.1.3	SRMZ - Upper Copper	5	5.1		yes	

3.1.3	SRMZ - Miligit Valley	1	1.1	16.2 & 16.3			
3.1.3	SRMZ - Miligit Valley		1.2	20.11			
3.1.3	SRMZ - Miligit Valley		1.3	7.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 1	21.1		yes	"Encourage ..."
4.1	Jobs, Communities and Quality of Life	1	bullet 2	12.1 & 21.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 3	21.1		yes	"Encourage ..."
4.1	Jobs, Communities and Quality of Life	1	bullet 4	21.1	yes		
4.1	Jobs, Communities and Quality of Life	1	bullet 5	21.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 6	21.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 7	21.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 8	21.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 9				Direction for private industry
4.1	Jobs, Communities and Quality of Life	1	bullet 10	21.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 11	21.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 12				Direction for private industry
4.1	Jobs, Communities and Quality of Life	1	bullet 13	21.3			
4.1	Jobs, Communities and Quality of Life	1	bullet 14	21.1			
4.1	Jobs, Communities and Quality of Life	1	bullet 15	7.9			
4.1	Jobs, Communities and Quality of Life	1	bullet 16	21.1	yes		
4.1	Jobs, Communities and Quality of Life	1	bullet 17	21.1			
4.1	Jobs, Communities and Quality of Life	2	bullet 1	5.7			
4.1	Jobs, Communities and Quality of Life	3	bullet 1	13.2			
4.1	Jobs, Communities and Quality of Life	3	bullet 2	21.4			
4.1	Jobs, Communities and Quality of Life	3	bullet 3	13.2			
4.1	Jobs, Communities and Quality of Life	3	bullet 4	13.2			
4.1	Jobs, Communities and Quality of Life	3	bullet 5	13.2			
4.1	Jobs, Communities and Quality of Life	3	bullet 6	21.5			
4.1	Jobs, Communities and Quality of Life	3	bullet 7	13.3			

4.1	Jobs, Communities and Quality of Life	4	bullet 1	21.1
4.1	Jobs, Communities and Quality of Life	4	bullet 2	12.5 & 21.1
4.1	Jobs, Communities and Quality of Life	4	bullet 3	21.1 & 21.3
4.1	Jobs, Communities and Quality of Life	4	bullet 4	21.1
4.1	Jobs, Communities and Quality of Life	5	bullet 1	
4.1	Jobs, Communities and Quality of Life	5	bullet 2	21.1
4.1	Jobs, Communities and Quality of Life	5	bullet 3	21.1

Appendix C: Abbreviations used in text

Abbreviations for 2018 government agencies:

AGRI	Ministry of Agriculture
AGRI – SDB	Ministry of Agriculture – Sector Development Branch
CWS	Canadian Wildlife Service
DFO	Fisheries and Oceans Canada
EC	Environment Canada
ENV	Ministry of Environment and Climate Change Strategy
ENV – EP	Ministry of Environment and Climate Change Strategy – Environmental Protection
FLNR	Ministry of Forests, Lands, Natural Resource Operations and Rural Development
MEMPR	Ministry of Energy, Mines and Petroleum Resources
MTAC	Ministry of Tourism, Arts and Culture

Abbreviations for government agencies used in earlier reporting:

ILMB	Integrated Land Management Bureau
MAL	Ministry of Agriculture and Lands
MED	Ministry of Economic Development
MOE	Ministry of Environment
MOE – EP	Ministry of Environment – Environmental Protection
MOE – ES	Ministry of Environment – Environmental Sustainability
MOE – WS	Ministry of Environment – Water Stewardship
MoFR	Ministry of Forests and Range
MTSA	Ministry of Tourism, Sports and the Arts

Other abbreviations used in this report:

BEC	Biogeoclimatic Ecosystem Classification
CEAA	Canadian Environmental Assessment Agency
CWAP	Coastal Watershed Assessment Procedure
CWD	Coarse Woody Debris
FPC	Forest Practices Code
FPPR	Forest Planning and Practices Regulation, regulation under <i>FRPA</i>
FREP	Forest and Range Evaluation Program
FRPA	Forest and Range Practices Act
FSP	Forest Stewardship Plan
GAR	Government Actions Regulation, regulation under <i>FRPA</i>
IWAP	Interior Watershed Assessment Procedure
LRMP	Land and Resource Management Plan
OGMA	Old Growth Management Area
SBFEP	Small Business Forest Enterprise Program
SRMP	Sustainable Resource Management Plan
SRMZ	Sustainable Resource Management Zone
TFL	Tree Farm Licence
TSA	Timber Supply Area
UWR	Ungulate Winter Range

VQO	Visual Quality Objective
WHA	Wildlife Habitat Area
WTP	Wildlife Tree Patch

Appendix D: Landscape-level Practices analyzed in draft Kalum LRMP Strategic Practices Analysis Report¹⁷⁵.

LRMP Reference	Management Direction	Indicator
Access Management Strategy 2.5	Minimize construction of roads in riparian areas, wildlife habitat areas and forest ecosystem networks.	INDICATOR: # of metres of roads constructed in, within 20 metres and within 100 metre of riparian areas and wildlife tree patches.
Biodiversity Objective 1	Maintain a range of seral stages across the landscape to meet the needs of a wide variety of species	INDICATOR: Percent of early, mature plus old, and old seral stages within the Crown Forested Land Base by landscape unit, by BEC variant.
Biodiversity Objective 2	Managed forests are to have a mosaic of stands consisting of a range in patch sizes in an attempt to have some resemblance of the natural pattern of forest disturbances.	INDICATOR: Percent distribution by patch size by Natural Disturbance Type by Landscape Unit. INDICATOR: Percent of cutblock area or cutblock aggregate retained as Wildlife Tree Patches, by landscape unit by BEC subzone.
Biodiversity Objective 3	Maintain old growth forest attributes through the designations of old growth management areas (OGMAs) across the landscape.	INDICATOR: Percent old seral forest within OGMAs by landscape unit by BEC variant. INDICATOR: Percent of OGMAs with interior forest condition by BEC variant.
Biodiversity Objective 4	To help conserve the natural species abundance and diversity, maintain the natural composition of dominant tree species across the landscape.	INDICATOR: Percent leading and secondary leading species composition by Landscape Unit by BEC subzone
Biodiversity Objective 5	Develop practical approaches to minimize potential problems of fragmentation of habitats and populations.	INDICATOR: Amount of harvesting within polygon "A" on Map 5 (SRMP) the pass between Kiteen and Cedar drainages. INDICATOR: Percent of harvested area within polygon "B" (Map 5, SRMP) harvested with partial cutting systems. INDICATOR: Percent of area in old and mature seral stages in the level pass between the Williams and Thomas/Clore watersheds (Map 5, SRMP).
Biodiversity Objective 9	Provide opportunities to fulfill biodiversity objectives in key undeveloped watersheds within TFL 41.	INDICATOR: Percent of old seral stages within the Crown Forested Land Base in identified undeveloped watersheds by BEC site series.
Grizzly Bear Strategy 2.1	Ensure that no more than 30% of the forested land base, excluding hardwoods, will be between 25 and 100 years old.	INDICATOR: Amount of mid-seral forest within the forested land base, excluding hardwood in the McKay-Davies and Copper watersheds.
Grizzly Bear Objective 2	Maintain natural level of forage supply for grizzly bears in identified watersheds (Map 11).	INDICATOR: Number of stems per hectare within free growing managed forest on rich and wetter sites.

¹⁷⁵ Some of the Kalum LRMP strategies direct practices at the landscape level rather than at the operational level. Implementation of those involves analysis of resource conditions at a landscape scale. The indicators listed in this appendix have been subject to analysis as landscape level practices in the draft *Kalum LRMP Strategic Practices Analysis Report*. Draft report available at: Ministry of Forests, Lands and Natural Resource Operations, Skeena Region, Smithers, BC.