SUPPORTING DOCUMENT FOR THE FOREST STEWARDSHIP PLAN

FOR SUBMISSION

For operations within the Coast Mountains Natural Resource District under Tree Farm License 1 and Forest License A16835, held by:

Coast Tsimshian Resources LP

REGISTERED PROFESSIONAL FORESTER PROVINCE OF RICK BROUWER BRITISH COLUMBIA NO. 2094

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Date: Dec 2, 2022

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SD1 INTRODUCTION

This document is provided in support to the Forest Stewardship Plan (FSP) for the operations under Tree Farm License 1 and Forest License A16835 held by Coast Tsimshian Resources Limited Partnership ("Coast Tsimshian Resources", "CTR", or "the FSP Holder"). These operations will occur within Forest Development Units (FDU) located in the Coast Mountains Natural Resource District. This supporting document is organized as follows:

Section SD1: Introduction and context of this FSP within the current planning framework that exists on the FSP area.

Section SD2: Information directly related to the results and strategies in the FSP. Information is provided describing how the results or strategies are consistent with the related objective and a rationale as to why the result or strategy was created.

Section SD3: General descriptions and discussion of issues with respect to the eleven resource values that have been identified in the Forest and Range Practices Act, including information that relates the results and strategies to these resource values. The general discussion allows a more conversational description of the intent of the FSP and adds clarity and context to the enforceable results and strategies noted in the FSP. It is the FSP Holder's intent that this will simplify the FSP for the layperson.

Section SD4: Additional information for those parts of the FSP that are not related to the FRPA legal objectives.

Section SD5: Public, Agency and First Nation referral, comment, review and response information.

Section SD6: A description of the sources of information used in preparing the FSP.

This "Supporting Document" is not considered part of the FSP. Nonetheless, it is important to have this document in hand when reviewing the FSP, as it provides context for the results and strategies described in the FSP.

SD1.1 Interpretation

All references to the *Forest Act* mean the *Forest Act (Chapter 157),* current to December 1, 2022.

All references to the *Forest and Range Practices Act*, or to FRPA, mean the *Forest and Range Practices Act (SBC 2002, Chapter.69),* current to December 1, 2022.

All references to the *Forest Planning and Practices Regulation*, or to FPPR, mean the *Forest Planning and Practices Regulation (BC Reg 14/2016),* consolidated to November 22, 2022*.*

All references to the *Government Actions Regulation*, or to GAR, mean the *Government Actions Regulation (BC Reg 582/2004),* consolidated on November 22, 2022.

All references to the *Invasive Plant Regulation* mean the *Invasive Plant Regulation (BC Reg 18/2004),* consolidated on November 22, 2022.

All references to the *Land Act* mean the *Land Act (Chapter 245)*, current to December 1, 2022.

All references to the *Wildlife Act* mean the *Wildlife Act (Chapter 488),* current to December 1, 2022.

All references to the *Kalum Sustainable Resource Management Plan*, or Kalum SRMP, mean the *Kalum Sustainable Resource Management Plan (April 2006), including amendments, as they occur from time to time.*

All references to the *Kalum Land and Resource Management Plan*, or Kalum LRMP, mean the *Kalum Land and Resource Management Plan (May 2002), including amendments, as they occur from time to*

time.

Unless otherwise noted, statements and information provided are current to November 2022. Every effort has been made to ensure that current data have been used in map generation and analyses. While this does not mean that the data is up-to-date or completely accurate, it is the best available information.

Due to government re-organization, certain ministries have been renamed.

- The Ministry of Water, Land, and Air Protection (MWLAP) was renamed as the Ministry of Environment (MOE).
- The Ministry of Forests and Range (MOFR) was renamed Ministry of Forests, Range and Natural Resource Operations (MFLNRO).
- The MFLNRO was renamed to the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (MFLNRORD).
- The MFLNRORD was renamed to the Ministry of Forests (MOF).

References to the old ministry names in this document generally are kept when they refer to actions or items that pre-date the name change. However, the names should be considered synonymous and any errors in references are unintentional.

Forest District boundaries have changed. The area previously covered by the Kalum Forest District is now covered by the Coast Mountains Natural Resource District. References to the Kalum Forest District in this document can be interpreted to mean the Coast Mountains Natural Resource District.

Unless otherwise noted, statements and information provided are current to December 2022. Every effort has been made to ensure that current data have been used in map generation and analyses. While this does not mean that the data is up-to-date or completely accurate, it is the best available information.

SD1.2 Context of the FSP within the existing planning framework

The FSP applies on FDUs within the CMNRD District, on lands within the Kalum Timber Supply Area and Tree Farm License 1. Several strategic planning initiatives have occurred within this area.

SD1.2.1 Kalum Sustainable Resource Management Plan

The Kalum Sustainable Resource Management Plan covers the Kalum Timber Supply Area and Tree Farm Licenses 1 and 41. The SRMP is based on the Kalum Land and Resource Management Plan, a publicly developed land-use plan.

The SRMP was approved by a delegate of the Minister of Agriculture and Lands in April 2006 and the SRMP objectives were declared as “Land Use Objectives” under section 93.4(1) of the *Land Act.* Therefore, the Kalum SRMP provides legal objectives under FRPA. The land-use objectives from the SRMP are listed in the FSP document and results and strategies are provided in the FSP that are consistent with the SRMP objectives.

The Kalum SRMP was amended in 2017 by Land Use Objectives Regulation Ministerial Orders to: establish additional objectives within the Kiteen area; and amend the objectives for the Skeena Island Areas.

SD1.2.2 Kalum Land and Resource Management Plan

The Kalum Land and Resource Management Plan (LRMP) covers the Kalum Timber Supply Area and Tree Farm Licenses 1 and 41. The LRMP was approved by the provincial cabinet in 2002 but was not designated as a “higher level plan” as defined in the *Forest Practices Code Act of BC* (FPC), nor in the FRPA. Therefore, the Kalum LRMP does not provide any legal objectives under FRPA and as a result, no land-use objectives from the LRMP are listed in the FSP document.

The LRMP did receive cabinet approval, sending a clear message that it provides guidance for forest management considerations. Therefore, since not all the LRMP was translated into the

Kalum SRMP, it is still incumbent on both Coast Tsimshian Resources professional staff and the delegated decision maker that the information in the LRMP be considered in the formulation and review of those parts of the FSP that overlap the LRMP area and are related to forestry operations.

SD1.2.3 Interim Land and Marine Resources Plan of the Allied Tsimshian Tribes of Lax Kw'alaams

The Interim Land and Marine Resources Plan (ILMRP) applies to the Traditional Territory of the Allied Tsimshian Tribes of Lax Kw'alaams ("Lax Kw'alaams") and was prepared in June 2004 by Lax Kw'alaams. This ILMRP identifies Lax Kw'alaams' management directions for specific resource values and land use designations over the Traditional Territory.

The FSP area overlaps with the Stewardship Areas, the Skeena River Corridor Special Management Areas, the Klaxghels (Lakelse Lake) Special Management Areas and Ksuz'mdkziiks (Exchamsiks River) Cultural and Natural Area identified in the ILMRP. The FSP Holder have development results and strategies related to wildlife, biodiversity, riparian areas and cultural heritage resources (CHR) that are in line with the management intent of the ILRMP areas. In addition, legally designated areas that coincide with the ILRMP area are also consistent with the management intent, including:

- parks and protected areas;
- Kalum SRMP special resource management areas for the Skeena Islands and Lakelse;
- old growth management areas; and
- moose ungulate winter range.

SD1.2.4 Thunderbird Integrated Resource Management Plan

The Thunderbird Integrated Resource Management Plan (TIRMP) was a pre-*Forest Practices Code* plan. Nonetheless, the plan was prepared through a consensus based, multi-interest public planning body so it was important to review and incorporate the management intent of the TIRMP into the Kalum LRMP. It was determined that the intent of the TIRMP would be addressed through implementation of:

1) Forests practices legislation and regulations;

2) General resource management direction that applies to the whole Kalum LRMP area; and

3) Designation of a Special Resource Management (SRM) Zones (subzones 1 and 2) within the Kalum LRMP and SRMP for the Lakelse River corridor.

The Kalum LRMP also adopted two protected areas from the TIRMP area: Hai Lake/Mt. Herman and Lakelse Lake Wetlands. These areas have now been designated as provincial parks.

SD1.2.5 Fiddler Creek Total Resource Plan

The Fiddler Creek Total Resource Plan (TRP) was completed in 1995 by the Ministry of Forests in consultation with Skeena Cellulose Inc. and the Gitxsan and Kitselas First Nations. The Fiddler TRP is intended to provide direction for operational planning and forest practices. It was approved by the District Manager in 1995 but has not been incorporated into the Kalum LRMP, nor has it been designated a higher-level plan.

The purpose of the Fiddler TRP was to manage all resources, including timber, wildlife habitat, biodiversity, visual landscape, recreation and aboriginal interests.

The Fiddler TRP divided the area into four management zones with objectives as follows:

Zone 1 - Critical Habitat Zone: The objective for this area was to maintain wildlife rearing and feeding areas and manage riparian areas for water quality, fish habitat and biodiversity. Section 2 of the FSP describes the results and strategies for riparian areas and for wildlife and biodiversity objectives (FPPR sections 7(1), 8, 9, and 9.1); these will capture

the intent of the TRP objective.

Zone 2 - Fish and Wildlife Special Management Zone: The objective was to provide areas for feeding, rearing, travel and shelter ranging from the valley bottom to alpine areas and to conserve fish habitat areas. Section 2 of the FSP describes the results and strategies for riparian areas and for wildlife and biodiversity (FPPR s. 7(1), s. 8, s. 9, and s. 9.1); these will capture the intent of this objective.

Zone 3 - Visually Sensitive Zone: The objective was to minimize the visual impact from Highway 16. The area was broken down into three subzones: subzone 3A has a retention Visual Quality Objective (VQO), subzone 3B has a partial retention VQO and subzone 3C has a modification VQO. These VQOs have been established for the scenic area that covers the Fiddler TRP area and Section 2 of the FSP describes the results and strategies for visual quality (FPPR s. 10); these will capture this objective.

Zone 4 - Working Forest Zone: The objective was to maintain a wood supply for the forest industry while mitigating long term detrimental impacts on biodiversity and wildlife habitat. This is consistent with the objectives of FRPA.

During the preparation of the Fiddler TRP, the Lax'Skiik of the Gitxsan provided the Ministry of Forests with an infrastructure map (January 1995) which included trails throughout the area. The importance of these trails to the Lax'Skiik is recognized by CTR, and when harvesting is proposed in their vicinity, it is expected that information on these trails will be provided by the Ministry to CTR. The management strategy for conserving these trails may vary from designing a reserve corridor to retaining stand structure through partial cutting. The level of retention will generally depend on the level of current use and relative importance to the trail infrastructure. The advent of the *Forest Practices Code* and its evolution into the *FRPA* means that the resource zoning and management guidance from the Fiddler TRP has been captured by the results and strategies in this FSP.

SD1.2.6 Gitanyow Land Use Plan and Kiteen Land Use Objectives Regulation Order

The Gitanyow Land Use Plan found in Schedule A and B of the Gitanyow Huwilp Recognition and Reconciliation Agreement, was signed June/July 2016 by Wilp Chiefs and the Province of BC. A Land Use Objectives Regulation Order was prepared to address the Gitanyow LUP[1]. The objectives within the order have been addressed via designation of the Ksi Gahlt'in FDU and the generation of the results and strategies that apply to it.

SD1.2.7 Gitwangak Land Use Plan (GkLUP)

The Simgiget'm Gitwangak Society (SGS) representing most of the Gitxsan Wilps or Houses in the Gitxsan Lower Skeena Watershed/Gitwangak Lax'yip (territory), developed the Gitwangak Land Use Plan (GkLUP) during the years 2010 to 2015.

Although, the GkLUP is a non-legal land use plan it is an expression of SGS's interests.

Portions of the Kiteen, Beaver, Tseax, Nelson Fiddler, Skeena River-Kalum and Kleanza-Treasure FDUs overlap the GkLUP.

The FSP contains Results/Strategies that address components of the GkLUP. For example, CTR17-35 (seral stage strategy) and CTR17-36 (patch size result) are in alignment with components of the GkLUP.

CTR will make all reasonable efforts to follow the spatial land base zonation to the best of its ability when planning harvest units in the GkLUP area. Information sharing with the SGS will summarize how the proposed harvest unit(s) is consistent with the GkLUP.

[1] Ministerial Order *Land Use Objectives* Regulation Amendment to Land Use Objectives for the Kalum Sustainable Resource Management Plan (2006) - (Kiteen area only), December 2017;

SD1.2.8 Provincial Park Management Direction Statements

There are 18 provincial parks, protected areas, conservancy areas and ecological reserves that overlap with the FDUs:

- Exchamsiks River Provincial Park
- Exchamsiks River Protected Area
- Gitnadoiks River Protected Area
- Hai Lake/Mount Herman Provincial Park
- Kitsumkalum Lake Provincial Park
- Kitsumkalum Lake North Protected Area
- Kleanza Creek Provincial Park
- Lakelse Lake Wetlands Provincial Park
- Lakelse Lake Provincial Park
- Lundmark Bog Protected Area
- Anhluut'ukwsim Laxmihl Angwinga'asanskwhl Nisga'a /Nisga'a Memorial Lava Bed Provincial Park
- Nisga'a Memorial Lava Bed Protected Area
- Skeena River Ecological Reserve
- Sleeping Beauty Mountain Provincial Park
- Swan Creek Protected Area
- Williams Creek Ecological Reserve

There are 9 parks, protected areas and conservancy areas adjacent to the FDUs:

- Atna River Park
- Burnie River Protected Area
- Burnie-Shea Park
- Khyex Conservancy
- Khutzeymateen Provincial Park
- Ksi X'anmaas Conservancy
- Gitnadoiks River Provincial Park
- Seven Sisters Park and Protected Area
- Lower Skeena River Provincial Park

Of these parks, only Exchamsiks River, Kleanza Creek, Lakelse Lake, Nisga'a Memorial Lava Bed, Skeena River, Williams Creek, Atna River, Burnie-Shea, Khutzeymateen and Seven Sisters Provincial Parks have a management direction statement or management plan in place. In general, operations are not expected to occur within parks or protected areas; however, should there be a reason to do so, activities will be consistent with the FSP and management direction statement or management plan.

SD1.2.9 TFL 1 Management Plan 10

A requirement of the TFL 1 tenure document is that a management plan (MP) be prepared for TFL 1 every ten years. A management plan describes the management philosophy of the TFL holder and the utilization requirements for the TFL. In addition, a timber supply analysis and AAC recommendation is part of the management plan. Approval of the MP is at the discretion of the Chief Forester of BC. The most recently approved management plan is MP 10.

SD1.2.10 United Nations Declaration on the Rights of Indigenous Peoples

In 2020, the BC government passed the Declaration on the Rights of Indigenous Peoples Act (DRIPA), which commits the province to updating its laws and policies to be consistent with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). This work is ongoing, and Coast Tsimshian Resources LP is excited to see the outcomes of this process. Of course, as implementation of DRIPA results in changes to the legislation that governs forest planning and operations, the FSP will be updated or amended accordingly.

SD1.2.11 Other BC Government planning initiatives

Modernized Land Use Planning

BC has embarked on a process of reviewing and potentially updating existing land use plans. This work was long overdue for the Kalum LRMP/ SRMP. In addition to this existing need, the need to implement DRIPA is also a driver for looking at the existing plans. This FSP will reflect any changes to the legal plans or planning environment. However, as of December 2022, no specific changes have been made, nor are any indicated as forthcoming in the near future.

Modernizing Forest Policy

In 2019 and 2021 the Province passed legislation that will result in changes to the regulatory regime for forest planning in BC. These changes will eventually result in the creation of Forest Landscape Plans (FLP), which, as part of the implementation of DRIPA, are expected to be developed jointly between BC and First Nations. No FLPs have been developed as yet, and none are scheduled to be developed in the near future within the area covered by this FSP. Until such time as a FLP is prepared for this area, FSPs are still required.

As regulations are put into place to allow for implementation of the 2019 and 2021 legislation, there will likely be additional forest planning requirements – as those requirements are made known, this FSP will be adjusted or amended as required.

Old Growth Strategic Review

In 2019, the BC government commissioned a panel to provide a report on Old Growth, which was provided in 2020. As part of the response to that report, in fall of 2021 the Province announced it would engage with First Nations to find agreement on deferring harvest of areas of old growth forests that, through a high-level provincial analysis, were deemed to be within potentially "at risk" ecological areas. To date, it is understood that several First Nations within the FSP area have not agreed to deferring harvest of old growth forests from the FSP area due to concerns about how the high-level analysis was conducted and the data used for the analysis.

The Coast Mountains Natural Resource Management District (CMNRMD) is characterized by a large amount of remaining old growth forest. Coast Tsimshian Resources hopes that a regionally appropriate approach can be developed that will be suitable for the forested land base in the district. There are several existing old growth management tools that CTR believes will allow achievement of old growth forest objectives at lower economic cost than the provincially-suggested old growth deferral areas. For example, there are spatially designated Old Growth Management Areas (OGMAs) within the CMNRMD, and these are currently being refined through a OGMA co-location process that aims to improve the quality of old growth forest values located within OGMAs. Another local example is the patch and seral analysis that is conducted jointly be licencees at least every 3 years – this summarizes forests (including old growth) by biogeoclimatic subzone and Landscape Unit, and has confirmed that the vast majority of biogeoclimatic subzone and Landscape Unit combinations in the FSP area have large amounts of old growth forests. The patch and seral analysis also allows licencees, First Nations, and the Province to proactively identify any areas where harvesting pressures might result in unacceptable reductions in the amount of old growth, and to adjust forest planning accordingly.

SD1.3 Acronyms

Acronyms used in the FSP or Supporting Document are as follows:

AAC:	Allowable Annual Cut
AIA:	Archaeological Impact Assessment
AOA:	Archaeological Overview Assessment
ATV:	All-Terrain Vehicles
BA:	Basal Area
BCTS:	British Columbia Timber Sales
BEC:	Biogeoclimatic Ecosystem Classification
C&E:	Compliance and Enforcement
CDC:	Conservation Data Center
CHR:	Cultural Heritage Resource

CHRR: Cultural Heritage Resource Review
CMNRD: Coast Mountains Natural Resource District
CMT: Culturally Modified Tree
CP: Cutting Permit
CWD: Coarse Woody Debris
CWH: Coastal Western Hemlock
DDM: Delegated Decision Maker
DFO: Fisheries and Oceans Canada
DRIPA: Declaration on the Rights of Indigenous Peoples Act
ECA: Equivalent Clearcut Area
FA: Fuel Assessment
FAR: Fuel Assessment Rating
FDP: Forest Development Plan
FDU: Forest Development Unit
FL: Forest License
FLTC: Forestry License to Cut
FMSS: Fire Management Stocking Standard
FPPR: Forest Planning and Practices Regulation
FRPA: Forest and Range Practices Act
FSP: Forest Stewardship Plan
FSR: Forest Service Road
GAR: Government Actions Regulation
GWM: General Wildlife Measure
ICH: Interior Cedar-Hemlock
ILMB: Integrated Land Management Bureau
IWMS: Identified Wildlife Management Strategy
LRMP: Land and Resource Management Plan
LU: Landscape Unit
MAg: Ministry (or Minister) of Agriculture
MH: Mountain Hemlock
MOE: Ministry (or Minister) of Environment
MOF: Ministry (or Minister) of Forests
MOFR: Ministry (or Minister) of Forests and Range
MFLNRO: Ministry (or Minister) of Forests, Lands and Natural Resource Operations
MFLNRORD: Ministry (or Minister) of Forests, Lands and Natural Resource Operations and Rural Development
MOTSA: Ministry (or Minister) of Tourism, Sports, and the Arts
MSRM: Ministry (or Minister) of Sustainable Resource Management
MWLAP: Ministry (or Minister) of Water, Land and Air Protection
NA: Nass Area
NAR: Net Area to be Reforested
NDT: Natural Disturbance Type
NLG: Nisga'a Lisims Government
NSR: Not sufficiently restocked
NWA: Nass Wildlife Area
NWC: Nass Wildlife Committee
OGMA: Old Growth Management Area
OSBG: Objectives Set by Government

QP:	Qualified Professional
RESULTS:	Reporting Silviculture Updates and Land Status Tracking System
RMA:	Riparian Management Area
RMZ:	Riparian Management Zone
RP:	Road Permit
RPBio:	Registered Professional Biologist
RPF:	Registered Professional Forester
RRZ:	Riparian Reserve Zone
RUP:	Road Use Permit
SP:	Site Plan
SPAR:	Seed Planning and Registry System
SRMP:	Sustainable Resource Management Plan
SRMZ	Special Resource Management Zone
SU:	Standards Unit
TFL:	Tree Farm License
TIRMP:	Thunderbird Integrated Resource Management Plan
TRP:	Total Resource Plan
TSA:	Timber Supply Area
TSFA:	Terrain Stability Field Assessment
TSL:	Timber Sale License
UNDRIP:	United Nations Declaration on the Rights of Indigenous Peoples
UWR:	Ungulate Winter Range
VIA:	Visual Impact Assessment
VQO:	Visual Quality Objective
VSC:	Visual Sensitivity Class
WAP:	Watershed Assessment Procedure
WHA:	Wildlife Habitat Area
WTP:	Wildlife Tree Patch
WTRA:	Wildlife Tree Retention Area

SD2 INFORMATION DIRECTLY RELATED TO THE RESULTS AND STRATEGIES

This section provides information on how the results or strategies described in the FSP are consistent with objectives set by government; why the results or strategies have been selected and how they relate to the resource values identified in the FRPA.

Many results or strategies apply to more than one forest value. A table showing the results or strategies that are applicable to each forest value is provided in Section SD3.12.

The following paragraphs are reproduced from the FSP document to remind the reader of the structure of Objectives, Strategies, and Result.

Objectives are descriptions of how overall goals are to be achieved. In this case, the goals are increased flexibility in forest management, decreased administrative complexity and environmental protection. Objectives can vary from place to place, depending on the circumstances of the area. The FRPA defines three types of objectives:

Objectives set in regulation: these objectives are explicitly stated in the FPPR and apply provincially.

Objectives enabled by regulation: The Government Action Regulation (GAR) provides authority to the Ministers responsible for the *Forest Act*, *Land Act* and *Wildlife Act* to establish objectives for certain items described in the regulation. These objectives can apply at many different scales.

Notices providing information on habitat amount, distribution and attributes have been provided for several wildlife species under section 7(2) of the FPPR (“Section 7" notices).

Under GAR, Wildlife Habitat Areas and Ungulate Winter Range have been established for areas that overlap with the FDUs.

See the Supporting Document to this FSP for further discussion of these items.

Land-use objectives: These are objectives specific to a certain area that have been established through a Landscape Unit Plan or some sort of higher-level plan such as a Land and Resource Management Plan or Sustainable Resource Management Plan. The Minister responsible for the Land Act sets these objectives.

The Kalum Sustainable Resource Management Plan (SRMP) was approved in April 2006, using the cabinet-approved Kalum Land and Resource Management Plan (LRMP) as its basis. The objective in the Kalum SRMP were amended in 2017 by ministerial order for the Kiteen area and the Skeena Islands area. The objectives within the SRMP and the amendments are considered land-use objectives under the FRPA.

Results are

- measurable or verifiable outcomes in respect of an established objective, and
- the situations or circumstances that determine where in a FDU the outcomes will be applied.

Strategies are

- measurable or verifiable steps or practices that will be carried out to achieve consistency with an established objective, and
- the situations or circumstances that determine where in a FDU the steps or practices will be applied.

Some **Practice Requirements** can be affected by results or strategies. Under the FPPR there are practices described that must be followed, however, some of these practice requirements are optional if the FSP contains results or strategies for objectives that also meet the intent of the practice. Conversely, some of these optional practice requirements, if committed to in the FSP, relieve the FSP Holder from having to provide results or strategies for certain objectives. These practice requirements are considered to achieve some of the objectives set by government. It is up to the FSP Holder to indicate whether the results and strategies in the FSP allows the FSP to be exempted from following these optional practice

requirements or whether, by following certain practice requirements, the FSP does not require results or strategies for certain objectives.

SD2.1 Rationales for Results and Strategies

This section provides information describing the rationale for creating a result or strategy and how the result or strategy is consistent with its related objective. The result or strategy is not reproduced here, as it is expected that this document will be reviewed with the FSP in hand.

SD2.1.1 Soil

FSP Reference number: **CTR17-01** *Result*

This result comes from recommendations in the TIRMP and Kalum LRMP. Alwyn Creek flows into the Lakelse River system and has deep glaciomarine soils that have proven highly unstable under certain conditions. A watershed assessment was completed for the Alwyn Creek watershed in 1995. This was a hydrologic assessment with an objective to define the current state of the watershed and provide guidance regarding further logging within it. The study showed that the Alwyn Creek watershed produces high levels of suspended sediment due to the fine-textured soils within the basin.

The source of sediment in Alwyn Creek is from the following:

- Roads and trails adjacent to the creek;
- Ditch lines directing surface runoff water into the creek;
- Earth slumps, failures and cut banks along the length of the creek;
- Recreational vehicle crossings of the creeks; and
- Channel erosion from peak flows.

The LRMP recommendation was for the Forest Service and the private landowners to take the lead role in protecting and mitigating water quality concerns in Alwyn Creek. This would be achieved by ensuring that existing roads and trails are deactivated prior to the construction of any new roads, reducing the current equivalent clear-cut area levels particularly above and around sensitive soil types and by initiating a detailed road and channel assessment to determine the nature and extent of sediment sources and mobility within the watershed.

Consistency with the soils objective is achieved by addressing an area of known soil sensitivity that was singled out through public planning processes.

FSP Reference number: **CTR17-02** *Result and* **CTR17-03** *Strategy*

This result and strategy are taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency with the objective is achieved by limiting the equivalent clearcut area (ECA) within the major watersheds (Kiteen and Cranberry) to less than 30% unless a hydrologic assessment is completed and development in excess of 30% ECA follows the recommendations of that assessment. It should be noted that only a small portion of the Cranberry watershed is under CTR stewardship and CTR is unable to control the activity throughout the portions of the watershed outside of their tenures.

FSP Reference number: **CTR17-04** *Strategy*

This strategy has been paraphrased from wording in the Kalum LRMP. Consistency with the soils objective is achieved through acting on roads, which are known conduits for the movement of erodible soils; regular inspections will allow the risk of erosion to be mitigated.

SD2.1.2 Timber

FSP Reference number: **CTR17-05** *Result*

The Stocking Standards in this FSP are based on established standards that have undergone extensive review, including the consideration of economically and ecologically viable species and the forest health risks associated with those species.

Consistency with the timber objective and Objective 6 from the Kalum SRMP and Objective 4(14) from the 2017 Kalum SRMP Amendment for the Kiteen area is achieved by confirming the need to reforest areas that are harvested, so there will be timber for the forest industry in the future, and maintain a natural composition of tree species through ecologically based standards.

FSP Reference number: **CTR22-01** *Strategy*

This strategy introduces a Fire Management Stocking Standard (FMSS) requiring minimum stocking of ecologically appropriate deciduous species to reduce the risk of wildfire in cut blocks close to urban area, structures and infrastructure. On blocks where FMSS are applied, economically viable timber may be reduced; however, the FMSS should enhance the timber value by protecting adjacent stands from fire. This strategy is considered consistent with the timber objective.

SD2.1.3 Wildlife

FSP Reference number: **CTR17-08** *Result*

This result is based on an amalgamation of the Section 2.2.11 of the Kalum LRMP pertaining to grizzly bears and the habitat attributes for moose as described in the *Notice – Indicators of the Amount, Distribution, and Attributes of Wildlife Habitat Required for the Winter Survival of Ungulate Species* for TFL 1, TFL 41 and the Kalum TSA. This result is consistent with Objective 8 in the Kalum SRMP as it takes the stocking standards directly from Table 8 of the SRMP. It is also consistent with Moose Ungulate Winter Range Order 6-009, specifically General Wildlife Measure 3 which calls for moose forage to be restored after harvesting.

Reduced stocking requirements and minimum inter-tree spacing was determined through the LRMP to reflect the needs of grizzly bear and this was incorporated into the accepted stocking standards for the Kalum Forest District (now the Coast Mountains Natural Resource District).

Maintenance or increased potential for forage and browse species within moose UWR can also be achieved through the application of reduced stocking and/or cluster planting on the moist, rich sites that occur within the UWR areas, providing a benefit to moose within their winter range[2].

Consistency with the wildlife objective is achieved through this result's establishment of criteria for maintaining forage opportunities for identified species.

FSP Reference number: **CTR22-04** *Result*

The result is intended to provide visual screening next to roads within or adjacent to a cutblock, by requiring regenerating deciduous trees and herbaceous brush to be retained within 10 m of the road. The result does not require brush to be maintained during logging, as that is often not feasible for operational reasons, but rather that brush will be allowed to grow next to the road after logging.

Deciduous trees and brush within 10 m of the road will not be counted as competing vegetation when surveying the block for free growing trees, and no brushing treatment will be required in this 10 m buffer.

The result applies to permanent access as defined in FPPR. It does not apply to temporary roads and there is an exception for in-block roads that meet the permanent access definition in FPPR (e.g., in-block

[2] B. Pollard, RPBio. Personal communication. January 14, 2005

roads constructed on material where crop trees will not grow). This exception is included for situations where maintaining a 10 m buffer on all in-block roads will be overly complex with little benefit to visual screening.

An exception is also included to ensure that this result does not impact brushing that may be need for safety reasons (e.g., to maintain line of sight along the road) or forest health reasons.

FSP Reference number: **CTR17-10** *Strategy and* **CTR17-11** *Result*

This strategy and result direct primary forest activities occurring within 500m of known goshawk nest areas. Consistency with the objectives from the 2017 Kalum SRMP Amendment for the Kiteen area is achieved by restating those objectives as Strategy CTR17-10 and Result CTR-11.

FSP Reference number: **CTR17-50** *Result*

This wording for this result flows directly from Objective 11 of the Kalum SRMP. The wording allows for proportional targets based on the amount of the FDU that overlaps with the Grizzly Bear Identified Watershed.

The seral requirements of this objective will also benefit Moose, which are dependent on forage opportunities like Grizzly Bear.

Consistency with the Kalum SRMP is achieved by using wording that derives directly from the Kalum SRMP objective, and consistency with the wildlife objective is achieved through this result's balancing of seral stages to ensure continued forage opportunities for identified species.

FSP Reference number: **CTR17-56** *Result*

This result states that a no-harvest boundary will be established around known and active fisher and wolverine denning sites unless an alternate management direction is given by a qualified professional. Consistency with the objective from the 2017 Kalum SRMP Amendment for the Kiteen area is achieved by provide an approach to maintain and reduce impacts on fisher and wolverine denning sites.

SD2.1.4 Fish

FSP Reference number: **CTR22-06** *Result*

In accordance with the FPPR section 12(3), the retention of trees within Riparian Management Zones (RMZ) is addressed. A method for approximating basal area is provided and the result is worded to reflect the need for flexibility with respect to site specific conditions. The result also ensures consistency with practice requirements, specifically FPPR s. 52(2)(a), by requiring retention on the lower 100 m of S6 streams that are directly tributary to S1, S2 and S3 streams. Since this result will provide for retention on S5 and some S6 streams, it will benefit the coastal tailed frog, an Identified Species At Risk which is reliant on steep mountain streams. The timing of the application of this result recognizes the ongoing nature of forest planning and prevents additional constraints and costs from being applied to blocks that have already been started.

Providing for the retention of trees within RMZs achieves consistency with the objective for riparian areas (FPPR s. 8).

FSP Reference number: ***CTR17-13*** *Result*

This result is consistent with the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective. The result is required due to the different reserve and management zone widths for L1 riparian features in the 2017 Kalum SRMP Amendment for the Kiteen area.

FSP Reference number: **CTR17-14** *Strategy*

This strategy is taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is

achieved by restating the objective.

FSP Reference number: **CTR17-15** *Strategy*

This strategy is taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective. The criteria for amending the ecosystem network have been included in the strategy.

FSP Reference number: **CTR17-16** *Result*

This result is taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective.

FSP Reference number: **CTR17-17** *Strategy*

This strategy is taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective. This strategy references the ecosystem network amendment criteria (strategy CTR17-15) as criteria for retaining less than 100% of the forested area of hydroriparian zones within Water Management Units.

FSP Reference number: **CTR17-18** *Strategy*

This strategy is taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective. The result allows riparian management practices applicable to the forest land base outside the Water Management Unit to apply within the Unit on cutblocks that are only partially within the Unit.

FSP Reference number: **CTR17-19** *Result*

This result has been taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective.

FSP Reference number: **CTR17-58** *Strategy*

This result addresses the potential impacts of harvesting and road construction on fish bearing streams by restating the results and strategies that have been adopted that will help to maintain the functional integrity of fish-bearing streams. Consistency with the objective for fish habitat and fish-bearing streams from the 2017 Kalum SRMP Amendment for the Kiteen area is achieved by adopting results and strategies that address riparian and hydroriparian management, large woody debris in streams and riparian areas, alluvial and floodplain management, as well as area specific management in the Ksi Gahlt'in FDU, including the Water Management Unit and Ecosystem Network.

FSP Reference number: **CTR22-02** *Strategy*

This strategy has been taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective.

FSP Reference number: **CTR22-03** *Strategy*

For primary forest activities on floodplains and alluvial fans, this strategy provides a process for identifying hydrogeomorphic hazards and ways of addressing those hazards during design and operations. Consistency with the objective from the 2017 Kalum SRMP Amendment for the Kiteen area is achieved by provide an approach to maintaining the functional integrity of hydrogeomorphic processes on floodplains and alluvial fans.

SD2.1.5 Water

FSP Reference number: **CTR17-20** *Result*

This result has been taken from the Kalum SRMP (Objective 17). The use of clearcut equivalency is a useful surrogate for maintenance of flow regimes. Where a Watershed Assessment Procedure is conducted that indicates a better threshold or parameter, it will be adopted for the appropriate watershed(s).

Consistency with the objective for water in community watersheds (FPPR s. 8.2) and for Objective 17 in the Kalum SRMP is achieved by ensuring that a well-defined parameter is used to monitor the potential impact on the watershed.

FSP Reference number: ***CTR17-21*** *Result*

Due to the small size of the Virginia Brook and Drake Community Watersheds, the FSP Holder has committed to no harvesting (with exceptions to prevent timber loss and for road construction), which should ensure the hydrological function of the watershed without an undue impact on timber supply.

This result is consistent with the objective for water in community watersheds (FPPR s. 8.2) and for Objective 17 of the Kalum SRMP, by ensuring that no hydrological impact occurs within these watersheds from primary forest activities carried out by the FSP Holder.

SD2.1.6 Biodiversity

FSP Reference number: **CTR17-06** *Result*

This result is taken from the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency with the objective is achieved via application of the objective and the Ksi Gahlt'in Deciduous Stocking Standards (as described in the stocking standards that apply to the FSP) to deciduous-leading areas larger than one contiguous hectare throughout the BEC zones present throughout the Ksi Gahlt'in FDU.

FSP Reference number: **CTR17-35** *Strategy and* **CTR17-36** *Result*

This strategy and result will allow a distribution of areas of different sizes over time. In other words, it provides for a temporal and spatial distribution of seral stages and patch sizes.

The process in this result and strategy is based on the well-established science of Natural Disturbance Types (NDT) and the temporal and spatial distribution of disturbance, as described in the *Biodiversity Guidebook* (September 1995) and updated in the *Landscape Unit Planning Guidebook* (1999), and uses the analysis as described in the LUP guidebook.

This strategy and result are consistent with the habitat requirements for Marbled Murrelet, as described in the notice for this species under section 7 of the FPPR. Moose and grizzly bear will also benefit from a range of seral stages, particularly with respect to continued forage opportunities.

The strategy and result are consistent with the FRRP s. 9 objective for landscape-level biodiversity and the seral stage and the patch distribution requirements of the Kalum SRMP (Objectives 1, Objective 7, and Objective 4(9) of the 2017 Kalum SRMP Amendment for the Kiteen area).

FSP Reference number: **CTR17-37** *Result*

This result provides wording that paraphrases, and is therefore consistent with, the wording of Kalum SRMP Objective 3 for Old Growth Management Areas (OGMAs).

FSP Reference number: **CTR17-38** *Strategy*

This strategy provides a mechanism for disturbing an Old Growth Management Area to allow operational flexibility. The strategy was developed based on Kalum SRMP Objective 4 and the Skeena Region Old Growth Management Area Amendment Policy (August 2010) which provides further guidance on how to amend OGMAs.

Consistency with Kalum SRMP Objective 4 is achieved by allowing activities in Old Growth Management Areas while also ensuring that old seral stage forest is maintained by requiring the selection of replacement areas.

FSP Reference number: **CTR22-05** *Result*

This result is guided by and consistent with Objective 5 from the Kalum SRMP: the WTRA targets are as per Table 6 from the Kalum SRMP. This result also provides for management of WTRAs consistent with the FRPA objective for stand level biodiversity (FPPR s.9.1).

FSP Reference number: **CTR17-40** *Result*

This result is consistent with the 2017 Kalum SRMP Amendment for the Kiteen area and modifies the WTRA requirements for cutblocks and cutblock aggregates within that area.

FSP Reference number: **CTR17-41** *Strategy*

This strategy allows the FSP Holder to move wildlife tree retention areas designated by other licensees provided the specified criteria are met. This strategy ensures that stand level biodiversity is maintained through the retention of wildlife trees while also allowing operational flexibility.

In some instances, wildlife tree retention on blocks may have been established in excess of the requirements in the Kalum SRMP, and this strategy therefore allows for the re-balancing of wildlife tree areas with targets. This result is therefore also consistent with the timber objective.

FSP Reference number: **CTR17-42** *Strategy*

This strategy is consistent with the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective. The strategy and objective refer to the ‘core area’, which is understood to mean the area within the mapped red-listed ecological community.

FSP Reference number: **CTR17-43** *Strategy*

This strategy is consistent with the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective.

FSP Reference number: **CTR17-44** *Strategy*

This strategy is consistent with the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective.

FSP Reference number: **CTR17-45** *Result*

This result has been taken directly from the Kalum SRMP (Objective 8). Moose and grizzly bear will also benefit from this result because it provides for a travel corridor between habitat areas.

Consistency with the Kalum SRMP is achieved by using wording that derives directly from the Kalum SRMP objective.

FSP Reference number: **CTR17-46** *Result*

This result has been taken directly from the Kalum SRMP (Objective 9). Moose and grizzly bear will also benefit from this result because it provides providing for a travel corridor between habitat areas.

Consistency with the Kalum SRMP is achieved by using wording that derives directly from the Kalum SRMP objective.

FSP Reference number: **CTR17-47** *Strategy*

This strategy is consistent with the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective.

FSP Reference number: **CTR17-48** *Strategy*

This strategy is consistent with the 2017 Kalum SRMP Amendment for the Kiteen area. Consistency is achieved by restating the objective. The strategy and objective refer to the 'forested core', which is understood to mean the Ecosystem Network area, as identified on the FSP maps.

FSP Reference number: **CTR17-49** *Result*

This result provides for management of forest activities on the Skeena Islands. The approach taken is to limit the amount of impact on the rare plant communities by retaining older seral stages and other features that provide habitat value or contribute to the recruitment of old seral stage forest. Consistency with the 2017 Kalum SRMP Amendment for Objective 10 for the Skeena Islands Area is achieved by using wording that derives directly from Objective 10.

FSP Reference number: **CTR17-51** *Result*

This result is taken from the Kalum SRMP (Objective 12), which recognizes the importance of the Lakelse River area for fish and recreation. Consistency with the biodiversity objectives is achieved by detailing seral, patch and wildlife tree retention requirements on a specific area that has been identified as important through public planning processes.

Consistency with the Kalum SRMP is achieved by using the same wording as in Kalum SRMP Objective 12.

FSP Reference number: **CTR17-52** *Strategy*

This strategy provides wording that describes the process of allowing road construction through the Upper Kitsumkalum Special Resource Management Zone, as allowed by Kalum SRMP Objective 13.

FSP Reference number: **CTR17-53** *Result*

This result paraphrases and is therefore consistent with the wording of Kalum SRMP Objective 14 for activities in the Miligit Creek Sensitive Area.

FSP Reference number: **CTR17-55** *Result*

This result is consistent with the 2017 Kalum SRMP Amendment for the Kiteen Area. Consistency is achieved by restating the objective.

SD2.1.7 Visual Quality

FSP Reference number: **CTR17-22** *Strategy and* **CTR17-23** *Result*

This strategy and result are based on the Visual Impact Assessment guidebook (January 2001), with the addition of a viewpoint selection process. **CTR17-22** includes a minimum viewing time that is based on the Visual Landscape Inventory: Procedures and Standards Manual (May 1997).

Result **CTR17-23** indicates that block configuration will be consistent with the visual design.

Consistency with the objective set by government for visual quality is achieved through the application of an established method for visual management.

FSP Reference number: **CTR17-54** *Result*

This result provides wording that paraphrases and is therefore consistent with, the wording of Kalum SRMP Objective 15 for activities along the Upper Copper River.

SD2.1.8 Cultural Heritage Resources

FSP Reference number: **CTR17-24** *Strategy*

This strategy allows the identification, review, and update of traditional use and cultural heritage information that is used in the development (and if necessary, amendment) of this FSP.

Consistency with the cultural heritage resources objective (FPPR s. 10) and the CHR Objective from the 2017 Kalum SRMP Amendment for the Kiteen area is achieved by providing a method: for continual updates to known cultural heritage resource information; and to identify ways to conserve and protect those cultural heritage resources.

FSP Reference number: **CTR17-25** *Strategy*

It is important to recognize that the Nisga'a Nation has rights beyond access to cultural heritage resources derived from lands within the FDUs. This strategy can serve to address foreseen infringement upon those rights and is not limited to discussion of cultural heritage resources.

Like **CTR17-24**, this strategy allows the identification, review and update of traditional use and cultural heritage information that is used in the development (and if necessary, amendment) of this FSP. This strategy is focused on gathering of similar information from the Nisga'a Lisims Government (NLG). The NLG is not a First Nation but has valuable insight into the cultural heritage resources of continuing importance to the Nisga'a people outside of Nisga'a Lands.

Consistency with the cultural heritage resources objective (FPPR s. 10) is achieved by providing a method for continual updates to known cultural heritage resource information

FSP Reference number: **CTR17-27** *Strategy*

This strategy allows the identification and review of cultural heritage information that has not been captured in the development of this FSP or through information sharing as per **CTR17-24** and **CTR17-25.**

This strategy also confirms that new cultural heritage information identified through **CTR17-27** will be shared with the affected First Nation(s) or Nisga'a Lisims Government, provided to the District Manager, and documented and reviewed by the FSP Holder. For the purposes of confidentiality and protection of cultural heritage features, information provided to the District Manager may be purposefully vague.

Consistency with the cultural heritage resources objective (FPPR s. 10) and the CHR Objective from the 2017 Kalum SRMP Amendment for the Kiteen area is achieved by providing for stand-level mitigation of identified cultural heritage resources when necessary.

FSP Reference number: **CTR17-28** *Result*

Cedar provides a valuable resource for traditional cultural activities; bark provides textiles, and the logs provide building (canoes, planks) and spiritual materials (totem poles). The stocking standards in this FSP prescribe cedar where ecologically appropriate, so a continued supply of trees for bark stripping and the supply of lumber (the modern form of planks) is assured. However, to ensure the supply of larger logs for canoes, planks or poles, this result has been prepared to ensure that in forest stands that have cedar retention in wildlife tree retention areas (WTRAs) and RMZs, removal of some of these stems for cultural purposes is an acceptable activity. To ensure that the biological function of a reserve is not impaired[3], a limit is placed on the amount that can be removed.

Consistency with the cultural heritage resources objective (FPPR s. 10) and the cedar Objective from the 2017 Kalum SRMP Amendment for the Kiteen area is achieved by providing a method for ensuring that a supply of raw materials (cedar) for traditional cultural heritage activities be maintained.

[3] B. Pollard, RPBio. Personal communication. August 16, 2005

FSP Reference number: **CTR17-29** *Strategy*

This strategy provides for post-contact CMT management in response to specific input from several First Nations. Post-contact CMTs provide proof of continuous occupation for First Nations in their treaty negotiations. By ensuring that post-contact CMTs are recorded, there will be a record of occupancy for First Nations. Specific CMT types are identified as requiring an additional level of mitigation.

This is consistent with CHR Objective (FPPR s 10) in that post-contact CMTs are a resource that has been identified as of continuing importance to several First Nations. This strategy is also consistent with the CHR Objective from the 2017 Kalum SRMP Amendment for the Kiteen area because it provides a management strategy for CMTs.

SD2.1.9 Recreation Resources

FSP Reference number: **CTR17-30** *Result*

The identified recreation sites or trails all share a "Trail Management" objective. This result is basically a paraphrasing of this common objective so it will apply to all these sites and trails, with a clarification regarding the potential for trail re-establishment or relocation.

To ensure the recreation experience is recognized, development activities within 50 m of the trail, trail crossings, and access barriers will only proceed after a referral to or, in some cases, an authorization from the Ministry responsible for the trail[4].

Consistency with the recreation site and trail objectives is achieved as the wording is taken directly from the objectives.

FSP Reference number: **CTR17-31** *Result*

The identified recreation sites have similar "Site Management" objectives to retain natural vegetation and shorelines near waterbodies. This result is basically a paraphrasing of this common objective so that it will apply for all these sites.

To ensure that the recreation experience is recognized, development activities within the remainder of the listed recreation sites will be reserved from disturbance unless authorized by the Ministry responsible for the site.

Consistency with the recreation site objectives is achieved; the wording is taken directly from the objectives.

FSP Reference number: **CTR17-32** *Strategy*

This strategy provides a process for ensuring that any forestry activities that may occur in the Red Sand Lake Forest Interpretive Site are consistent with the objective and that they are clearly described and included with an application to carry out road construction or logging.

FSP Reference number: **CTR17-33** *Result*

The identified recreation sites have "Access" objectives. The result indicates that the stated access objectives will be followed and, therefore, is consistent with the recreation site and trails objectives. A clarification regarding the potential need for access outside of the window for planning or silviculture is also included.

Consistency with the recreation site and trail objectives is achieved; the wording is taken directly from the objectives.

[4] As of May 2022, the responsible Ministry is Environment and Climate Change Strategy

FSP Reference number: **CTR17-34** *Result*

The recreation sites and trails have a “Recreation Experience” objective that is related to general access to them. This result confirms the minimum level of access that will be maintained to these sites or trails, ensuring consistency with the objective of providing access to a recreation experience.

SD2.2 Consistency of Results and strategies across the known FRPA Objectives

In addition to a strategy or result having to be consistent with the objective for which it was written for, the strategies and results should not create any inconsistency with any of the other known objectives set by government. The FSP has been reviewed with this consideration in mind, and there are no obvious contradictions or conflicts between the results and strategies.

Appendix SDA provides an evaluation tool for the Delegated Decision Maker in determining how the strategies and/or results in the FSP are consistent with the objectives set by government, and how they are measurable or verifiable.

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SD3 RELATING THE RESULTS AND STRATEGIES TO THE FRPA RESOURCE VALUES

This section provides background information on the resource values described in the FRPA legislation (FRPA section 149[5]) and how the results and strategies described in the FSP relate to these values. Each value is described in general, followed by a more specific description of the management considerations related to the value. Linkages to the results and strategies in the FSP are noted.

This section may also include discussion of forest management aspects or activities that do not appear in the FSP. This reflects the fact that while the FSP can only address legal objectives that have been set by government, there are other activities and actions that are carried out by the forest manager.

Where information exists, reference is made to the outcomes and recommendations of Multiple Resource Value Assessments (MRVA) and Forest and Range Evaluation Program (FREP) reports. The MRVA and FREP reports provide information on the outcomes of the FSPs and practices of forest professionals and can be used in an ongoing manner to inform, clarify, or assess the state of any value. The most recent MRVA report for the Coast Mountains Resource District is available as an online document with a reference year of 2021[6]. This information describes the current status of the values reported on (riparian, water quality, visual quality, stand level biodiversity, and cultural heritage), and also provides thoughts on district-wide trends. The primary value from this report is likely the "recommended best practices" for each of these values, as they provide helpful considerations to keep in mind when conducting planning and carrying out operations.

SD3.1 Soils

Maintenance of forest soil is facilitated by keeping soil where it is. This is accomplished through results and strategies that are consistent with the objective for soils, as described in Section 2 of the FSP.

The soils on the FSP area are predominated by podzols[7] and are typical of the cool, moist climate, deep snowpacks and short growing season. The structure of the soils and its parent material is highly variable over the landscape, with clay or silt-dominated soils being the most sensitive to erosion.

The FSP Holder has elected to follow the practice requirements outlined in section 35 and 36 of the FPPR to ensure consistency with the objective for soils. These practice requirements describe limits for allowable soil disturbance on a site and limits on the area that can be converted to roads or landings. This information will be noted within SPs and site rehabilitation measures will be employed where appropriate. Logging systems and seasonal restrictions will be prescribed to limit soil impacts to the accepted levels.

Management for soil conservation can include consideration of terrain stability, road construction and road maintenance activities.

SD3.1.1 Terrain Stability

In general, the intent of the FSP Holder's operations is to avoid areas having a high potential for landslides. When potentially unstable areas are unavoidable, operations will be prescribed and conducted in a manner that limits the risk of landslides and soil erosion. For instance, when

[5] Soils, Timber, Wildlife, Water, Fish, Biodiversity, Cultural heritage resources, Recreation resources, Resource features, Visual quality, and Forage.

[6] Coast Mountains District – Multiple Resource Value Assessment – 2021 Online Report

[7] Coarse, well-drained soil formed under cool, moist conditions that has its upper layers leached of organic matter and primary minerals

operations are planned in areas with potential instability, risk of soil erosion or of potential impact on the environment can be limited by following the results and recommendations of detailed terrain stability field assessments (TSFAs).

Overview terrain stability and hazard mapping exists for several areas, including portions of the FDUs. Where overview assessments have not been completed, mapping is available that identifies areas where slopes exceed 60%. Remotely sense data, including LiDAR, is also becoming increasingly available and can assist with the identification of hazard. In addition, at times, local knowledge of terrain allows differentiation between stable and potentially unstable areas.

Terrain stability analysis will be incorporated into landscape level planning so that where appropriate, sensitive terrain units can be included into riparian reserves, old growth/biodiversity reserves, WTRAs or visual reserves, thereby achieving multiple objectives.

Where planned operations encroach on areas identified as potentially unstable or unstable terrain, detailed site assessments can be carried out with recommendations prepared by a qualified professional. Recommendations prepared are then reviewed for incorporation into applicable planning (e.g., Road Designs or SPs).

TSFA and/or site-specific operational prescriptions may be prepared for areas planned for development that have unstable or potentially unstable terrain or that have high or very high soil erosion potential. Part of the TSFA report will include an evaluation of cut block/opening shape and size or of proposed road locations, with a focus on their effects on soil erosion potential. TSFAs identify mitigation measures to minimize erosion and landslide potential within, adjacent to, and down slope of areas proposed for development. These protective measures may include relocating a section of road or block boundary; end hauling; full suspension cable harvesting; timing restrictions; road deactivation; or other measures to maintain slope stability.

Sites requiring TSFAs are identified by field personnel in the planning or layout stage and will be undertaken concurrent with block and road layout.

Where a TSFA is completed for an area, operations will be consistent with the assessment's results and recommendations.

SD3.1.2 Road Construction

Road layout, design and survey will be completed to the satisfaction of the FSP Holder prior to construction or modification. Investigative field inspections and reviews by qualified professionals will be done as appropriate. It is CTR's goal to have mainline and operational road construction take place during favorable weather conditions. All road construction will maintain natural drainage patterns, with the use of appropriate drainage structures to minimize siltation and to maintain the natural flow of water. In all areas, fisheries habitat will be protected from adverse effects caused by road construction, modification and maintenance. Where unavoidable, impacts will be minimized. Overland and end-haul techniques will be used where necessary to minimize disturbance to subsurface drainage and to avoid loading fill slopes with unfavorable material.

Forest roads will be deactivated when they are no longer in regular use and are not regularly maintained. Generally, drainage structures that present serious maintenance problems on limited access roads will be removed or fail-safed. Features such as water bars, rolling dips and fords will be constructed where necessary to establish natural drainage and disperse water flow. This is consistent with recommendations for water quality from the 2021 MRVA Report for the CMNRD, which suggests that more and better designed cross ditches should be used in the District to manage road surface water. These features will be designed to permit vehicular traffic. Periodic maintenance will be conducted for limited access roads.

Road condition and access requirements will guide the level of deactivation for roads that are permitted by CTR. Guiding Principles and Considerations when Planning and Implementing Road Deactivation were prepared in 2015 for the Coast Mountains Natural Resource District by the Kalum Plan Implementation Committee. Even though these Guidelines have not been formally

endorsed, the FSP Holder's approach to deactivation is consistent with many of the guidelines, and they will be considered when deactivating roads. Roads may be active or inactive as dictated by operational needs and special resource concerns such as protection of wildlife and trail use objectives. Inactive roads may have limited access or be inaccessible if they are closed to vehicular traffic. On roads that are deactivated, the objective will be to provide adequate drainage and slope stabilization that will protect the road for future management use. Additional deactivation efforts (i.e., culverts and bridge superstructure removal, fill material stabilization or reclamation, reforestation or revegetation) may be required for other forest management reasons.

SD3.1.3 Road Maintenance

For the term of the Plan, all active road systems under permit within the FSP Holder's planning areas will be maintained in accordance with the *FRPA.* Specifically, the structural integrity of the road prism is protected, drainage systems are functional, and the road is safe for industrial users. Road inspections and maintenance will be carried out as determined by the following road risk rating chart. If no road risk rating is completed, inspections will occur at least annually on all non-deactivated roads within CTR's operating area, as per strategy **CTR17-04** of this FSP.

CTR ROAD RISK RATING CHART	**CONSEQUENCE**																	
	Proximity to Community Watershed				Proximity to Fish Streams				Proximity to PNG Lines				Proximity to Hydro Lines				Proximity to Private Land		
HAZARD	Greater than 1km away	Between 0.5 and 1km away	Within 0.5km		Greater than 0.5km	Between 0.1 and 0.5km	Within 0.1km		Greater than 0.1km	Within 0.1km	Adjacent to road or crossing		Greater than 0.1km	Within 0.1km	Adjacent to road or crossing		Greater than 1km	Within 0.1km	Adjacent to road or crossing
Wilderness Road	L	L	M		L	L	M		L	L	H		L	L	H		L	L	M
Terrain Class I, and II	L	L	L		L	M	H		L	L	M		L	L	M		L	M	H
Terrain Class III	L	M	H		M	H	H		M	M	H		L	M	H		L	M	H
Terrain Class IV and V	H	H	H		H	H	H		H	H	H		H	H	H		H	H	H

L	Low = inspect every 3 years
M	Moderate = inspect every 2 years
H	High = inspect annually

CTR's goal for active roads is to maintain the integrity of the road prism and drainage structures. Practices that can help alleviate soil disturbance or transport risk include:

- Grass-seeding disturbed cut and fill slopes of roadways that are prone to surface soil erosion and may contribute to siltation of streams (ideally on the first growing season following construction or maintenance).
- Grass seeding and fertilizer applications on areas affecting domestic water supplies should be scheduled and conducted so there is no impact on water users.
- Regular inspections of all drainage structures, bridges, roadways and ditchlines will take

place. These inspections will produce a maintenance schedule that addresses the problems identified such that road maintenance objectives are met. Formal inspections will occur at least annually for all inactive roads and quarterly for all active roads unless a risk assessment determines that another inspection frequency is appropriate. Informal inspections will also be regularly conducted on all active and limited access roads. An annual inspection will occur shortly after snowmelt (May to June) allowing any required maintenance to be done prior to the peak rainfall season (October to November). Grass seeding may be done concurrent with this inspection. Inspection of drainage structures should record the condition, maintenance requirements and priority along with any remarks that serve the road maintenance program. If maintenance is completed at the time of the inspection, it should be noted to allow historical tracking of drainage structure performance. Regular (at least annual) roadway inspections of roadways and ditchlines will record the maintenance requirements and priority along with any remarks that serve the maintenance program. In particular: the road surface; ditchlines; cut and fill slopes and hazards along the right-of-way will be inspected.

In addition to the practices requirements, note that management for soils also occurs through results and strategies that are provided within the FSP: **CTR17-01**, **CTR17-02**, **CTR17-03** and **CTR17-20** place limits on the total clearcut area within specified watersheds, thereby managing peak water flows and reducing the potential for erosion of soils in the watershed.

SD3.1.4 MRVA/FREP: Soils

According to the April 2019 FREP Report from the Assistant Deputy Minister, within the Skeena Natural Resource Region, there is not enough historical information to determine a stewardship trend for soils. Nonetheless, the following practices were listed in the report as opportunities for improving the management of soils:

- Plan operations in and outside roadside work areas to minimize soil disturbance.
- Implement road and structure rehabilitation for permanent deactivation.

The 2021 MRVA Report for the Coast Mountains Natural Resource District does not include the soils value, but the recommendations for roads provided as part of the water quality value are also applicable to soils:

- On non-operational roads, install more and better designed cross ditches to manage water from road surfaces.
- On newly constructed roads, reduce the area of disturbance, grass seed, armour with rock or spread logging debris on bare soil to reduce erosion.

This supporting document discusses practices to minimize soil disturbance in the preceding sections. Road inspections carried out as part of **CTR17-04** will identify road maintenance requirements, including road and structure rehabilitation where it is deemed necessary by inspection.

SD3.2 Timber

The timber inventory in the FDUs consists primarily of western hemlock (*Tsuga heterophylla*) and amabilis (“balsam”) fir (*Abies amabilis*). Western red cedar (*Thuja plicata*), Sitka (hybrid) spruce (*Picea sitchensis var.*), mountain hemlock (*Tsuga mertensiana*) and lodgepole pine (*Pinus contorta*) are also found throughout the FDUs in lesser amounts. There are also small amounts of black cottonwood (*Populus trichocarpa)*, balsam poplar (*Populus balsamifera*), red alder (*Alnus rubra*) and birch (*Betula papyrifera*) that may be of commercial value as well. Harvesting of this inventory will be conducted in a cost-effective manner that maintains the integrity of other associated resource values within the operating area. Harvesting techniques that maximize the economic, environmental and safe utilization of the timber resource will be encouraged.

TFL 1 is an area-based tenure that includes four distinct operating areas: Kiteen, Kitsumkalum, Copper, and Whitebottom. The total allowable annual cut (AAC) for TFL 1, apportioned to CTR is 320,277 m^3. The AAC for FL A16835 is 244,037 m^3. The operating areas for this forest license include side drainages that flow into the Skeena River, the eastern slopes of the Kitsumkalum valley, the Big Cedar drainage and the Williams Creek and Hatchery Creek drainages.

The timber in the Kalum TSA is challenging from a processing standpoint. Timber quality is relatively poor with high proportions of decay due to the age of most forest stands. Timber management focuses on providing a secure landbase and maintaining the health and productivity of the forest resource so that a sustainable and viable forest industry is supported. Management strategies for logging are designed to avoid inconsistency with other forest resource objectives. These considerations translate into significant challenges with respect to finding areas that are economically operable.

At the landscape level, a multi-pass system will be considered to reduce the rate of logging in developed areas and to establish primary access across the representative profile of the commercial forest landbase. The number of logging passes will be contingent on stand conditions, resource management objectives and silviculture needs. CTR will strive to log the timber profile within all planning areas, with stand cutting priority influenced by forest health objectives. Market conditions will additionally influence the feasibility and timing of logging stands that have constraints due to access, quality or quantity. Landscape fragmentation consequences are to be evaluated to ensure a balanced achievement of resource objectives. This is addressed through strategy **CTR17-35** and result **CTR17-36**.

In general, cutblocks are designed so that economic timber is not isolated from subsequent logging opportunities. Clearcut blocks will conform to landforms or timber types and will vary in size and distribution to provide a range of opening sizes across the FDUs. Logging proposals will conform to 'Total Chance Planning' principles in which road locations and logging systems are optimized. The logging method that best meets the constraints imposed by soil and terrain conditions, timber quality, known resource objectives and economic feasibility will be favored.

Silviculture systems employed will be designed to be ecologically suitable in recognition of known resource values, and economic and resource objectives. Non-clearcut systems will be considered for use where stand structure allows and where resource values such as water quality or wildlife habitat would be adversely affected by clearcut logging. The falling selection for these systems may be based on species, tree health, defect, diameter, age, windfirmness or a combination of such factors. Generally, CTR plans to clearcut the forest types of even-aged, mixed coniferous species within its FDUs. Regeneration will occur at or near the time of logging and will promote an ecologically appropriate mix of species such as; hemlock, cedar, balsam, spruce and pine as per result **CTR17-05** and, within the Ksi Gahlt'in FUD, **CTR17-06**. Clearcut systems will incorporate strategies such as single tree and patch retention to address biodiversity and other resource objectives.

Forest health agents of importance within the FSP area include insect pests of mature and immature trees and pathogens affecting roots, stems and foliage of managed tree species. Mammals such as voles, hares and porcupines are also of concern as are abiotic factors such as frost, fire and windstorms. Forest health considerations such as pests and disease agents, or abiotic factors such as windthrow or fire may also influence cutblock design and reforestation prescriptions.

SD3.2.1 Pests and Disease

CTR is committed to managing the health of forest stands. The primary forest health management objective is to maintain, recover or enhance the short- and long-term productivity of the timber resource by minimizing losses caused by insect, disease, windthrow and other damaging agents to levels that are socially acceptable and economical. As early detection is one of the keys to preventing major outbreaks, stands are assessed on a regular basis through periodic surveys. If an epidemic outbreak of insects or disease is detected, the FSP Holder, in consultation with other agencies, will determine the appropriate course of action. Strategic planning for forest health is guided by a Forest Health Strategy prepared for the Coast Mountains Natural Resource District.

CTR is committed to a program of pest management which will minimize losses due to insects

and diseases. Detection, prevention, control and monitoring of insect and disease infestations will be a co-operative effort between CTR and the MOF and is in the preparation of all operational plans.

Site-level planning will endeavor to anticipate all insect and disease infestations, both current and potential, beyond the free growing time frame with all agents identified and appropriate prescriptions stated clearly. Pest incidence will be assessed during silviculture surveys and periodic site visits. If a specific pest concern is noted on a cutblock during a survey, a subsequent pest assessment will normally be scheduled.

Spruce Leader Weevil (*Pissodes strobi)* is one of the more common pests in plantations, particularly in the southern part of the district. The approach taken within this FSP to minimize spruce leader weevil, is to limit the amount of spruce being planted in areas susceptible to weevil attack (generally based on BEC Zone and elevation), and to source spruce seeds that are weevil resistant. This minimizes the risk of a plantation not successfully regenerating if the weevil damages the spruce. This limitation on spruce planting is reflected in the stocking standards included in the FSP (Section 3.2).

Hemlock dwarf mistletoe (*Arceuthobium tsugense*) is present throughout the district. Dwarf mistletoe spread rate is fastest in multi-storied stand conditions where mistletoe seeds from infected overstory trees drop onto susceptible understory trees. Two or three-meter knockdown during logging is one method intended to slow down the rate of spread of dwarf mistletoe. In areas proposed for partial cutting or commercial thinning, trees infected with mistletoe should be targeted for removal. An alternative treatment is to promote non-susceptible species such as cedar on sites anticipated to have high risk to mistletoe infection.

Since timber adjacent to cutblocks will have some level of infection, it will be difficult to eliminate mistletoe infection from managed stands. Highly productive sites have been shown to outgrow branch-infested mistletoe, making management of mistletoe less important in these areas.

Voles (*Microtus spp*.) can cause considerable damage to young plantations. Voles may eat new shoots or more commonly girdle young seedlings. Options for reducing the damage from this pest are limited. Newly planted seedling can be sprayed with a repellent. When planting in areas where voles are known to be a concern, protective collars can be placed around the seedlings. This is a high maintenance solution and has only proven effective in some cases. Other potential strategies include retaining perch trees or installing artificial perching structures can encourage vole predation by raptors; or reducing cover for voles by brushing newly planted areas, as brushing makes the voles visible to predators. Overall, however, the primary strategy is to align planting activities with the boom-and-bust population cycle that voles typically follow. For example, fill planting may be prescribed for areas once vole populations are at the low end of their cycle or planting can be delayed in the spring until after leaf out so voles have alternative food.

Porcupine (*Erethizon dorsatum*) feeding on conifers is not a significant problem at the forest level but can be significant at the stand level. Some methods to minimize porcupine damage are to plant a variety of tree species on a block and favor tree species less susceptible to damage during juvenile spacing activities. Less susceptible species may include western red cedar and amabalis fir.

Northern Pitch Moth (*Petrova albicapitana*), **Comandra Blister Rust** (*Cronartium comandrae*), and **Stalactiform Blister Rust** (*Cronartium coleosporiodes*) have been attacking second growth pine stands in the Nass TSA. Since the FSP area adjoins the Nass TSA and there are many pine leading second growth stands close to becoming free growing and reaching green-up, these pests are of concern. The Pitch Moth typically weakens the leader/main stem making it susceptible to wind and snow breakage. *Cronartium* rusts typically weaken and deform stems and have a higher probability of causing mortality. Seedling to juvenile trees and over mature trees suffer the most damage from the cankers. The 2007 Forest Health Strategy ranked Comandra as a moderate risk. The risk is mitigated through the limitations on lodgepole pine in the stocking standards included in the FSP (Section 3.2).

Dothistroma Needle Blight (*Mycosphaerella pini*) is a concern; many young pine plantations have been attacked. There has been an aggressive effort to inventory the attacked areas and set priority for treatment, which consists mostly of underplanting non-susceptible species. It is believed that Dothistroma is usually endemic in the forest, but a series of warm, wet summers, combined with the prevalence of stands at a susceptible age has allowed it to grow significantly. The MFLNRO has a program in place to address the hardest-hit stands and for continued monitoring. While Dothistroma is widespread in the FDUs, there does not seem to be significant mortality. Damage is light to moderate on the majority of the FDUs except for flat areas near major river systems (personal observation, Rico Jorimann). The risk associated with Dothistroma is mitigated through the limitations on lodgepole pine in the stocking standards included in the FSP (Section 3.2).

Mountain Pine Beetle (*Dendroctonus ponderosae*) have been attacking and killing pine stands within the interior of British Columbia. Several years ago, active infestations were reported in Rosswood, Nisga'a Lands, Lower Nass, and the Copper River valley; these areas have been subject to a fall and burn program. Current infestations are minor, but Mountain Pine Beetle remains endemic throughout the district and it is possible an outbreak could occur in the FDUs. If epidemic populations do develop within the FSP area, a strategy involving additional salvage logging and/or fall and burn may be necessary.

Tomentosus root rot (*Inonotus tomentosus*) and **Annosus** root disease (*Heterobasidion annosum*) are root diseases that naturally persist in forests throughout the Coast Mountains Natural Resource District. Management strategies include clearing the infested areas as part of normal logging and reforesting the infection centers with less susceptible species. For Tomentosus root rot centers, Sitka spruce and lodgepole pine are the most susceptible species; western red cedar, western hemlock and amabalis fir suffer less damage and are the preferred species to manage.

For Annosus root disease centers in the FDUs, lodgepole pine, cedar and deciduous species are the preferred species to manage, with hemlock and spruce being more susceptible and amabalis being the most susceptible. Stocking standards have been developed and included within the FSP (Section 3.2) for sites within the Coastal Western Hemlock ws1 BEC unit that have a high incidence of Annosus root disease.

Other potentially viable treatments for root rot infections include stumping and knock over logging, but these practices are expensive and would generally make harvesting the area uneconomical. As well, stumping and knock over logging may result in significant site degradation on areas with steep slopes or fine textured soils. The preferred management of root rot diseases is to promote less susceptible species.

Spruce beetle (*Dendroctonus rufipennis)* bores into the cambium of downed and standing spruce to lay its eggs. This beetle prefers downed material including recent windthrow, logs, stumps and debris from logging, but will also attack living trees when populations are high. Stands that have the highest hazard for spruce beetle include those with more than 300 cubic meters of spruce per hectare, spruce with dbh of 41 cm or greater, and creek bottoms that contain more than 65 percent spruce. In the Skeena Region, higher than normal populations of spruce beetle have been detected but an outbreak has not yet occurred. The District Manager of the Coast Mountains Natural Resource District issued an expectations letter in July 2016 in conjunction with Beneficial Management Practices for the Skeena Region that provides guidance should an outbreak occur. Various suppression options are listed in the Beneficial Management Practices including trap trees, sanitation harvesting, reducing windthrow and others. The FSP Holder will document and report spruce beetle infestations.

SD3.2.2 Windthrow

Windthrow is of general concern throughout the Coast Mountain Natural Resource District. Strong inflow and outflow winds as well as localized gusting winds can produce significant amounts of windthrown timber. Of concern is the stability of residual timber in partial cut stands,

interior reserves in clear-cut areas and riparian reserve areas. CTR manages windthrow by minimizing the occurrence and salvaging accessible windthrow.

1. **Minimizing the amount of windthrow** is achieved by taking into consideration the direction of prevailing winds and windthrow risk when prescribing silviculture systems and designing cut block boundaries. Site specific measures will be determined during block layout and prescribed in silviculture prescriptions.
2. **Salvaging wind thrown timber** where it occurs will be undertaken where economical. Areas of wind thrown timber larger than one (1) hectare in size are usually laid out and logged quickly. Where large blowdown events occur, adjacent susceptible timber may be proposed for logging concurrent with salvage of the windthrown timber.

   Removal of windthrown trees within RMAs will be considered where the integrity of stream banks can be protected. Where there are standing, undamaged trees within RMAs, retention of these trees will provide a natural wind firm feathered boundary and valuable riparian habitat. Windthrown trees that have entered a stream channel will only be removed if they are determined to be negatively impacting the stream habitat and/or channel stability, or they can be removed without negatively impacting stream channel stability and water quality.

SD3.2.3 Fire Protection

CTR is committed to ensuring fuels created by logging operations do not pose an unacceptable risk to identified forest resources. All logging activities will ensure that excess slash can be disposed of in a safe, orderly manner limiting both fire and insect hazards. Upon completion of logging, completed blocks and roadways will be assessed to determine the requirement for reforestation and hazard abatement treatments. Consideration is also given to large woody debris retention for the maintenance of biodiversity and soil nutrients. Appropriate treatments will be carried out to satisfy protection, silvicultural and ecological management objectives.

Forests in the FSP area generally consist of decadent hemlock/balsam stands with some areas containing minor components of spruce, cedar or pine. Logging slash can create a high fire hazard unless managed appropriately.

To minimize fire hazard, the following fuel management strategies may be used:

1. Salvage wind thrown timber wherever economical and environmentally practicable.

2. Pile roadside slash and landing accumulations concurrently with logging operations. Where possible, slash piles will be burned or disposed of in the first or second fall after harvest when there is a reduced fire hazard and venting conditions are appropriate. In areas where smoke is a concern, CTR will coordinate any hazard abatement with the appropriate organizations and/or individuals. The size and number of debris piles being burned at one time may be reduced in areas where smoke management is a concern.

3. To reduce wildfire risk close to existing development, CTR has developed a Fire Management Stocking Standard (FMSS) (strategy **CTR22-01** and **Appendix A** of the FSP). Where 50% of the SU is located within 500 m of three or more known instances of structures or infrastructure, a Fuel Assessment (FA) will be conducted using the Fuel Assessment Worksheet from Appendix B of the Wildfire Threat Assessment Guide and Worksheets (June 2020). A copy of the worksheet is included in **Appendix sdD**. The assessment will consider current conditions and future conditions under both conventional stocking standards and Fire Management Stocking Standards (FMSS). Where 50% of the SU is located within 500 m of one or two known instances of structures or infrastructure, a FA may be conducted at the discretion of the prescribing forester. If the FA determines that the Fuel Assessment Rating (FAR) is projected to be moderate, high or extreme using conventional stocking standards, and if the FAR is projected to drop at least one class using Fire Management Stocking

Standards (FMSS), Fire Management Stocking Standards (FMSS) will be used. Fire Management Stocking Standards attempt to balance timber values with reduced wildfire behavior. Deciduous stocking is strongly linked with reduced fire behavior and FMSS consider ecologically appropriate deciduous species to be preferred, and apply minimum requirements for deciduous stocking.[8]

CTR will also submit a contact list annually to the MFLNRO's Northwest Fire Centre.

Prescribed (broadcast) burning is an option primarily used for different purposes such as reducing the duff layer, creating plantable spots or reducing fuel loads or creating conditions for growth of early seral stage species (e.g., berries for First Nations cultural use). CTR does not currently plan to use prescribed burning on any areas. If fuel loading becomes a concern or site preparation for reforestation is required, broadcast burning may be an option.

SD3.2.4 Provincial Timber Management Goals

The MFLNRORD released a set of provincial level timber management goals, objectives, and targets in 2017, which are based on and build on those in FRPA and other Ministry policies and reports. Five broad goals were set for: timber volume flow over time; timber quality; tree species composition; stand productivity and growing stock; and inherent site capacity. In September 2022, an update was released for the Kalum TSA and TFL 1 that updated the status for these local timber management targets. While a preliminary review of the update did not note changes of significant concern, at the time of writing this Supporting Document, local licencees including CTR were working together to collectively review the summaries in more depth.

Note that management for timber also occurs through strategies and results not otherwise mentioned in this section:

- **CTR17-35** and **CTR17-36** provide for a distribution of seral stages and patch sizes across larger areas, providing for the maintenance of timber supply.
- **CTR17-38** provides a mechanism for disturbing an Old Growth Management Area to allow operational flexibility.
- **CTR17-41** provides a mechanism for disturbing a wildlife tree retention area to allow operational flexibility.

SD3.3 Wildlife

Under the *FRPA*, identified wildlife species that require management will be managed through an FSP, a Wildlife Habitat Area (WHA), or a General Wildlife Measure (GWM).

On May 3, 2004, under section 11 (now section 13) of the *Government Actions Regulation* (GAR*)*, the Minister of WLAP identified species of wildlife that require management. Further amendments to this list were made on May 30, 2005 and June 5, 2006 and a nomenclature update was made on July 18, 2011.

WHAs for coastal tailed frog and GWMs for mountain goat and moose Ungulate Winter Range have been established within the FDUs.

When a Notice of Habitat Attributes, Amount and Distribution is given under FPPR s. 7 for a species, the FSP must describe strategies or results that are consistent with that Notice. If there is no Notice, strategies or results are not required.

Results or strategies in the FSP that are prepared to be consistent with the wildlife objective are centered on habitat maintenance strategies intended to sustain viable populations of native wildlife species within

[8] Fire Management Stocking Standards Guidance Document 2016

their natural ranges. Rare, endangered or regionally significant species are to be protected or enhanced. The successful achievement of the wildlife objective is also linked to the implementation of biodiversity and riparian management strategies. For example, the establishment of RMAs, sensitive areas, old growth preserves and conservation areas and group and single tree retention will provide critical components of wildlife habitat such as wildlife trees, vertical structure, snags, coarse woody debris sources, a variety of forest edge types and migration and dispersal corridors.

SD3.3.1 Species at Risk

Of the species at risk identified under GAR s. 13(1), the table below lists the species that may occur in the FDUs. Caribou (northern mountain population) may occur within the eastern reaches of the CMNRD, but according to information provided within the MOE website for Identified Wildlife, the potential range does not overlap with the FDUs.

As of December 2022, notices under FPPR s. 7(2)(b) providing descriptions of the habitat area, distribution, and attributes for the identified species at risk in the CMNRD have been issued by the MWLAP (now MOE) for:

- coastal tailed frog
- grizzly bear
- Marbled Murrelet

Notices for the other species identified under GAR s. 13(1) have not been issued, so strategies or results for these wildlife species are not required in the FSP. Between the strategies and results that address the coastal tailed frog, grizzly bear, and Marbled Murrelet, as well as those for ungulate winter range, plus the other strategies within this FSP that address water and biodiversity issues, management is occurring that benefits all the identified species.

The following table provides additional information on the species within the CMNRD and a complete listing of the species at risk identified under GAR s. 13(1) for BC is provided in **Appendix sdB (Table sdB-1)**.

Category/Species	Date designated	Notice of Habitat Attributes, Amount & Distribution in place?
Amphibians		
Coastal/Pacific Tailed Frog	**May 6, 2004**	**Yes**
Northern Red-legged Frog	**May 6, 2004**	No
Birds		
American White Pelican	**June 6, 2006**	No
Ancient Murrelet	**May 6, 2004**	No
Cassin's Auklet	**June 6, 2006**	No
Great Blue Heron, *fannini* subspecies	**May 6, 2004**	No
Great Blue Heron, *herodias* subspecies	**June 6, 2006**	No
Lewis's Woodpecker (including Georgia Depression pop'n)	**May 6, 2004**	No
Long-billed Curlew	**May 6, 2004**	No
Marbled Murrelet	**May 6, 2004**	**Yes**
Northern Goshawk, *laingi* subspecies	**May 6, 2004**	No
Northern Pygmy-owl, *swarthi* subspecies	**June 6, 2006**	No
Sage Thrasher	**May 6, 2004**	No
Short-eared Owl	**May 6, 2004**	No
White-tailed Ptarmigan, *saxatilis* subspecies	**June 6, 2006**	No
Fish		
Bull Trout	**June 6, 2006**	No
Invertebrates		
Quatsino Cave Amphipod	**June 6, 2006**	No

Category/Species	Date designated	Notice of Habitat Attributes, Amount & Distribution in place?
Mammals		
Caribou (including northern mountain [pop.15], southern mountain [pop.1], & boreal [pop.14] populations)	**May 6, 2004**	No
Fisher	**June 6, 2006**	No
Grizzly Bear	**May 6, 2004**	**Yes**
Pacific Water Shrew	**May 6, 2004**	No
Wolverine (subspecies *luscus, vancouverensis*)	**May 6, 2004**	No

In addition to the wildlife species identified through GAR s. 13, there are also "red- or blue-listed" species identified through the BC Conservation Data Center (CDC) and these are also referred to as "species at risk". As of June 2022, the CDC lists four animal and eight plant species as red-listed (extirpated, endangered, or threatened), and 72 animal and 18 plant species as blue-listed (of special concern) that may occur in the FDUs. In addition, there are 44 plant communities (ecosystem associations) that are either red-listed (10) or blue-listed (34). These species and communities are provided in **Appendix SDB**. Specific information regarding the distribution of these CDC species and associations within the FDUs was not available. CTR is aware of these species and associations and will make note of any occurrences. However, from the perspective of FRPA, these CDC species are not addressed in the FSP unless they are also identified under the GAR.

SD3.3.1.1 Bull Trout

Bull trout are cold water specialists, well-distributed across BC, particularly in interior watersheds. Bull trout have historically been confused with Dolly Varden and continue to be difficult to differentiate. There are three distinct life strategies with bull trout: full time stream residents; adfluvial (spawn in tributary streams and reside in lakes) and fluvial (spawn in tributaries, live in mainstream rivers). The five habitat features that primarily influence bull trout distribution and abundance are: channel and hydraulic stability; substrate; cover; temperature and the presence of migration corridors. Influences on habitat are likely to come from elimination of or restriction to habitat; sediment input; or habitat loss[9].

Although specific habitat amount, attributes or distribution information for bull trout has not been established for the CMNRD, results and strategies in this FSP that are consistent with objectives set by government for biodiversity and riparian areas also serve to protect channel stability, substrate, cover, temperature and connectivity, which will benefit bull trout and other fish species. All streams that are designated as fish bearing are afforded appropriate protection through the default practice requirements under *FRPA*.

SD3.3.1.2 Coastal Tailed Frog

The coastal tailed frog is the only known stream breeding frog in Canada. The coastal tailed frog is listed as a species requiring management under GAR s. 13 but was changed from a blue-listed species to a yellow-listed (apparently secure and not at risk of extinction) by the BC CDC in 2016. It has two discrete distributions in BC, occurring predominantly along the Coast Range, with a small population in the Southern Interior Mountains of the Kootenays. For coastal BC, the tailed frog distribution generally coincides with the CWH BEC Zone. The known northern limits of distribution are found in the CMNRD and are encompassed within the FDUs.

The coastal tailed frog primarily inhabits headwater gullies of cool and permanent mountain streams. Creek size and fine sediment levels appear highly influential to tailed frog populations.

[9] Accounts and Measures for Managing Identified Wildlife – Bull Trout.

The creek substrates and gully sidewalls must be relatively stable as events such as debris flows, and sediment laden floods impart a high mortality on larval populations. A stable creek has a low percentage of fine sediments with boulders and cobbles comprising the channel bed. This substrate provides tadpoles forage sites and cover from predators and bedload transport events. Adults will feed on terrestrial invertebrates at night, retreating under cover in or next to streams during the day. Bedrock types also likely play a significant role in tailed frog distribution with populations most prevalent in competent, coarse-grained intrusive rocks and scarce or absent in friable, fined-grained sedimentary rocks. Tadpole numbers also appear correlated to creek size, occurring in creeks ranging from 1 to 12 meters in width. Wider creeks have a greater carrying capacity and may flush out any sediment inputs more effectively.

The tailed frog is likely to occur in all CTR planning areas, specifically where coarse-grained bedrock geology is present. Management of suitable habitat will revolve around the maintenance of natural stream channel sediment levels and transport regimes and the conservation of forested buffers along the stream. Strategies such as riparian reserves, fall away and yard away techniques, machine free zones in RMAs and ditchline sediment traps on roadways will be employed.

Since the coastal tailed frog is dependent on small forest streams, the default riparian management area (RMA) widths (FPPR s.47 to 49) will capture a significant portion of the small forest stream habitat for coastal tailed frog (usually stream class 3, 4, 5, or 6). In addition, the Kalum LRMP and then the Kalum SRMP have identified special areas for the frog; culminating with the designation of ten Wildlife Habitat Areas (WHA) within the CMNRD. The FSP overlaps with the following 9 coastal tailed frog WHA:

- 6-058 (Ascaphus)
- 6-059 (Trapline)
- 6-060 (Hardscrabble)
- 6-061 (Shannon)
- 6-062
- 6-063 (Copper)
- 6-064 (Kleanza)
- 6-065 (Shames)
- 6-066 (Gosling)

The FSP does not provide results or strategies for tailed frog as this WHA designation has been determined to meet the required amount of tailed frog habitat in the Kalum TSA. The goals of these WHAs are to ensure that there are legacy areas where stream stability, maintenance of water temperature, riparian habitat and microclimate, and coarse woody debris for adult frog dispersion are the focus[10]. General Wildlife Measures are provided in the Orders establishing coastal tailed frog WHAs.

Over the remainder of the FDUs, it is worthwhile to note that the practice requirements for riparian areas (as described in FPPR s. 47 – 52), plus the retention of trees as described in result **CTR22-06**, will also provide for the needs of the coastal tailed frog.

SD3.3.1.3 Fisher

Fishers are large fur-bearing mammals of the weasel family with a wide distribution across the interior of BC. The CMNRD is on the fringe of fisher distribution. Fishers are solitary and do not interact with other fishers except at mating or as mothers raising their young. Fishers are omnivores but are preferentially carnivorous. Their preferred prey is porcupine and hare, but fishers will change their diet as necessary depending on prey availability. Most foraging occurs within mature or old-growth forests, though fishers may also make use of other forest types, depending on availability of prey. The key habitat features for fisher are availability of coarse woody debris, large wildlife trees, and canopy coverage in winter[11].

For fishers, the predominant impacts of clearcut logging are the reduction of canopy coverage and forest interior conditions leading to reduced connectivity of suitable habitat. The

[10] Hetherington, A. Personal communication. Jan 14, 2005
[11] Accounts and Measures for Managing Identified Wildlife - Fisher

maintenance of connective corridors, specifically along riparian areas, within wetland forest types and to upland habitats is extremely important for maintaining habitat opportunities. The default riparian practices in the FPPR provide for the maintenance of RMAs along streams, lakes and wetlands. Critical habitat for fisher is generally riparian associated, with suitable resting and maternal denning sites possibly being limiting factors. Large CWD is important for both winter rest sites and as habitat for prey species. Maternal den sites are predominantly located in large, declining cottonwood. Fishers (as well as marten and other furbearers) may avoid large openings (25 ha +) because of the lack of cover and susceptibility to being preyed upon by predators, therefore the maintenance of corridors or screening patches will reduce sighting distances and link unharvested forest stands. The patch size distribution targets identified through strategy **CTR17-35** will also ensure that there are smaller openings. WTRAs (result **CTR22-05**) typically include large veterans and deciduous species that provide important opportunities for denning and cover habitat and they provide sources of CWD for resting and foraging sites. Within the Ksi-Gahlt'in FDU, active denning sites are protected through results **CTR17-56** by retaining a no-harvest boundary during forest activities or an alternate strategy provided by a qualified professional.

Fishers can also act as a representative furbearing species so managing for fisher habitat will also provide some habitat value for other furbearers. This is a particularly important consideration for areas where trapping of wildlife is an economic or cultural consideration.

SD3.3.1.4 Great Blue Heron

The great blue heron is dependent on lakes and ponds and is generally a lowland species. Following the default RMA widths (FPPR s. 47 to 49), as referenced in section 2 of the FSP, especially with respect to protection around lakes, will capture a significant portion of this habitat.

Breeding habitat is often lowland sites with deciduous forest, preferably red alder.[12] These sites often overlap with moose Ungulate Winter Range areas, so it is expected that the GWM in the UWR Order for moose will also benefit the Great Blue Heron.

SD3.3.1.5 Grizzly Bear

The grizzly bear is a species for which conservation is of international importance. Its range has been greatly reduced in North America in areas to the south and east of BC. Grizzly bears depend on diverse habitats and do not tolerate human encounters well.

Valley-bottom salmon streams and productive riparian forests provide important forage species such as devils club, red elderberry, currants, and skunk cabbage. Avalanche tracks, subalpine, and alpine meadows are likewise important upland habitats. Suitable grizzly bear habitat may be found throughout the FDUs.

Conservation strategies for integrated grizzly bear and timber management strive to provide connectivity of habitats and conditions conducive to the survival, growth and productivity of grizzly bear forage species throughout the harvest rotation. Rich and productive valley-bottom sites may be managed to contain clusters of mature conifers with frequent groupings of deciduous trees and brushy areas, in conjunction with the preservation of riparian reserves and wet ecosystems. Silvicultural strategies such as; variable spacing and grouping of trees during reforestation and selective vegetation management and spacing techniques may be used. This is described in result **CTR17-08**. Stand retention during logging may also be used on these valley-bottom sites, as well as on the forested buffers of avalanche tracks and subalpine meadows.

The Kalum LRMP includes objectives and strategies for managing grizzly bear habitat within identified Grizzly Bear Watershed Units. The FDUs overlap the following Grizzly Bear Watershed Units.

[12] IWMS (2004). Accounts and Measures for Identified Wildlife – Great Blue Heron

Grizzly Bear Watershed Units within CTR FDUs[13]

Grizzly Bear Watershed ID	*Grizzly Bear Watershed Name*
14	Lakelse - Cecil
15	Skeena River west
16	Dasque - Whitebottom
23	Williams
24	Eight Mile - Mattson
25	Copper
26	Kleanza
27	Little Oliver - Skeena River East
28	Fiddler
29	Maroon - Wesach
30	Shames - Zymacord
31	Erlandsen
32	Kasiks
33	Exchamsiks
34	Exstew
35	Star - Alice - Deep
36	Nelson
37	Mayo
38	Beaver
39	Cedar
40	Greenville - Nass - Ksedin
41	Ishkheenickh
42	Upper Tseax
43	Lower Tseax
44	Seaskinnish
45	Kiteen
46	Nass - Kwinamuck

Within this FSP, management of grizzly bear habitat will be focused on the grizzly bear identified watersheds and informed by established grizzly bear Wildlife Habitat Areas. Within identified watersheds, management will occur by maintaining forage within critical habitats. This means cluster planting and/or reduced stocking in several rich and wet ecosystems; the stocking levels for managing grizzly bear habitat as identified in the SRMP are used in the stocking standards in the FSP (see result **CTR17-08** and Appendix A in the FSP). When ecosystem classification identifies a complex (mappable or not) that contains a significant amount of an identified richer or wet ecosystem, the intent is that this area will be included in a standards unit that manages for grizzly bear habitat.

[13] There is also a minor overlap with the McKay-Davis and Gitnadoix Grizzly Bear Identified Watersheds. The overlap is at the height-of-land outside the forested landbase. For this reasons these watershed have not been included in the table.

Within grizzly bear WHAs, management for grizzly bear occurs by limiting timber harvesting within these WHA areas**.** The WHAs identify critical habitat[14] for grizzly bears, including core areas (foraging areas) and security areas (adjacent forest cover). The establishment of WHAs is a fine filter management tool for grizzly bears, and is meant to work with landscape and operational level planning to achieve conservation objectives for grizzly bear.

In addition, grizzly bear forage and habitat will also be maintained through result **CTR17-50** and strategy **CTR17-35** and result **CTR17-36**, which ensure a distribution of patch sizes and seral stages on the landscape. The existing no-harvest zones (parks, protected areas, conservancies, ecological reserves, old-growth management areas) provide long-term habitat areas for grizzly bear. In addition, the wildlife corridors identified for the Williams-Clore pass (result **CTR17-46**), and the restrictions on the Kiteen-Cedar pass and Lakelse River area as described in result **CTR17-45** and **CTR17-51** respectively provide protection for grizzly bear movement and potential habitat (as well as for other species). An important clarification regarding the allowable partial cutting systems as referred to in **CTR17-45** is that they need to maintain the intent of the corridor, which is to provide for wildlife movement. As an example, a fifteen-hectare block with one seed tree per hectare will not likely be consistent with the intent of the corridor.

Other possible measures that would favor maintenance of grizzly bear forage or critical habitat types include:

- returning areas to a young seral state by harvesting at age class 4;
- opening the forest floor to more light and extending the window for forage production, through pre-commercial and commercial thinning, selection or variable retention harvesting, or pruning;
- acceptance of small not sufficiently restocked (NSR) patches if they contribute to maintenance of forage; and
- using prescribed fire to open the forest floor to more light and to create a nitrogen flush for forage production.

SD3.3.1.6 Marbled Murrelet

The Marbled Murrelet is dependent on large trees within old forests for its nest sites. In addition to the old forest that exists outside of the timber harvesting landbase, the strategy **CTR17-35**, which maintains the old growth proportion by landscape unit, will ensure that this old forest structure is maintained. In addition, this strategy will ensure a distribution of patch sizes is found on the landscape; this should reduce the amount of forest fragmentation, which is likely better for the Murrelet.[15] In addition, the existence of OGMAs should ensure that there are areas reserved with potential nesting sites (OGMA retention is addressed through **CTR17-37** and **CTR17-38** in the FSP).

The farthest distance that the Marbled Murrelet might be encountered from tide water is 80 km. The establishment of the Foch-Gilttoyees Park and its connectivity to the Gitnadoix Park result in a significant amount of old growth set aside from sea level to alpine that is well within the range of the Marbled Murrelet. Other areas that have been set aside, such as the Nalbeelah Wetlands Provincial Park, Exchamsiks Protected Area, Eagle Bay Provincial Park and Lakelse Wetlands Provincial Park also contribute.

SD3.3.1.7 Wolverine

The wolverine is not dependent on any specific habitat type, with the possible exception of denning requirements. This carnivore is primarily a carrion feeder that often depends on ungulates as a food source.[16] As a result, wolverines' range will often overlap with moose or mountain goat winter range, so it is expected that the management strategies for moose and goat

[14] Kalum LRMP defined critical habitat as high value forage areas.
[15] Accounts and Measures for Identified Wildlife – Marbled Murrelet, 2004
[16] Accounts and Measures for Identified Wildlife – Wolverine, 2004

winter range will also benefit wolverines. Within the Ksi-Gahlt'in FDU, active denning sites are protected through results **CTR17-56** by retaining a no-harvest boundary during forest activities or an alternate strategy provided by a qualified professional.

SD3.3.2 Regionally important species

Under section 13(2) of the GAR, the Ministry responsible[17] for the *Wildlife Act* can identify regionally important species.

As of December 2022, there have been no regionally important species identified for the CMNRD. However, there have been some indications that the Coastal Northern Goshawk and/or Interior Northern Goshawk may be identified at some point in the next several years, due to a significant decline in the use of known nest sites. The cause of this decline is not yet known but may be a combination of disturbance to habitat through harvesting and a possibly increase in mortality of nestlings from black fly attacks. [18]

Measures to address Northern Goshawk may include[19]:

- maintaining a spatial and temporal distribution of closed canopy forests (i.e., it is recommended that more than 30% of the foraging area surrounding breeding areas is maintained in suitable mature-old forest of 80+ years);
- designation of nesting or fledging areas with constraints on amount or timing of industrial activities;
- establishment of breeding habitat areas of closed canopy, mature-old forest (120+ years) greater than 100 hectares; or
- establishment of larger (e.g., 200-300 hectare) mid-slope forest anchor areas to recruit breeding pairs of the birds.

MFLNRORD has recommended interim measures to licensees including[20]:

- that field crew can identify nests;
- available information on existing nest sites is reviewed prior to conducting site planning;
- report new breeding areas to MFLNRO representatives; and
- take steps to avoid, minimise or otherwise mitigation adverse impacts to breeding areas.

Except for the Ksi Gahlt'in FDU, no specific strategies or results are included in the FSP until a legal designation occurs. Within the Ksi Gahlt'in FDU, strategy **CTR17-10** and result **CTR17-11** provide a mechanism to maintain goshawk habitat including: nest and post-fledging areas, connectivity to foraging habitat, and mature and old forest structure within foraging areas.

SD3.3.3 Specified ungulate species and associated Ungulate Winter Range

Under section 13(3) of the GAR, the following are identified as ungulate species for which an ungulate winter range may be required:

- Mule and black-tailed deer
- Elk
- Caribou
- Thinhorn sheep
- White-tailed deer
- Mountain Goat
- Bighorn Sheep
- Moose

Of the above ungulate species, deer, mountain goat and moose are found within the FDUs. Only mountain goat, thinhorn sheep and moose are identified as requiring ungulate winter range management in the Kalum TSA.

Notices providing descriptions of the habitat area, distribution, and attributes for ungulate species

[17] As of April 2022, this is the Ministry of Land, Water and Resource Stewardship
[18] Wildlife Dynamics Consulting. 2015
[19] Stuart-Smith et al. 2012.
[20] MFLNRO. Goshawk Expectations Letter, May 29, 2016.

in the Kalum TSA were made available in December 2004 for Mountain Goat and Moose and February 2020 for Thinhorn sheep. UWR and GWMs have been established by order for mountain goat, thinhorn sheep, and moose in the FDU. As a result, there is no longer a requirement to provide results or strategies for mountain goat, thinhorn sheep, or moose in this FSP.

Also note that the range of Thinhorn sheep, while within the Coast Mountains Natural Resource District, does not overlap with this FDU.

SD3.3.3.1 Mountain Goat Ungulate Winter Range

Important mountain goat habitat is known to occur throughout the Kalum TSA. Due to snow shedding properties, steep bedrock slopes with sharp ledges and overhangs, particularly southern exposures, are favored habitats to evade predators. Vertical ravines and canyons may serve as traditional seasonal movement areas.

As summer progresses, goats will move upslope to alpine meadow habitats to feed on shrubs, grasses, sedges, and forbs. Goat populations tend to condense as winter approaches, retreating to lower elevations below timber line to escape heavy snows and cold temperatures. Winter foraging will occur in very close proximity to steep escape terrain, including areas of old growth forests where browse species such as coniferous trees, lichens, forbs, and mosses may be available. The rut may occur from late October to early December, with spring birthing and nursing in May or June typically being associated with extreme terrain. The over wintering and early spring birthing habitats are the most critical to goat populations and may be a concern for forest management and development activities.

In November 2005, Order U-6-001 established Mountain Goat Ungulate Winter Range. The UWR polygons established in the Order protect these areas of critical goat habitat and include General Wildlife Measures to reduce disturbance to goat populations and protect and conserve mature forest cover adjacent to identified escape terrain and seasonal movement areas. An amendment to the order in 2014 changed some of the Goat UWR polygons to canyon/escarpment dwelling UWR, and updated the GWM to require additional buffers on the canyon/escarpment polygons.

The UWR Order replaces the “Section 7 Notice” for Mountain Goat, relieving the FSP Holder of the need to prepare strategies or results. The FSP maps show the goat UWR. The General Wildlife Measures meet the objective for mountain goats. The order supersedes the requirements of the FSP.

SD3.3.3.2 Moose Ungulate Winter Range

In April 2015, Order U-6-009 established Moose Ungulate Winter Range. UWR polygons and General Wildlife Measures established in the Order are intended to reduce disturbance to moose populations and protect or conserve moose habitat requirements including forage and forest cover for snow interception, security cover, and thermal cover.

The UWR Order replaces the “Section 7 Notice” for Moose, relieving the FSP Holder of the need to prepare strategies or results. The FSP maps show the moose UWR, and the order provides General Wildlife Measures which meet the objective for moose. The order supersedes the requirements of the FSP.

Maintenance of forage and browse species within moose UWR can also be achieved through the application of reduced stocking and/or cluster planting on the moist rich sites that occur within the UWR areas. Result **CTR17-08** describes stocking that is applicable to moose as well as grizzly bear. This is consistent with the GWM in Order U-6-009.

Locating roads on drier sites that are less likely to support moose forage species has been identified by the Nisga’a Lisims Government as a best management practice that can favor moose populations and will be employed across all potential moose habitat.

Given the considerable overlap of large portions of moose UWR with the Skeena Islands Area, **CTR17-49** (which provides direction for this area, as per Kalum SRMP Objective 10) provides benefits for moose as well as for rare plant communities. The wildlife corridors identified for the Williams-Clore pass (result **CTR17-46**) and the restrictions on the Kiteen-Cedar pass as described in result **CTR17-45** will provide protection for moose movement (as well as for other species).

SD3.3.4 Wildlife Habitat Areas

In accordance with Section 10 of the GAR, the Minister responsible for the Wildlife Act can specify WHAs and objectives for WHAs.

There are ten WHAs established in the Kalum portion of the CMNRD for the coastal tailed frog. Nine of these fall within the FDUs and are shown on the FSP maps. These areas are discussed in greater detail in Section SD 3.3.1.2.

WHAs for grizzly bear have been identified and overlap with the FDUs (as shown on FSP Maps). These areas are discussed in greater detail in Section SD 3.3.1.5.

SD3.3.5 Wildlife Habitat Features

In accordance with GAR section 11, the Minister responsible for the Wildlife Act can specify wildlife habitat features. As of December 2022, there are no wildlife habitat features set for the area covered by the FSP.

SD3.3.6 General Wildlife Measures

In accordance with GAR section 9, the Minister responsible for the Wildlife Act can specify general wildlife measures (GWMs).

In June 2004, an updated version of the Identified Wildlife Management Strategy was released, providing accounting of, and including measures for, the management of species at risk identified in the May 6, 2004 notice.

These accounts and measures are not established under GAR s. 9 but are excellent background information and have influenced the results and strategies for wildlife in this FSP.

GWMs for Mountain Goat UWR were established in November 2005 through Order U-6-001.

GWMs for coastal tailed frog WHA were established in April 2006 through Orders 6-058 to 6-067.

GWM for moose UWR were established in April 22, 2015 through Order U-6-009.

GWM for grizzly bear were established in June 2018 through Order 6-287.

SD3.4 Water

The focus of water resource management is on the maintenance of water quality and quantity for domestic, recreational, agricultural, and industrial use and for wildlife and fisheries needs. Under FRPA, the hydrological integrity of watersheds is protected, and riparian areas maintained. Actions such as the establishment of RMAs, machine free zones, fall and yard away techniques around watercourses, terrain assessments and prescriptions (e.g., to avoid moderate to highly unstable sites), riparian classification (e.g., to determine fisheries values) and total chance planning (e.g., to provide optimum road placements and to minimize the total amount of road) function to protect water quality.

Water quality and quantity also has value to the local fish populations. Fisheries values can be very high within the FDUs. Proper identification and classification of all riparian areas will enable protection of

sensitive fish populations and habitats and by extension, will also protect water quality.

Riparian classification of streams, lakes and wetlands will be initially identified at the landscape planning level and where available are shown on the FSP maps. Generally, at this planning level all streams are conservatively classified using a default system of stream gradient and estimated width criteria unless the stream has been inventoried (e.g., Skeena River). Non-inventoried streams with less than a 20% gradient and without discernible obstructions are by default, classified as fish bearing streams. Non-inventoried streams which exceed the 20% gradient criteria are classified as non-fish bearing streams. Non-fish bearing stream reaches that are deemed to be especially important may be managed as fish bearing where appropriate. The classification on the FSP maps indicates whether the stream classification was inventoried or derived. Fisheries values are further assessed at the stand level during the development activities. Stream gradients, widths and fish habitat suitability are confirmed on the ground at this time.

Water protection issues focus on the maintenance of water quality throughout the area in this plan. It is the intent of CTR to conduct activities in a manner that limits adverse effects on water quality and maintains the aquatic biological productivity of fish streams. By following the practice requirements (FPPR s. 47 to 49), and the results and strategies in the FSP for retention in riparian management areas and hydroriparian zones (**CTR17-13**, **CTR17-14, CTR17-15**, **CTR17-16**, **CTR17-17**, and **CTR22-06**), adequate buffers will be retained along streams, wetlands, and lakes to protect water quality and fish habitat.

There are many ways to conduct development activities to minimize adverse effects on water quality. Some examples include:

1. For roads in a partially built state, maintain drainage and stability at season's end.
2. Conduct road construction operations during appropriate construction windows.
3. Conduct road construction operations in snow-free conditions (except winter roads).
4. Ensure adequate yarding deflection has been achieved during the engineering phase.
5. Conduct winter ground-based harvesting operations on frozen ground and/or sufficient snowpack in areas of wet ground and/or fine-textured soils.
6. Use site sensitive, ground-based harvesting systems during summer operations where soil conditions dictate.
7. Use fall away and skid/yard away techniques to protect understory vegetation and stream bank integrity.
8. Establish machine free zones of appropriate width on either side of streams.
9. Establish appropriate riparian reserves along high value fish bearing streams, lakes, and wetlands.
10. Use partial overstory removal in RMZs to promote wind firmness of riparian reserves (e.g., feathered, or notched edges).
11. Retain individual trees or wildlife tree patches to provide large organic debris recruitment.

Immediate action will be taken to mitigate any adverse impacts on water quality and fish habitat that may occur during forestry operations.

SD3.4.1 Riparian Management Areas

Riparian areas along streams, lakes and wetlands are important for protecting water quality, fisheries, and wildlife values. *FRPA* provides for the maintenance of RMAs along streams and rivers and around wetlands and lakes.

Riparian classes and widths of RMAs are established in accordance with *FPPR* and, within the Ksi Gahlt'in FDU, the 2017 Kalum SRMP Amendment for the Kiteen Area. The 2017 Kiteen amendment deviates from the riparian classes and widths in FPPR by requiring a reserve zone on L1 lakes and a hydroriparian zone (as defined in the Order) for streams, wetlands and lakes within defined areas (Ecosystem Network, Special Habitats for General Wildlife, and Water Management Unit).

Classes S1 to S4 apply to streams that are within community watersheds or are fish streams and classes S5 and S6 apply to streams outside community watersheds that are not fish streams.

Riparian Management Areas (RMAs) are areas adjacent to streams, lakes and wetlands that are classifiable under the *FRPA.* RMAs contain both high value timber and non-timber resources. Depending on the riparian classification, the RMA consists of a Riparian Reserve Zone (RRZ) and/or a Riparian Management Zone (RMZ). The identification and assessment of the RMA habitat and its incorporation into operational plans is critical to the management and conservation of riparian resources.

RMAs provide for the protection and management of fisheries, important wildlife habitats and water quality. All classifiable riparian features will have an RMA established. Streamside tree retention, particularly mature hardwoods, is encouraged to maintain streambank stability and stream temperature control, and to provide a source of wildlife use trees and future large woody debris. The degree of retention within any specific RMZ will be dependent on the riparian classification, the values present and the risks to those values (e.g., due to windthrow potential). Site specific prescriptions will be developed to meet fisheries and riparian area objectives at the stand level.

CTR has elected to follow the practice requirements outlined in sections 47 through 51, section 52(2), and section 53 of the FPPR, as noted in Section 2 of the FSP. This is consistent with the objective set by government for water within riparian areas (FPPR section 8).

These “defaults” can be summarised as follows (refer to the actual legislation for full details). Refer to the 2017 Kalum SRMP Amendment for the Kiteen Area for deviations from these defaults for the Ksi Gahlt’in FDU.

Streams

Riparian Class	*Stream width*	*Fish stream*	*RMA - Riparian Management Area (slope distance)*	*RRZ - Riparian Reserve Zone (slope distance)*	*RMZ - Riparian Management Zone (slope distance)*
S1-A	*≥ 100 m*	*Yes*	*100 m*	*0*	*100 m*
S1-B	*≥20 and ≤100 m*	*Yes*	*70 m*	*50 m*	*20 m*
S2	*5 - 20 m*	*Yes*	*50 m*	*30 m*	*20 m*
S3	*≥1.5 and ≤5 m*	*Yes*	*40 m*	*20 m*	*20 m*
S4	*< 1.5 m*	*Yes*	*30 m*	*0*	*30 m*
S5	*> 3 m*	*No*	*30 m*	*0*	*30 m*
S6	*≤3 m*	*No*	*20 m*	*0*	*20 m*

Retain enough trees (in riparian management zones) to maintain channel stability along S4, S5, and S6 streams that are direct tributaries to S1, S2, or S3 streams as per FRRP s. 52 (2).

Wetlands

Riparian Class	*Wetland area*	*RMA (slope distance)*	*RRZ (slope distance)*	*RMZ (slope distance)*
W1	*> 5 ha*	*50 m*	*10 m*	*40 m*
W2	*1 – 5 ha (CWHxm/dm/ds)*	*30 m*	*10 m*	*20 m*
W3	*1 – 5 ha (other)*	*30 m*	*0*	*30 m*
W4	*≥0.25 and <1 ha (CWHxm/dm/ds); 0.5 – 1 ha (other)*	*30 m*	*0*	*30 m*
W5	*Complex of wetlands ≥ 5ha*	*50 m*	*10 m*	*40 m*

Lakes

Riparian Class	*Lake area*	*RMA (slope distance)*	*RRZ (slope distance)*	*RMZ (slope distance)*
L1-A	*≥ 1000 ha, or designated*	*0*	*0*	*0*
L1-B	*≥5 and <1000 ha*	*10 m*	*10 m*	*0*
L2	*1 – 5 ha (CWHxm/dm/ds)*	*30 m*	*10 m*	*20 m*
L3	*1 – 5 ha (other)*	*30 m*	*0*	*30 m*
L4	*0.5 - 1 ha (CWHxm/dm/ds)*	*30 m*	*0*	*30 m*

Retain trees in riparian reserve zones (unless specific conditions apply)

Locate roads outside of riparian management areas, except at stream crossing

Where wildlife trees and/or wildlife tree patches are required to be retained within a cut block, the RMA will be reviewed for wildlife trees and/or wildlife tree retention area designation prior to considering areas outside the RMA.

Part of the challenge when managing and conserving RMA habitat in the CMNRD is managing the risk of windthrow. In some cases, it may be more beneficial to clear cut immediately up to the riparian feature to avoid having retained timber blow down and negatively impact water quality or the habitat. In other cases, the habitat value may be high enough to warrant prescribing a wider RMZ than the minimum. Strategies for reducing the risk of windthrow will be considered where the windthrow risk in the RRZ is moderate to high. Any windthrow management strategy will consider the non-timber resource values in the RMA.

Fall and yard away is employed where possible on S5 and S6 streams. Any yarding over fish streams will include full suspension or other measures that protect bank stability and do not introduce deleterious substances into the stream. Safety and windthrow potential will also be considered before prescribing retention of trees that cannot be felled and yarded away since in some cases controlled falling and yarding may have less impact on the stream's habitat than uncontrolled windthrow. Where falling and yarding away is not possible, actions will be taken to limit the impact on stream banks. This may include falling trees across so that the butt log clears the channel or the stem spans both stream banks; lifting out only those portions of the stem that can be removed without damaging the stream channel; retaining portions of the log on site as large organic debris (if the remaining portion of the log does not obstruct stream flow or fish passage). If the stream is within a gully, then the management of the gully system must be assessed on a site-specific basis.

Stream clean-out will be considered where harvesting debris enters the high-water mark of a stream channel and has the potential to negatively impact either:

- stream bank or channel stability, or
- immediate or downstream water quality or fish habitat.

Where introduced harvesting debris is stable and will not negatively impact the riparian resource it will not be required to be removed. Naturally deposited large woody debris will generally not be removed from streams unless required for operational or safety reasons. Within the Ksi Gahlt'in FDU, **CTR22-02** requires that large woody debris naturally deposited in S1 to S4 streams is maintained.

When harvesting and/or debris removal is planned within a gully, a gully assessment can help determine how to conduct operations within the gully.

General Management Practices

The following identifies some of the common practices that will generally be prescribed in RMZs.

Riparian Classification	***General Management Practices***
S1, S2, S3 streams	The primary objective of the RMZ for these streams is to reduce the risk of windthrow in the reserve zone and provide opportunities for meeting wildlife tree objectives. Generally, no harvesting will occur in RRZs except for road construction; clearing of full suspension yarding corridors; falling of danger trees or other activities to meet the management objectives of non-timber resources. Salvage operations may occur where the operation results in a condition that is consistent with the management objectives of non-timber resources in the RRZ. Where there is a moderate to high risk of windthrow in the RRZ, feathering of the RMZ will be considered where suitable wind firm trees exist in the RMZ. Where no suitable wind firm trees exist, other treatments such as top pruning or crown thinning treatments may be prescribed within the RMZ and/or RRZ. Where these treatments are not suitable for protecting the RRZ from windthrow, options for the relocation and/or redesign of the boundary will be considered. Retention within the RMZ will be as per Result **CTR22-06** and the provisions of the practice requirements.
S4 streams	Where required to maintain stream bank stability, protect fish habitat, maintain downstream water quality and where wind firm trees exist, sufficient trees will be retained. Otherwise, all merchantable trees may be logged. Non-merchantable trees, understory deciduous trees, shrubs, and herbaceous vegetation within ~5 m of the stream channel will be retained to the fullest extent possible. Retention within the RMZ will be as per Result **CTR22-06** and the provisions of the practice requirements.
S5, S6 streams	Where required to maintain stream bank stability, maintain downstream water quality and where wind firm trees exist, sufficient trees will be retained, otherwise all merchantable trees may be logged. Non-merchantable trees, understory deciduous trees, shrubs, and herbaceous vegetation within ~5 m of the stream channel may be retained if practical. Retention within the RMZ will be as per Result **CTR22-06** and the provisions of the practice requirements.
Wetlands and Lakes (all classes)	For those lakes and wetlands that have a RRZ, the primary objective of the RMZ is to maintain the integrity of the RRZ. Where there is a moderate to high risk of windthrow in the RRZ, feathering of the RMZ will be considered if suitable wind firm trees exist in the RMZ. Where suitable wind firm trees do not exist for protecting the RRZ from windthrow, relocating and/or redesigning the boundary will be considered. For lakes and wetlands without a RRZ, the RMZ will function to maintain important wildlife habitat values adjacent to the riparian feature. The distribution and level of retention within the RMZ will be dependent on the site characteristics; stand conditions; windthrow hazard management and wildlife habitat features. Important wildlife features such as: major game trails; licks; denning sites and moist understory vegetation habitat will be buffered to maintain cover or visual screening. For lakes and wetlands without a RRZ, understory deciduous trees, shrubs, and herbaceous vegetation within ~5 m of the lake or wetland feature will be retained to the fullest extent possible. Retention within the RMZ will be as per Result **CTR22-06** and the provisions of the practice requirements.

SD3.4.2 Lakeshore Management Zones

In accordance with the GAR Section 6, the Ministry of Forests, Lands and Natural Resource Operations can specify lakeshore management areas and objectives. As of December 2022, no lakeshore management zones have been established within FDUs.

SD3.4.3 Community watersheds

In accordance with GAR Section 8, the Minister responsible for the *Land* Act can designate a community watershed, and the Minister responsible for the *Water* Act can specify water quality objectives for a community watershed.

The following is a list of known community Watersheds in the CMNRD (and the community the water is supplied to):

Community Watershed	***Community supplied***	***Within FDUs?***
Clear (Carlotta) Creek	Rosswood	Yes – Beaver
Deep Creek	Terrace	Yes – Kalum; Skeena River-Kalum
Drake Creek	Thornhill	Yes – Skeena River-Kalum
Eneeksagilaguaw Creek	Kitsumkalum	Yes – Kalum; Skeena River-Kalum
Gitzyon Creek	New Aiyansh	Yes - Tseaux
Hatchery Creek	Lakelse	Yes – Hot Springs
Kas Miintl Am Hawak Creek	Gitwinksihlkw	No
Singlehurst Creek	Kleanza/ Usk	Yes – Skeena River-Kalum; Kleanza-Treasure
Skovens (Usk) Creek	Usk	Yes – Skeena River-Kalum
Spring Creek	Terrace	Yes – Kalum; Skeena River-Kalum
Virginia Brook	Thornhill	Yes – Skeena River-Kalum
Wathl Creek	Kitamaat Village	No

As of December 2022, there are no established water quality objectives for community watersheds within the area covered by this FSP.

Under strategy **CTR17-20**, logging within a community watershed must remain under an equivalent clearcut area (ECA) threshold, unless a Watershed Assessment Procedure (WAP) is completed that determines a different threshold level or different parameter to use. A WAP identifies the possible type and extent of stream channel impacts associated with past forest harvesting activities and provides tools to recognize the possible hydrologic implications of proposed activities. A modified Level 1 (reconnaissance level) Coastal WAP was completed for the Deep Creek Community Watershed as part of the Kalum Watershed Restoration Program Project. The purpose of a reconnaissance level analysis is to focus subsequent field-based assessments (Level 2). The results of the Coastal WAP did not identify any logging related impacts within the Newtown Creek planning area portion of the Deep Creek Community Watershed. It was therefore determined that a Level 2 analysis was not necessary for the Deep Creek Community Watershed.

Due to the small size of the Virginia Brook and Drake Community Watersheds, CTR has committed to no harvesting under result **CTR17-21** (with exceptions to prevent timber loss and for road construction), which should ensure the hydrological function of the watershed without an undue impact on timber supply.

Downstream from several of the community watershed boundaries there are several domestic water supply license holders and Fisheries and Oceans Canada has a water license for use in the

Deep Creek Fish Hatchery. There are also several other domestic water supply intakes within the CMNRD, and locations of domestic water licensees are identified on the FSP maps.

SD3.4.4 Other watersheds

Preliminary (non-legal) water quality objectives were identified for the Lakelse Lake and lower Kitimat River areas. These are not related to community watersheds and were introduced in the 1980s. The Kitimat River objectives were reviewed in 2020, with a recommendation to increase and improve sampling and monitoring before making any changes[21]. The objectives for soils and water and the associated results and strategies should successfully address these non-legal objectives.

The Lakelse River and Williams Creek are not designated or proposed community watersheds; however, water quality concerns are an issue for the protection of fish. Special practices were recommended through the Kalum LRMP around the Lakelse River (result **CTR17-51**). In 2021, a Watershed Status Evaluation Report for Williams & Sockeye Creeks was published by FREP. The watershed status report assigned the Williams-Sockeye creeks Watershed with an "impaired" watershed function rating and recommended that the watershed be designated as a "fisheries sensitive watershed". The majority (52%) of stream impacts were attributed to human disturbances, including logging, roads and utility corridors, with pre-1995 logging being the largest cause of impact at 25%. The study also notes that the high rate of natural causal factors indicates that the watershed is inherently sensitive to disturbance. The report indicated that future activity in the watershed should emphasize management for unstable terrain, road location, construction and maintenance, and harvest location and rate. In addition, riparian retention on all stream classes was recommended. Should the watershed be designated as a "fisheries sensitive watershed", the FSP will be updated to be consistent with any designated objectives. Until a designation is made, the FSP Holder will consider the management emphasis mentioned in the report, including riparian retention on all stream classes.

SD3.4.5 Kiteen Order: Water Management Unit

The 2017 Kalum SRMP Amendment for the Kiteen Area defined a Water Management Unit (WMU, shown on the FSP Maps). The stated goal for this Unit in the Gitanyow Land Use Plan is to protect the hydrologic integrity of the watershed, maintain water quality, and peak and low flows by managing surface water and groundwater. The FSP includes results and strategies **CTR17-17**, **CTR17-18**, and **CTR 17-19** specific to the Water Management Unit that address: hydroriparian retention in the WMU; an allowance to use riparian management practices applicable to the forest land base outside the WMU in limited circumstances; and road deactivation requirements and limits on new road construction.

SD3.4.6 MRVA/FREP: Riparian and Water Quality

SD3.4.6.1 Riparian

According to the 2021 online MRVA report for the CMRD, the overall stewardship trend from 1997 to 2017 for riparian areas within the Kalum TSA, TFL 41, the Cascadia TSA and Pacific TSA was shown to be improving until 2015; however, sampling in 2016 and 2017 went against this trend. This is attributed to stream bank disturbance due to windthrow in riparian areas, debris deposited into the stream bed from logging and fine sediments introduced into the stream.

Review of the data reveals that the sample size was small, so the trends seen are preliminary. Nonetheless, the trend is informative and indicates that continued vigilance is needed regarding riparian management.. The FSP Holder has reviewed the FREP/MRVA reports and considered

[21] Water Quality Assessment and Monitoring for the Lower Kitimat River (May 2020)

the recommendation and will continue to do so; however, the FSP Holder does not feel that the results require the creation of new results or strategies now.

Recommendations in the MRVA and FREP reports include:

- Limiting the introduction of logging-related woody debris in channels (leave natural debris in place).
- Avoiding physical contact with the streambed and stream banks (e.g., through falling and yarding away from channels whenever feasible).
- Minimizing fine sediment delivery to channels from roads and stream crossings throughout the entire road life cycle.
- Windthrow management should be considered in high windthrow risk situations.
- When riparian management area retention requirements are low, retain understory vegetation (trees and shrubs) to maintain deep roots near the bank and decrease the amount of disturbance to the bank.
- Consider placing wildlife tree patches in the RMZ of streams that do not have an RRZ, in particular on fish-bearing small streams (S4) or non-fish reaches that make contribution to downstream fish habitats.

To a large extent, prescriptions that are incorporated into the FSP Holder's Site Plans address the recommendations listed above. These prescriptions are reflected in results or strategies in the FSP and by practices described in this Supporting Document, including:

- Falling and yarding away from channels and channel clean-up will take place where feasible as described above in section SD 3.4.1. While eliminating cross-stream yarding may consistently improve the MRVA/FREP results, it is a necessary operational tool in limited instances.
- Road maintenance will reduce sediment delivery to channels. Strategy **CTR17-04** and section SD 3.1.3 describe road inspections and maintenance practices.
- Windthrow management, retention of non-merchantable trees and understory, and placement of WTRA to include the RMZ of streams is a common practice of the FSP Holder as discussed in sections SD3.4.1.

SD3.4.6.2 Water Quality

According to the 2021 online MRVA report for the CMRD (including the Kalum TSA, TFL 41, the Cascadia TSA and Pacific TSA), it is not possible to determine the overall stewardship trend for water quality. However, most management factors for water quality relate to limiting sediment input to streams. Recommendations in the MRVA report include:

- Reduce the impact of resource roads on water quality by improving road maintenance by armouring, seeding, and protecting bare soil, and using cross ditches and kick outs.

This supporting document discusses road maintenance in section SD3.1.3.

Note that management for water also occurs through strategies and results that are provided in other sections within this FSP:

- Result **CTR17-01** places limitations on cumulative harvest impacts in Alwyn Creek, and therefore limits the potential for sediment to RMAs
- Result **CTR17-49** limits activities within an area adjacent to the Skeena River, therefore providing protection to the riparian area of the river.
- Result **CTR17-51** limits activities within an area adjacent to the Lakelse River, therefore providing protection to the riparian area around that river.

SD3.5 Fish

Fish and fish habitat are very important resources in the CMNRD. Anadromous salmonids are found in nearly all main river systems. Non-anadromous salmonids are also present in most large creeks and rivers that have a low gradient (<20%). The resource supports a commercial, recreational and First Nations' fisheries.

The BC Government and the federal government (Fisheries and Oceans Canada (DFO)) are responsible for managing fisheries. These agencies have the mandate to ensure that the productive capacity of fish bearing waters is maintained. CTR is committed to maintaining the aquatic biological productivity of all anadromous and resident fish bearing streams within their FDUs. This will be achieved through the identification of fish streams and proper planning designed to avoid damage to fish habitat.

Riparian inventories that provide riparian classifications within the FDUs have been conducted. These assessments gathered existing information, local knowledge, and topography, allowing riparian classification. CTR has erred on the side of caution when assigning classifications and it is likely that we have identified more fish bearing streams than exist. This classification strategy ensures a conservative approach to managing fisheries resources. Block specific riparian assessments are also completed as required as part of the site plan fieldwork. These assessments will confirm overview riparian classifications as well as classify additional riparian features not found at the overview scale.

In May 2005, timing windows for in-stream work were published by the MWLAP[22]. These timing windows provide guidance for limiting the risk to damage to fish or eggs in the streambed. In-stream work windows within the FDUs are highly variable as they are dependent on the species of fish present as well as the conditions specific to the site and the nature of the works. CTR will work with the DFO and/or the BC Ministry responsible for fisheries to ensure that appropriate timing windows and measures are followed when working in fish streams.

The terms and conditions identified in the Terms and Condition for Changes In and About a Stream for the Skeena Region (November 2004) will be considered as "best available information". Any operations conducted outside these identified windows will include additional measures, as required, to ensure fish and fish habitats are protected.

Road construction, modification, maintenance, deactivation, and logging operations will use techniques required to limit sediment entering known fish streams or streams that flow directly into known fish streams.

During operations, CTR will provide contractors with any special practices and measures to ensure stream bank integrity is maintained and fish habitat is protected. Regular road maintenance, repair, and cleaning of debris from culverts and streams and careful logging practices are all ways to ensure that fish habitat is not adversely impacted.

SD3.5.1 Riparian Management

Riparian areas occur adjacent to streams, lakes, and wetlands. These include areas dominated by continuous high moisture content and the adjacent upland vegetation that exerts an influence upon them. Riparian management focuses on the maintenance of riparian zones for fishery, water, and wildlife resources. The primary objective is to minimize or prevent impacts to these important resources.

The FSP provides for two components for RMAs: RRZs and RMZs (see tables in Section SD3.4 above). Usually, logging is not permitted in RRZs; however, logging can occur in RMZs although constraints may apply.

SD3.5.1.1 Streams

[22] Skeena Region Reduced Risk In-stream Work Windows and Measures

The critical consideration for streams is maintenance of stream bank integrity. Generally, this is accomplished through the RMA which is defined in the criteria for riparian areas (as per FPPR s. 47 to 49). For streams without an RRZ, CTR will maintain streambank integrity through careful logging practices (e.g., fall and yard away), location of machine-free zones, or retention of some trees around the stream, as described in result **CTR22-06** and, within the Ksi Gahlt'in FDU, **CTR17-13**. This last method is commonly referred to as basal area (BA) retention. The amount of retention will vary for different stream types, but the most important streams that BA retention would apply to are S4 streams, as they are fish-bearing but do not have an RRZ.

For S1, S2, and S3 streams, no logging will be planned in the RRZs. A range of BA retention in RMZs may occur depending upon the windthrow hazard. While the limits are defined in Result **CTR22-06**, the location of the retention is a site-specific issue and will be determined at the field layout stage. Reserve zones for S4, S5 and S6 streams are not required, but may be established to maintain windfirm trees for streambank stability. This will also be assessed at the field layout phase.

Forest development may occur near or adjacent to all stream classes (S1 - S6). However, S6 streams represent most of the streams encountered throughout the FDUs. The BA retention prescribed at the stand level (e.g., site plan) may vary and is dependent on a multitude of site-specific factors, including:

1. logging system;
2. existing topography of adjacent wetted perimeter and upland ground;
3. windthrow risk;
4. timber soundness/safety concerns;
5. stream/ reach value;
6. wildlife habitat value; and
7. erosion/ sedimentation/ stability risk.

For all stream classes, CTR does not attempt to address the level of BA retention in RMZs in a spatially uniform manner. RMZ retention is accomplished by extending reserve (no harvest) zone boundaries into management zone areas. Extended reserve zones are a common occurrence since site specific factors, such as natural topographic features (e.g., top of gorge/gully) and stand structural changes play a significant role in the location of logging boundaries.

To manage and conserve the timber and non-timber resources within RMAs, various management prescriptions will be used, and where logging is planned, a variety of silviculture systems and/or treatments will be prescribed. As a minimum, the widths of RMAs will follow those specified in the FSP. Wider RMAs will be prescribed when required to manage and conserve high valued riparian habitat (e.g., a sensitive fish population) or to protect unstable stream banks. Site specific strategies will be determined during site plan and/or road layout and design preparation.

During the planning stage, streams, and riparian areas within or adjacent to proposed cutblocks and roads will be identified and classified in accordance with this FSP. The location of fish bearing streams will be clearly marked on operational maps and where necessary, appropriate machine free zones may also be prescribed. The FSP also provides for RRZs and RMZs.

Stream classifications shown on the FSP maps are based on Resource Inventory Committee (RIC) and non-RIC standard fisheries inventories and field assessments of individual cutblocks.

SD3.5.1.2 Wetlands and Lakes

The same approach to riparian zone boundary determination, as described above in Section 3.5.1.1 will be used for wetlands and lakes. Stand structural changes and natural topographic features also play key roles in the location of management zone boundaries.

For all classes of wetlands and lakes, the minimum level of retention is noted in Result **CTR22-**

06, and, within the Ksi Gahlt'in FDU, **CTR17-13**, **CTR17-14, CTR17-15**, **CTR17-16**, and **CTR17-17.**

SD3.5.2 Fisheries Sensitive Watersheds

In accordance with Section 14 of the *Government Actions Regulation*, the Minister responsible for the *Wildlife Act* can identify a fisheries sensitive watershed and set objectives for such a watershed. However, there are no fisheries sensitive watersheds in the area covered by the FSP.

Note that management for fish also occurs through results and strategies that are provided in other sections within this FSP:

- Result **CTR17-01** places limitations on cumulative harvest impacts in Alwyn Creek and therefore limits the potential for sediment to RMAs.
- Result **CTR17-49** limits activities within an area adjacent to the Skeena River, therefore providing protection to the riparian area of the river.
- Result **CTR17-51** limits activities within an area adjacent to the Lakelse River.

SD3.6 Biodiversity

Biodiversity (biological diversity) means the diversity of plants, animals, and other living organisms in all their forms and levels of organization, including genes, species, ecosystems[23] and the evolutionary and functional processes that link them. Two levels of biodiversity are considered; landscape and stand level. At the landscape level, watershed areas are amalgamated into Landscape Units (LU), which are assigned either a low, medium, or high biodiversity emphasis in which "high" has the greatest importance for managing and conserving biological diversity[24]. Stand level biodiversity is more site specific and includes the requirement to retain wildlife trees across the landscape but also may include designating old growth management areas (OGMAs).

Biodiversity conservation in managed forests is based on evolving ecosystem management concepts that assume the needs of most organisms will be met by maintaining a range of habitats across a broad geographic distribution. As we cannot practically manage for all species on all areas individually, we must manage at a variety of scales and across a variety of landscapes. Strategies for individual species may be specifically designed as required. Section SD3.3 of this document describes management considerations for wildlife species that have been identified under FRPA as requiring management. At the provincial and regional scale, biodiversity is considered in the establishment of protected areas such as parks and wilderness areas. At the sub-regional level, the LU has been defined to address biodiversity conservation.

Within the FSP, biodiversity management is applied at the stand level and at the landscape level.

SD3.6.1 Landscape-level Biodiversity

A fundamental component of landscape level biodiversity is the LU and planning at the landscape level requires the determination of biodiversity emphasis for these LUs. Biodiversity emphasis assignments outline three broad options (low, intermediate, high) that reflect the provision of different levels of natural biodiversity for select LUs. The Kalum SRMP describes the biodiversity emphasis for LUs within the SRMP area. The *Order Establishing Provincial Non-Spatial Old Growth Objectives*, effective June 30, 2004, established LUs and biodiversity emphasis for each of them. These biodiversity emphasis assignments consider management opportunities and objectives for known resources and seek to balance risks to biodiversity against the social and economic objectives at a provincial level.

[23] FPPR section 1
[24] Ministry of Forests. Biodiversity Guidebook. 1995

The following Landscape Units overlap the CTR FDUs:

Landscape Unit	Biodiversity Emphasis Option	Overlaps FDU
Nass River-Kalum	High	Nass River-Kalum, Ksi Gahlt'in
Tseax	Intermediate	Tseax, Ksi Gahlt'in
Kiteen	Low	Kiteen, Ksi Gahlt'in
Ksedin	Low	Ksedin
Ishkheenickh	Intermediate	Ishkheenickh
Beaver	Intermediate	Beaver
Nelson-Fiddler	Low	Nelson-Fiddler
Kalum	Intermediate	Kalum
Kasiks	Intermediate	Kasiks
Exchamsiks	Low	Exchamsiks
Exstew	Intermediate	Exstew
Skeena River-Kalum	High	Skeena River-Kalum
Kleanza-Treasure	Low	Kleanza-Treasure
Dasque	Low	Dasque
Lakelse	Intermediate	Lakelse
Hot Springs	Low	Hot Springs
Clore	Intermediate	Clore

SD3.6.1.1 Old Growth

The *Order Establishing Provincial Non-Spatial Old Growth Objectives*, effective June 30, 2004, established LUs and biodiversity emphasis for each of them and retention levels for old growth by natural disturbance type (NDT).

The old growth targets in the order have been superseded by the spatial designation of OGMAs in the Kalum SRMP. As a result, there is no longer a requirement for a result or strategy in the FSP to address the Old Growth order.

An OGMA Amendment Policy (August 2010) has been adopted for the Skeena Region. This policy provides additional guidance to proponents requesting an amendment to an existing OGMA. Aspects of this policy have been incorporated into strategy **CTR17-38**.

Result **CTR17-37** and strategy **CTR17-38** are provided to ensure consistency of the FSP with the Kalum SRMP Objectives 3 and 4 for OGMA designated under the Kalum SRMP. In addition, strategy **CTR17-35** and result **CTR17-36** also incorporate the amount of old growth in the analysis of seral stages by LU.

SD3.6.1.2 Distribution of Patch Sizes

At the landscape level, natural openings will develop over time. These openings would be of various sizes, depending on how they originated (fire, wind, landslides, and avalanches). A forest management approach taken in this FSP is to provide for a distribution of different sized openings over time; i.e., a temporal and spatial distribution of blocks.

Strategy **CTR17-35** and Result **CTR17-36** provide for a distribution of patch sizes and seral stages within LUs in the FDUs. Target patch size and seral stage distributions will be identified, and the goal is to plan development within operating areas, so the distributions move towards target levels over time. They may not be achieved during the term of this FSP.

Cutblock design, including size, shape, and pattern, will promote a range of small to medium sized, similarly aged forest patches on the landscape. Small scale disturbances will be mimicked through dispersed small clearcutting and clearcutting with WTRAs. Some larger patches will be cut and aggregated to form larger openings, particularly at lower elevations and on drier aspects where fire disturbance was an historic influence. In areas of dispersed harvesting, the size range of leave areas will approximate that of logged openings. Landforms, features, and site sensitivity to development will be considered in cutblock design.

SD3.6.1.3 Skeena Islands

. Currently the following rare ecosystems have been identified on the Skeena Island:

- Red listed high bench Sitka spruce / salmonberry (CWHws1/07, CWHvm1/09), and
- Blue listed middle bench black cottonwood-red-osier dogwood (CWHws1/08, CWHvm1/10).

Logging during the 1950s and 1960s altered the forest cover of the Skeena Islands floodplain from highly productive coniferous stands to primarily deciduous-dominated forests. Recruitment of old growth and conifer-dominated stands has been identified as a planning priority for the Skeena Islands. Large confers (whether alive, standing, or dead and down) provide wildlife habitat; CWD for conifer establishment; and structure to back channels providing fish habitat. Old black cottonwood and red alder tree retention and recruitment is also identified as important for biodiversity and wildlife habitat value.[25]

The Kalum SRMP (April 2006) established an objective (Objective 10) to conserve the rare ecosystems on the Skeena Islands. In December 2017, Objective 10 was amended by a Land Use Objectives Regulation Order. This amendment included a simplified set of conservation polygons compared to the original “High”, “Medium” and “Low” conservation value rankings. High Conservation Areas have been identified in which the objective is to retain 100% of the forested land. Within the rest of the Skeena Island Area, the objective is to retain features that provide habitat value or contribute to the recruitment of old seral stage by maintaining a 50 m harvest free buffer around these features. The features requiring a buffer include back channels; coniferous stumps, logs, and snags greater than 50 cm in diameter; and coniferous trees greater than 50 cm diameter at breast height.

Result **CTR17-49** is consistent with the simplified conservation value rankings in the amended version Objective 10.

SD3.6.1.4 Kiteen Order: Ecosystem Network

The 2017 Kalum SRMP Amendment for the Kiteen Area defined an Ecosystem Network (shown on the FSP Maps). The Ecosystem Network within the Ksi Gahlt’in FDU is an approximation of the hydroriparian zone of the Kiteen River and some of its tributaries. The FSP includes results and strategies **CTR17-15**, **CTR17-47**, and **CTR17-48** to maintain the structural connectivity of the Ecosystem Network through hydroriparian zone retention, limitations on road building, and providing for interior old forest conditions.

SD3.6.1.5 MRVA/FREP: Landscape Level Biodiversity

The April 2019 FREP Report from the Assistant Deputy Minister provided a landscape-level biodiversity assessment for the 8 largest forested BEC zones in the Skeena Natural Resource Region. This assessment did not provide an ecological score/ impact rating or trend like other resource values, but was intended to allow stand level results to be seen in a landscape context. In general, the FREP report’s review of factors such as roadless forest and seral stage distribution for the BEC zones indicate that they are as expected.

The approach to utilize natural disturbance regimes for patch and seral distribution in this FSP is consistent with the approach in the FREP Report.

[25] de Groot, Haeussler and Yole 2005

SD3.6.2 Stand-level Biodiversity

SD3.6.2.1 Stocking standards

To ensure that tree species and understory vegetation diversity is promoted, result **CTR17-05**, **CTR17-08** and, within the Ksi Gahlt'in FUD, **CTR17-06** provide for stocking standards that prescribe ecologically acceptable species that are appropriate for the specific site being harvested. See section SD4.1.2 for more information on these stocking standards.

SD3.6.2.2 Wildlife Tree

At the stand level, important stand structural attributes will be preserved through the retention of wildlife tree patches and individual wildlife trees. Snags, culls, and veterans provide valuable habitat for cavity nesting birds, raptors and small mammals while contributing to vertical density. Measures that are listed under water (Section SD3.4), wildlife (Section SD3.3) and fish (Section SD3.5) contribute to the management of biodiversity.

To achieve stand level biodiversity objectives within the FDUs, wildlife tree retention is described in result **CTR22-05** and will follow the guidance from Table 6 in the Kalum SRMP and, within the Ksi Gahlt'in FUD, **CTR17-40**. In accordance with Table 6 of the Kalum SRMP, the amount of individual wildlife trees or groups of trees in WTRAs to be retained within cutblocks and/or adjacent to cutblocks is described by LU. The retention amounts in the SRMP were directed by the Kalum LRMP and allow for the retention amount to be calculated over a "cut block aggregate" – a grouping of blocks that are close to each other. Since the SRMP provides direction on wildlife tree retention on all the LUs in the FDUs, CTR is exempt from the practice requirements (FPPR s. 66, 67) for wildlife tree retention (as per Section 2 of the FSP).

WTRAs are planned on a site-specific basis and usually identified first during the reconnaissance phase of block layout. Wherever possible, WTRAs will be established in constrained areas such as: inoperable areas; RMAs; unstable terrain, gullies, and scenic areas.

The following are characteristics and habitat attributes[26] that are sought when evaluating the wildlife habitat of individual trees:

- internal decay;
- crevices;
- large brooms;
- active or recent use;
- current insect infestation;
- large nests;
- hunting perches;
- bear dens;
- largest tree on site; and
- locally important tree species.

Additional considerations[27] for WTRAs include the following:

- Distribute windfirm patches throughout the block with distances between patches (or to other suitable leave areas outside the block) not normally exceeding 500 meters. It is recognized that windfirmness cannot be guaranteed.
- Allow natural processes (insect, diseases, blowdown) to occur within WTRAs unless infestation or infection within the WTRA threaten to spread to the adjacent forested areas. Where intervention is required, treatment should try to retain a diversity of structural attributes (for example, see Kalum SRMP Objective 5), or a suitable replacement WTRA will be located, as per strategy **CTR17-41**.

[26] Kalum SRMP, page 15, footnote 18
[27] Kalum SRMP, page 16

- Where possible, place WTRAs to include rare plant species and ecosystems (listed in the most updated version with the BC Conservation Data Center or otherwise determined as rare/uncommon).
- As per Result **CTR22-05**, consider using wildlife habitat features, including likely wildlife movement corridors and high use areas, and other resource value features as anchors in the WTRA. These considerations will be documented in the Site Plan.

Areas with a range of tree species and sizes will be prescribed for WTRA designation before areas with a simple stand structure. WTRAs will be designed to protect those trees with valuable wildlife tree attributes. If there are no wildlife trees within or adjacent to a cutblock, then WTRAs will be located for long-term recruitment of wildlife trees and/or CWD or as a minimum be representative of the pre-harvest stand conditions. This may result in the inclusion of both deciduous and coniferous species in the WTRA. Where practicable, WTRAs will be established in areas that would contribute to the conservation of rare plant communities and ecosystems, or of riparian areas.

WTRAs will be located and designed to reduce the risk of windthrow. In high windthrow risk areas, WTRAs will be designated in the most wind firm timber, or WTRAs will be designated in areas of lower habitat value but in a more wind firm location. Timber with a relatively low height to diameter ratio will be identified for WTRA designation wherever practicable. It is expected and biologically acceptable to have some windthrow on the fringe of WTRAs.

Moving Wildlife Tree Retention Areas

Wildlife tree retention areas should be retained for a minimum of one rotation (i.e., the related cut-block reaches mature seral condition). Since one of the objectives of retaining WTRAs is to recruit future CWD, WTRAs will not be replaced if they are subject to windthrow and not salvaged.

In some instances, CTR may want to move a WTRA before the related cut-block reaches a mature seral condition. If the WTRA being moved was designated by CTR, the new area selected will be consistent with Table 6 in the Kalum SRMP as per **CTR22-05**, or the retention requirements specified in **CTR17-40** within the Ksi Gahlt'in FDU.

If the WTRA being moved was designated by another licensee, then CTR will need to determine if the other licensee is subject to practice requirement FPPR s. 67. If so, the WTRA can only be moved if an exemption is provided by the Minister under FPPR s. 91 (2). If not, then a new area will be selected that is consistent with Table 6 in the Kalum SRMP or Kalum SRMP Kiteen LUOR Objective 4(10) as per **CTR17-41.** In some instances, wildlife tree retention on blocks may have been more than the requirements in the Kalum SRMP; therefore, by select replacement areas as per Table 6, this result allows for the re-balancing of wildlife tree areas with targets.

Before amending a WTRA the FSP Holder will try to determine if the WTRA location was selected to protect other resources values (e.g., wildlife habitat or cultural heritage resources). They may do this by requesting a copy of the site plan associated with the WTRA, reaching out to the prescribing forester or through the information sharing process with First Nations.

SD3.6.2.3 Coarse woody debris

Coarse woody debris (CWD) is important for many types of organisms to maintain a presence within the area. The timber stands within the FDUs are predominantly over-mature and decadent. These stands exhibit various stages of decay, which contributes to higher amounts of CWD onsite prior to logging. The nature of these forests means that a high level of non-merchantable material is typically left on site. During logging, additional breakage of trees occurs and is often left onsite as most is unmerchantable.

Thriftier second growth stands will retain less CWD after logging compared to the typical over mature hemlock/balsam stands in the district. Managing the recruitment of CWD is most important within managed second growth stands where CWD may be otherwise limited. Required levels of CWD retention are described in section 68 of the FPPR.

Where site occupancy and fire hazard are not significant concerns, the FSP Holder will attempt to avoid practices such as piling and burning (except for landings) and will not conduct broadcast burning within the FDUs. These actions will provide essential habitat for those organisms that are dependent on CWD.

SD3.6.2.4 Kiteen Order: Red and Blue listed Ecological Communities

The 2017 Kalum SRMP Amendment for the Kiteen Area includes objectives for red and blue-listed plan communities. The FSP includes results and strategies **CTR17-42**, **CTR17-43**, and **CTR17-44** to ensure red-listed and blue-listed plant communities of a certain size are retained and, for red-listed communities, provided with a windfirm buffer.

SD3.6.2.5 MRVA/FREP: Stand-level biodiversity

According to the 2021 online MRVA report for the CMRD, stand-level biodiversity is primarily measured through the amount and placement of retained trees. The trend of retention has been variable from 1997 through 2016 within the Kalum TSA (including TFL 41, the Cascadia TSA and Pacific TSA), but overall continues to exceed the minimum levels of retention required by FRPA. The report indicated a concern with several individual blocks that had very low retention, but these do not relate to this FSP, as it commits the FSP holder to tree retention in harvested blocks at levels greater than 3.5 percent.

Recommendations in the MRVA report include:

- Leave treed retention on each cut block, preferably within the block (as opposed to on the edge).
- Retain larger patches of trees, with a species composition and large tree/ large snag density like that present prior to harvesting.
- Continue to retain good quality coarse woody debris (i.e., large pieces that are greater than 20 cm diameter and 10 m in length).

This supporting document discusses tree retention and coarse woody debris in sections SD3.6.2.2 and SD3.6.2.3.

SD3.7 Cultural heritage resources

Cultural heritage resources include activities or items that are of continuing importance to a group of people, whether First Nations or non-First Nations. Cultural heritage resources can include:

- traditional uses and practices;
- sites or areas that are of cultural importance; and
- archaeological sites, although these will be managed through the *Heritage Conservation Act*.

Aboriginal interests and traditional practices generally include the use of lands for specific activities integral to their culture. Archaeological resources are sites that contain evidence of past human activity. Sites that are dated prior to 1846 are archaeological sites.

The Kalum TSA is rich in First Nations culture and heritage. The FDUs fall within the traditional territories of the Gitanyow, Gitga'at, Gitxaala, Gitxsan, Haisla, Kitselas, Kitsumkalum, Lax Kw'alaams, Metlakatla, Office of the Wet'suwet'en, Skin Tyee, and Wet'suwet'en First Nations. The FSP is adjacent to Tsetsaut Skii Km Lax Ha territory but any overlap is attributed to a mapping discrepancy. They also include lands subject to treaty rights under the *Nisga'a Final Agreement (1999)*.

The FDUs also overlap with Kitselas and Kitsumkalum proposed Treaty Settlement Lands as defined under their respective Agreements in Principle (signed August 4, 2015). If a treaty is signed, it will supersede the FSP for any associated lands. Prior to a treaty being signed, conditions regarding activities in Settlement Lands may be imposed through regulatory means: should this occur the FSP

Holder will be expected to conform to those conditions.

Information sharing about this FSP with these First Nations and NLG is an ongoing process intended to ensure an understanding of the FSP process and the cultural heritage resources that are of continuing importance to First Nations and NLG. Information sharing generally occurs in the following ways:

- During FSP preparation as described in section SD5 of this document.
- Prior to forest development in a First Nation's Territory or the Nass Area/Nass Wildlife Area, as described in Strategy **CTR17-24** and **CTR17-25**.
- Operationally, prior to cutting permit application as part of a cultural heritage resource review (CHRR), as described in Strategy **CTR17-27**.
- At any other time during operations if cultural heritage information is identified, as described in Strategy **CTR17-27**.

The FSP is shared (referred) to First Nations and NLG for input and comment before submission to the Ministry of Forests. Any sensitive information is held in confidence, and is only used in the development of appropriate strategies or results. These strategies or results may not show up under the cultural heritage heading, as they may relate to First Nation concerns over wildlife, fish, or another forest value. Section SD5 describes the interaction between the FSP Holder and the First Nations/NLG that have made claim to the area covered by this FSP or have a treaty interest that overlaps with the FSP.

The FSP Holder has also elected through **CTR17-24** to **CTR17-29** to ensure that cultural heritage is considered in all activities.

Under strategy **CTR17-24**, information is requested regularly to ensure that the FSP Holder stays current with local First Nations' knowledge. Strategy **CTR17-25** includes a similar process for information sharing with the NLG. The NLG is not a First Nation but obviously has valuable insight into the cultural heritage resources of continuing importance to the Nisga'a people outside of Nisga'a Lands. **CTR17-24** and **CTR17-25** provides the FSP Holder and First Nations/NLG with an opportunity to discuss general and site-specific information related to proposed forest developments.

Through the information sharing process, specific sites or features that are of ongoing cultural importance can be identified. Normally, those sites or features will be identified by a First Nation. In addition to these sites or features that have a specific location, a First Nation may also identify cultural heritage resources that are non-spatial in extent. An example of a specific site would be a location where berry-picking has regularly occurred. An example of a non-spatial feature would be the activity of berry-picking. For both spatial and non-spatial cultural heritage resources, mitigative measures or actions can be put in place.

As described in **CTR17-27**, a cultural heritage resource review (CHRR) will be carried out for blocks where cultural heritage resource information is lacking (or has not been made available to the FSP Holder through other processes). This will involve a review of sources that may provide information on CHR as well as a site visit to the block to identify CHR that may be present. Available information that may be reviewed includes archaeological overview assessments, archaeological impact assessments, traditional use studies, information gathered for nearby blocks, and information gathered as per **CTR17-24** and **CTR17-25.** If cultural heritage resources are identified within an area proposed for road construction or timber harvesting, development options will be reviewed to determine what changes can be made to mitigate any detrimental impacts to the cultural heritage resources.

During the CHRR, if there is potential to impact a CHR of ongoing importance to First Nations then information sharing will occur with a First Nation/NLG.

CTR17-27 also describes a 'chance find procedure' if CHR are identified by operational personnel. If any new cultural heritage information is identified by operational personnel, then this information and mitigation will be shared with the First Nation/NLG. This would apply even if a cutting authority is already issued.

The term 'shared', as it is used in **CTR17-27,** means that information will be communicated to a First Nation and further engagement, such as discussions regarding the management of the CHR, may occur with the First Nation/NLG. The strategy does not explicitly state that discussions will occur because they may not be warranted or feasible in all cases. For instance, a First Nation may have a protocol in place to

address a particular CHR and this protocol may have been shared with the FSP Holder as part of **CTR17-24**. If the FSP Holder then identifies that type of CHR within their block and implements the First Nations protocol, further discussion is likely not required and information sharing would take the form of a notification.

When field layout crews are aware and trained in identification of cultural features, a FSP Holder minimizes the risk that cultural heritage resources will remain unidentified. In discussions with some First Nations, some concern has been raised with how to verify standards for this type of training, so this has led the FSP Holder to not include a reference to training in the FSP. The FSP Holder will continue to follow internal due diligence procedures in the interim.

Options for archaeological features are typically presented in the archaeological impact assessment reports. Where archaeological resources that are automatically protected by the *Heritage Conservation Act* need to be altered, an Alteration Permit will be applied for and affected parties consulted with. Actions around non-archaeological cultural heritage resources will be described and provided to the District Manager at or before a request is made for a cutting authority.

Result **CTR17-28** and strategy **CTR17-29** reflect input from several First Nations on the cultural importance of Cedar and CMTs to traditional activities.

In addition to information sharing, First Nations groups and NLG are consulted regarding resource use and developments on their traditional territories or the Nass Area and Nass Wildlife Area. This consultation is conducted by the Provincial Government in accordance with Provincial policy. First Nations and NLG will be consulted with respect to this FSP to ensure that proposals are sensitive to aboriginal rights, aboriginal uses of the lands, and treaty interests.

SD3.7.1 Traditional Uses and Activities

The following are some examples of traditional uses or activities that have been identified and their potential for being impacted by forestry activities are also described.

Trapping

There are several species identified through Objectives Set by Government and Wildlife Notices for management under an FSP. Fisher is one of these species and the FSP supporting document describes management initiatives that will support Fisher habitat. The premise is that managing for their habitat will also ensure that habitat needs of almost all the other species in the area will be met. Therefore, the trapped species are indirectly managed.

Despite habitat maintenance, trapping pressures may negatively affect a species. This is beyond an FSP and would be handled through wildlife regulations or in the case of cultural sustenance trapping, through voluntary limitation of trapping.

It is still valuable to note if there are areas of importance for cultural trapping activities. For example, information on whether trapped species are abundant or declining can help to determine if there is a need to provide feedback to the MOE for adjustment of regulations or to a First Nation community for voluntary restrictions.

Other information of value is the location of trapping cabins (may be captured through “camps/campsites”, below).

The continued opportunity for this cultural activity is captured in the FSP through the results and strategies for wildlife (see Section SD3.3 above) which, through management of “keystone” species, ensures that there is a continued supply of wildlife species for trapping.

Logging

The form and purpose of traditional logging is important to identify, as is the cultural desire of the First Nations (i.e., is it to be able to continue to carry out logging in a traditional style, or is it to ensure continued access to the materials once made available via traditional logging activities?).

The general intent of logging by First Nations was to provide building materials (i.e., for long

houses, drying racks, etc.), or to provide logs for totem poles or canoes. These uses can be addressed within the FSP and a particularly useful piece of information would be the quantities of materials needed.

Cedar is the primary tree species used by First Nations and often resulted in the marking of trees that became Culturally Modified Trees (CMTs).

This cultural activity has been captured in the FSP through result **CTR17-28** which provides for opportunities for continued First Nations' access to cedar.

Plant Gathering

If specific areas can be identified that have a cultural value as plant gathering sites (e.g., berry picking), there is the potential to address them through a result or strategy. Therefore, it is important to discuss and determine the expectations for management of identified sites. Alternatively, if plant gathering is determined to be a landscape level value, there may not be a site-specific result necessary; a seral stage requirement could ensure that opportunities for plant gathering continue over the long-term.

Gathering of Cedar bark falls within this category and is a significant activity carried out by First Nations that often resulted in CMTs. For more discussion on Cedar and CMTs, see **Sections SD3.7.2** and **SD3.7.3** below.

Other information of value is the location of processing sites for berries (may be captured through "camps/ campsites", below).

This cultural activity has been captured in the FSP through strategy **CTR17-35** and result **CTR17-36** which ensure that there will be a distribution of seral stages across the landscape.

Jigging areas

In current times, jigging is usually in relation to Halibut fishing and to a lesser extent, cod. In both cases, jigging is a marine activity. Forestry activities under an FSP are unlikely to affect jigging opportunities, other than through the location of log holding areas. The identification and approval of these areas (foreshore lease approvals) is handled outside of the FSP process.

Since the FDUs do not include any marine areas, this resource does not apply to this FSP.

Fishing areas

Fishing areas are probably identified in one of two ways; very specific sites that are of cultural importance (e.g., netting sites) or valleys/ river/creek systems that are identified as having been of cultural importance for fishing. These are generally handled through setbacks and riparian management zones. For specifically identified sites, it is important to discuss and determine the expectations for management of the sites (e.g., there may be a desire to manage activities around a historical processing area related to a netting site). CTR will ensure Nisga'a citizens safe passage for fishing through active harvesting areas subject to Nisga'a interests.

See Section SD3.5 above for a description of how the fish resource is managed by CTR.

This cultural activity has been captured in the FSP through the results and strategies for riparian areas.

Camps & campsites

Specific camps or campsites, if identified as being of cultural importance, can be addressed through the FSP. It is important to determine the management expectations for these sites. If the sites are pre-contact, they would also be covered by the *Heritage Conservation Act*.

Hunting

There are several species identified through the Objectives Set by Government and Wildlife Notices for management under an FSP. Management does not focus on the species but rather, on their habitat. These are generally keystone species and the premise is that managing for their

habitat will also ensure that habitat needs of almost all the other species in the area will be met. Therefore, the species will continue. Despite habitat maintenance, hunting pressures may negatively affect a species. This is beyond an FSP and would be handled through hunting regulations or, in the case of cultural sustenance hunting, through voluntary limitation of hunting.

It is still valuable to note if there are areas of importance for cultural hunting activities. For example, information on goats may affect spatial designation of Ungulate Winter Range.

During hunting season, CTR will maintain opportunities for safe passage for Nisga'a citizens through active harvesting areas subject to Nisga'a interests.

The continued opportunity for this cultural activity is captured in the FSP through the results and strategies for wildlife which, through management of "keystone" species, ensures that there is a continued supply of wildlife species for hunting.

Salmon

Salmon is of significant cultural importance and is generally handled within the FSP in two ways: (1) identification of fishing areas (see above); or (2) maintenance of salmon stocks through fish habitat maintenance. Item (2) can be addressed in FSPs through riparian area management or management of soils to limit sediment input.

This cultural resource has been captured in the FSP through the results and strategies for riparian areas.

Shellfish

Like jigging, shellfish gathering is a marine activity. Forestry activities under a FSP are unlikely to affect shellfish opportunities, other than through the location of log dumping sites. The identification and approval of these areas (foreshore lease approvals) is handled outside of the FSP process. Since the FDUs do not include any marine areas, this resource does not apply to this FSP.

Other information of value is the location of shellfish processing sites. Again, this is unlikely to be affected by activities governed by the FSP.

Medicine

This topic includes the identification and collection of resources that can be used for traditional medicines. Generally, these will be medicinal plants. This item will be handled similarly to the traditional use of plant gathering (see above).

If specific areas that have cultural value as medicinal resource gathering sites or processing sites can be identified, there is the potential to address them through a result or strategy. Therefore, it is important to discuss and determine the expectations for management of identified sites. Alternatively, if medicinal resource gathering is determined to be a landscape level value, then a site-specific result may not be necessary; a landscape level strategy to ensure long-term opportunities for medicinal resource gathering may suffice.

The opportunity for continued access to medicinal plants has been captured in the FSP through strategy **CTR17-35** and result **CTR17-36**, which ensure that there will be a distribution of seral stages across the landscape.

Herring/ Roe

Like jigging and shellfish gathering, the harvest of herring and roe is a marine activity. Forestry activities under an FSP are unlikely to affect herring/roe opportunities, other than through the location of log holding areas or log dumping sites. The identification and approval of these areas (foreshore lease approvals) is handled outside of the FSP process.

One aspect of roe on kelp collection would be the potential for heli-drop sites affecting the collection sites: if this information is available, there is the potential that it can be dealt with through the FSP.

Other information of value is the location of shellfish processing sites; again, this is unlikely to be affected by activities governed by the FSP, since the FDUs do not include any marine areas.

SD3.7.2 Cedar

All First Nations with territory overlapping the FDUs have identified western red cedar as a tree species of continuing cultural importance. Their primary desire has been to ensure that cedar is maintained on First Nations' traditional territories in amounts and of the proper attributes to allow ongoing cultural use. The 2017 Kalum SRMP Amendment for the Kiteen Area includes a specific objective stating that a sustainable source of cedar should be maintained so that First Nations' traditional, cultural and subsistence can continue.

Cedar provides a valuable resource for traditional cultural activities: bark provides textiles, and the logs provide building materials (canoes, planks) and spiritual materials (totem poles). The stocking standards in this FSP prescribe cedar where ecologically appropriate so a continued supply of trees for bark stripping purposes is ensured as is the supply of lumber. This may include planting cedar, where ecologically appropriate, to encourage the regeneration of cedar. The FSP Holder's general strategy for maintaining cedar in post-harvest stands is to plant it in proportion to its pre-harvest representation, as determined in the timber cruise, on a block-by-block basis. Furthermore, where present, non-merchantable or understory cedar may be retained in the block and in retention areas in WTRA, RRZ and RMZ, or as dispersed retention. To ensure the supply of larger logs for canoes, planks, or poles, result **CTR17-28** has been prepared to ensure that in forest stands that have cedar retention in WTRAs and RMZs, removal of some of these stems for cultural purposes is an acceptable activity. The FSP Holder also follows the Special Tree Protection Regulation 229/2020 and when circumstances allow, retains large cedar trees that do not meet the legislative criteria for protection within cutblocks to serve as sources of seed and mycorrhizal inoculum, as habitat features or due to their ecological significance. This provides a method for ensuring that a supply of raw materials for traditional cultural heritage activities will be maintained.

The Kalum TSA has a range of parks and protected areas and has spatially identified old growth areas. These areas will allow First Nations sustenance and traditional and cultural uses to occur on a substantial land base. This ensures that cedar is represented across the landscape.

SD3.7.3 Culturally-Modified Trees (CMTs)

For the purposes of this FSP, a CMT is a tree modified through a cultural activity of a First Nation. These trees are split into two classes; pre-contact (i.e., before 1846) and post-contact (after 1846). There is limited discussion of pre-contact CMTs in the FSP as they are archaeological features and are protected and managed by the *Heritage Conservation Act*. Post-contact CMTs have no formal protection or designation. Several First Nations have internal policies on post-contact CMTs most including some level of protection and buffering but there does not seem to be an established, consistent approach for dealing with post-contact CMTs. In this FSP, strategies **CTR17-24** and **CTR17-27** allow for the identification, discussion, and management of cultural heritage resources, which includes both pre-and post-contact CMTs. Strategy **CTR17-29** also describes what to do if a post-contact CMT is discovered during field activities.

SD3.7.4 MRVA/FREP: Cultural Heritage Resources

According to the 2021 online MRVA report for the CMNRD, management for cultural heritage values seem to be primarily assessed in relation to retention of CMTs. This is not surprising as CMTs are the most outwardly indicator of historical occupancy and use of forest resources. However, it is the FSP Holder's hope that continued engagement will lead to more forward-thinking management of cultural heritage, e.g., identification of management regimes that proactively grow cultural plants or develop opportunities for incorporation of traditional knowledge. The strategies and results in this FSP (**CTR17-24**, **CTR17-25**, and **CTR17-27**) are intended to allow that engagement to occur.

The following practices build from the FSP Holder's experience, the MRVA report, and the April 2019 FREP Report from the Assistant Deputy Minister as opportunities for improving the management of cultural heritage resources:

- Review cultural heritage resource documentation during planning and operations.
- Identifying cultural features with flagging tape during the pre-harvest site inspection for easy recognition during operations.
- Avoid cultural features by establishing windfirm reserves such as wildlife tree patches, machine-free zones, and block boundary modifications.
- Combining reserves with visual quality objectives, retention, or other reserve needs.
- Stubbing dead culturally modified trees above cultural marks to avoid future windfall or breakage.
- Avoiding skidding across cultural trails (or in some cases, use of designated crossings).
- Considering harvesting during winter (e.g., frozen ground to protect cultural plants).

This supporting document discusses management of cultural heritage resources in the preceding sections. Where appropriate the above listed practices are potential tools that may be prescribed because of the cultural heritage resource review described in strategy **CTR17-27**.

SD3.8 Recreation Resources

Many areas within the CTR FDUs are used recreationally for fishing, hunting, harvesting of botanical forest products, snowmobiling and woodcutting.

According to the FRPA, the FSP must provide strategies and results to be consistent with the higher-level plan objectives that have been established on recreational sites and trails. Therefore, responsibility for approving the strategies or results rests with the MOF Delegated Decision Maker.

CTR will conserve identified recreation resource values throughout their FDUs. They will maintain the recreation resource by complying with the higher-level plans established for the network of recreation sites and trails that overlap with the FDUs. The impact timber harvesting operations may have on high value recreation areas will be managed by assessing the potential impacts and prescribe mitigating measures where necessary and practical. Where recreation inventories exist, Site Plans will identify the recreation feature significance and recreation management class for the area, so its relative importance is highlighted. If necessary, measures to protect specific recreation features and resources will be identified in the Site Plan. CTR operations proposed within or adjacent to established sites and trails will be consistent with the management objectives (Higher Level Plans) for these features. Generally, this means no logging will occur within 10 meters of the feature. If additional measures are required to conserve the value of the recreation feature and where practical, partial cutting or additional buffering may be used adjacent to the 10-metre reserve. These activities will be developed in communication with the Ministry representative responsible for the trail. Where new sites or trails are being considered for establishment, CTR will not propose operations that will conflict with draft management objectives for those features.

There are recreation areas that are regularly used that do not have higher level plan objectives (e.g., Lakelse Lake). No results or strategies are required for these sites, though they are shown on the FSP maps.

SD3.8.1 Recreation Sites and Trails with Higher Level Plan Objectives

As of December 2022, the following sites and trails on the FSP area are established with objectives in place:

- Big Cedar Recreation Trail
- Bornite Mountain Recreation Trail
- Gunsight Lake Recreational Trail
- Maroon Mountain Recreation Trail

- Pine Lakes Recreation Site
- Pine Lakes Recreation Trail
- Red Sand Lake Interpretive Forest Site (includes Hart Farm Recreation Site, Red Sand Intro Recreation Trail and Red Sand Lake Operational Trail)
- Sterling Mountain Recreation Trail
- Thornhill Mountain Recreation Trail

As of December 2022, the following sites and trails on the FSP area are identified in the spatial layers for recreation sites and trails available from the BC Data Catalogue, but do not have objectives in place:

- Andesite Creek Boat Launch Recreation Site
- Copper Mountain Recreation Site
- Copper Mountain Climbing Recreation Reserve
- Exstew Climbing Area Recreation Reserve
- Exstew Falls Recreation Trail
- Exstew River Recreation Site
- Harvey Recreation Site
- Kalum Lake Boat Launch
- Kleanza Lake Recreation Reserve
- La La Valley Recreation Trail
- Lakelse River Recreation Site
- Limonite Recreation Site
- Lucky 7 Recreation Trail
- Maroon Area Recreation Reserve
- Middle Lake Recreation Site
- Mount Remo Cabin Recreation Site
- Mount Remo Recreation Trail
- Paragliding Launch Recreation Site
- Paragliding Recreation Trail
- Salmon Run Recreation Site
- Sandur – Terrace Motorcross Recreation Reserve
- Sandur TMXA Recreation Trails
- South Morris Cabin Recreation Reserve
- Spring Creek Recreation Reserve
- Steinhoe Ridge Recreation Trail
- Telkwa Pass Recreation Trail
- Terrace Mountain Recreation Site
- Terrace Mountain Bike Trails
- Terrace Mountain Hiking Trails
- Thomas Recreation Site
- Top Lake Recreation Site
- Trapline Mountain Recreation Site
- Upper Limonite Recreation Site
- Wesach Mountain Recreation Trail

Results **CTR17-30**, **CTR17-31**, **CTR17-32**, **CTR17-33,** and **CTR17-34** have been included in the FSP, and basically paraphrase the recreation objectives.

The following table provides additional information for each site and trail including objectives.

The objectives for these sites and trails are as follows:

Site or Trail	Recreation Site or Trail No.	Date Established (dd/mm/yyyy)	Recreation Experience Objective	Site or Trail Management Objective	Opportunities	Access objectives
Andesite Creek Boat Launch Recreation Site	REC168838	26/07/2012	No established objectives	No established objectives	Boating; Fishing	No established objectives
Big Cedar Recreation Trail	REC6459	31/01/1998	Appropriate semi-primitive motorized winter recreational activities	Active trail and natural vegetation will be retained within ten meters either side of the trail centerline.	Snowmobiling	Winter motorized access from November 1 to June 30; all motorized activities restricted from July 1 to Oct 31
Bornite Mountain Recreation Trail	REC0530	31/01/1998	Semi-primitive non-motorized	Active trail and natural vegetation will be retained within ten meters either side of the trail centerline	Hiking and viewing	n/a
Copper Mountain Recreation Site	REC6886	02/11/2005	No established objectives	No established objectives	n/a	No established objectives
Copper Mountain Climbing Recreation Reserve	REC257982	Unknown	No established objectives	No established objectives	n/a	No established objectives
Exstew Climbing Area Recreation Reserve	REC257562	Unknown	No established objectives	No established objectives	n/a	No established objectives
Exstew Falls Recreation Trail	REC16016 A	Unknown	No established objectives	No established objectives	n/a	No established objectives
Exstew River Recreation Site	REC0515	13/08/1981	No established objectives	No established objectives	n/a	No established objectives
Gunsight Lake Recreational Trail	REC0934	20/06/1996	Semi-primitive non-motorized	Active trail and natural vegetation will be retained within ten meters either side of the trail centerline	Hiking and viewing	n/a
Harvey Recreation Site	REC97585	13/10/2009	No established objectives	No established objectives	n/a	No established objectives
Kalum Lake Boat Launch	REC98748	02/02/2010	No established objectives	No established objectives	Boating; Canoeing; Fishing	No established objectives
Kleanza Lake Recreation Reserve	REC259033	Unknown	No established objectives	No established objectives	n/a	No established objectives
La La Valley Recreation Trail	REC206152	11/16/2015	No established objectives	No established objectives	n/a	No established objectives
Lakelse River Recreation Site	REC0514	13/08/1981	No established objectives	No established objectives	Camping; Fishing	No established objectives

Site or Trail	Recreation Site or Trail No.	Date Established (dd/mm/yyyy)	Recreation Experience Objective	Site or Trail Management Objective	Opportunities	Access objectives
Limonite Recreation Site	REC240716	19/07/2017	No established objectives	No established objectives	n/a	No established objectives
Lucky 7 Recreation Trail	REC33072	05/05/2009	No established objectives	No established objectives	n/a	No established objectives
Maroon Area Recreation Reserve	REC260938	Unknown	No established objectives	No established objectives	n/a	No established objectives
Maroon Mountain Recreation Trail	REC0627	20/06/1996	Semi-primitive non-motorized	Active trail and natural vegetation will be retained within 10 meters either side of the trail centerline.	Hiking and viewing	n/a
Middle Lake Recreation Site	REC240722	19/07/2017	No established objectives	No established objectives	n/a	No established objectives
Mount Remo Cabin Recreation Site	REC257497	02/02/2010	No established objectives	No established objectives	n/a	No established objectives
Mount Remo Recreation Trail	REC257495	Unknown	No established objectives	No established objectives	n/a	No established objectives
Paragliding Launch Recreation Site	REC265508	Unknown	No established objectives	No established objectives	n/a	No established objectives
Paragliding Recreation Trail	REC265510	Unknown	No established objectives	No established objectives	n/a	No established objectives
Pine Lake Recreation Site	REC3525	20/06/1996	Roaded	Shoreline, and natural vegetation will be retained within site boundaries	Camping, canoeing, and hiking	n/a
Pine Lake Recreation Trail	REC3505	20/06/1996	Semi-primitive non-motorized	Active trail, lake shoreline and natural vegetation will be retained within ten meters either side of the trail centerline	Hiking and viewing	n/a

Site or Trail	Recreation Site or Trail No.	Date Established (dd/mm/yyyy)	Recreation Experience Objective	Site or Trail Management Objective	Opportunities	Access objectives
Red Sand Lake Interpretive Forest Site (includes Hart Farm Recreation Site, Red Sand Intro Recreation Trail and Red Sand Lake Operational Trail)	REC6449/REC15778/REC15780/REC15781/REC15782	21/05/1999	Roaded	Shoreline and natural vegetation will be conserved within the site boundaries. Small scale timber harvesting and silviculture practices will exist on the site as part of forest interpretation and education. Forest interpretation activities and education on local ecosystems and forest practices will be provided through brochures, self-guided interpretive trails, and signage	Camping; Canoeing Hiking; Mountain Biking; Nature Study; Swimming	n/a
Salmon Run Recreation Site	REC97588	10/13/2009	No established objectives	No established objectives	n/a	n/a
Sandur – Terrace Motorcross Recreation Reserve	REC262826	Unknown	No established objectives	No established objectives	n/a	No established objectives
Sandur TMXA Recreation Trails	REC242995	Unknown	No established objectives	No established objectives	n/a	No established objectives
South Morris Cabin Recreation Reserve	REC263618	Unknown	No established objectives	No established objectives	n/a	No established objectives
Spring Creek Recreation Reserve	REC257984	Unknown	No established objectives	No established objectives	n/a	No established objectives
Steinhoe Ridge Recreation Trail	REC136116	13/05/2011	No established objectives	No established objectives	Hiking and mountain biking	No established objectives
Sterling Mountain Parking Lot Recreation Site	REC6321	20/06/1996	No Established Objectives	No Established Objectives	n/a	No Established Objectives
Sterling Mountain Recreation Trail	REC168804	6/20/1996	Appropriate semi-primitive motorized winter recreational activities	Active trail and natural vegetation will be retained within ten meters either side of the trail centerline.	n/a	Winter motorized access from November 1 to June 30; all motorized activities restricted from July 1 to Oct 31
Telkwa Pass Recreation Trail	REC204073	19/07/2017	No established objectives	No established objectives	n/a	No established objectives

Site or Trail	Recreation Site or Trail No.	Date Established (dd/mm/yyyy)	Recreation Experience Objective	Site or Trail Management Objective	Opportunities	Access objectives
Terrace Mountain Bike Trail	REC135988	13/05/2011	No established objectives	No established objectives	n/a	No established objectives
Terrace Mountain Hiking Trails	REC135986	Unknown	No established objectives	No established objectives	n/a	No established objectives
Terrace Mountain Recreation Site	REC0600	01/05/2007	No established objectives	No established objectives	n/a	No established objectives
Thomas Recreation Site	REC97590	13/10/2009	No established objectives	No established objectives	Camping, fishing, and mountain biking	No established objectives
Thornhill Mountain Recreation Trail	REC0585	31/01/1998	Semi-primitive non-motorized	Active trail and natural vegetation will be retained within ten meters either side of the trail centerline.	Hiking and viewing	No established objectives
Top Lake Recreation Site	REC240720	19/07/2017	No established objectives	No established objectives	n/a	No established objectives
Trapline Mountain Recreation Site	REC16021	01/05/2007	No established objectives	No established objectives	n/a	No established objectives
Upper Limonite Recreation Site	REC240718	19/07/2017	No established objectives	No established objectives	n/a	No established objectives
Wesach Mountain Recreation Trail	REC98845	02/02/2010	No established objectives	No established objectives	n/a	No established objectives

Source: Objectives for recreational sites and trails have been established by order. The existence of established objectives was confirmed through discussion with a representative for the North Coast, Queen Charlotte Islands, and Kalum Recreation District[28].

Note that management for recreation also occurs through results and strategies provided in other sections within this FSP:

- The strategy and results for visuals (**CTR17-22**, **CTR17-23**) will also have a positive effect on the recreation resource.

SD3.9 Resource Features

Section 5 of the *GAR* allows the identification of the following as resource features:

- surface or subsurface elements of a karst system;
- a range development;
- Crown land that is being used for research or experimental purposes;
- permanent sample sites used as snow courses by the Federal or Provincial government for measuring the water content of the snowpack on a given area;
- a cultural heritage resource that is the focus of a traditional use by an aboriginal

[28] C. Johansen. Personal communication. Various dates

people and that is not regulated by the *Heritage Conservation Act*;
- an interpretative forest site, recreation site or recreation trail;
- a trail or other recreation facility referred to in section 56 [*interpretive forest sites, recreation sites and recreation trails*] of the Act that is authorized by the minister or under another enactment;
- a recreation feature that the minister considers to be of significant recreational value.

Cultural heritage features are discussed under Section SD3.7 of this Supporting Document.

Interpretative forest sites, recreation sites and recreation trails, including a trail or other recreation facility referred to in Section 56 of the FRPA, or a recreation feature that the minister considers to be of significant recreational value, are discussed under Section SD3.8 of this supporting document.

Results or strategies are not necessary or required to provide strategic management of the remaining resource features.

As of December 2022, for the area covered by this FSP, no resource features have been identified with respect to:
- surface or subsurface elements of a karst system;
- a range development;
- Crown land that is being used for research or experimental purposes; or
- permanent sample sites used as snow courses.

While no karst elements have been identified as resource features, karst potential mapping at the scale of 1:250,000 is available within the FDUs. This reconnaissance level mapping is intended to inform more detailed planning and inventories. More information on how to identify karst features and considerations for forestry activities and karst are provided in Chapter 11 of Land Management Handbook 66: Compendium of forest hydrology and geomorphology in British Columbia (2010).

Various research trials and plots have been established throughout the CMNRD, including permanent sample plots (PSP). The locations of many of these are not mapped; However, they have been summarized in a document titled "*Kalum Forest District – Operational Trial and Study Synthesis*" (March 2002). The FSP Holder is not aware of any update to this document.

Permanent sample plots have been established within the CMNRD; some dating back to the 1920's and are maintained by MFLNRO. PSPs are important because they have provided the province with a data set on natural stands that has been gathered and re-measured over time. While PSPs have no official protection, MFLNRO recommends that harvesting plans identify any impact on PSPs and that the Ministry is contacted to determine the importance of the PSP[29]. To this end the sample plots have been identified on the FSP Maps. The Ministry also recommends considering Experimental Plots and contacting the Ministry for discussion if one of these plots is within a proposed development area.

Where practicable and feasible, the FSP Holder will avoid impacting trials and studies that have the potential to continue providing research opportunities.

SD3.10 Visual Quality

Landscape inventories exist for the Kalum TSA and TFL 1. These inventories were used to designate scenic areas and prepare VQOs. VQOs are objectives defining an acceptable level of alteration to a specific visual landscape unit based on the physical characteristics and public concern.

The District Manager has "made known" established Scenic Areas with established VQOs throughout the CMNRD. Prior to any development in a known scenic area, the planned development is reviewed to assess the potential impacts on the visual resource.

[29] See Chief Forester Memo on Consultation on Ministry Permanent Sample Plots, March 14, 2018

As of December 2022, VQOs are in place for these scenic areas within the area covered by this FSP:

- Highway 16 through the CMNRD
- Kitsumkalum Mountain
- Highway 37 South, Terrace to Kitimat
- Highway 113, Terrace to Kwinyarh Creek

The following scenic areas do not have visual quality objectives, but have established visual sensitivity classes:

- Nisga'a Highway, Terrace to Cedar River

For scenic areas without established VQOs, VSC will be used as a surrogate, as follows:

VSC	***VQO Surrogate***
1	Retention
2	Partial Retention
3	Modification
4	Modification
5	Maximum Modification

Visual Impact Assessments (VIAs) will be completed where development is proposed within known scenic areas (as per strategy **CTR17-22** and result **CTR17-23**). VIAs illustrate how the VQO will be met. To maximize timber development in scenic areas, CTR will use visual landscape design techniques when designing cut blocks in highly sensitive areas. Properly designed blocks will blend development into the natural landscape. Where visual landscapes are highly sensitive, a variety of silviculture systems will be prescribed to minimize the visual impact.

The following are definitions for the individual VQO classes from the FRPA the Kalum SRMP, the guidelines from the SRMP, and the *Visual Impact Assessment Handbook (May 2022)*[30]for the allowable percent alteration in perspective view for each VQO. The goal is to meet the legal definition of the VQO (FPPR s. 1), whereas the percent alteration guidelines help provide context around the relative scale of alteration on a visual landscape from clear cut or seed tree silviculture systems. It is important to remember that the percentages provided are guidelines and have no legal standing (the differing percentages in the VIA Handbook and the Kalum SRMP emphasize this point). Partial cutting systems have no alteration guidelines as the impacts will vary with the uniformity of logging and the percent of basal area removal rather than the size of the activity area. Refer to the VIA Handbook for specific details.

[30] The VIA Handbook was recently released. As it is utilised it may result in updates to the FSP or Supporting Document.

VQO	***VQO definition (legal)*** *(FPPR s. 1.1)*	***VQO definition*** *(Kalum SRMP)*	***% alteration guideline*** *(Kalum SRMP)*	***% alteration guideline*** *(VIA Handbook)*
Preservation	Consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is (i) very small in scale, and (ii) not easily distinguishable from the pre-harvest landscape.	Allows activities such as maintenance of minimal facilities (recreation sites and trails) that enhance [the] natural visual unit.	0 – 1	0
Retention	Consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is (i) difficult to see, (ii) small in scale, and (iii) natural in appearance.	The goal is to repeat the line, form, color and texture of the visual unit.	1 - 5	0 - 1.5
Partial Retention	Consisting of an altered forest landscape in which the alteration, when assessed from a significant viewpoint, is (i) easy to see, (ii) small to medium in scale, and (iii) natural and not rectilinear or geometric in shape.	Repetition of the line, form, colors and texture is important to ensure a blending with the dominant elements.	6 – 15	1.6 - 7.0
Modification	Consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, (i) is very easy to see, and (ii) is (A) large in scale and natural in its appearance, or (B) small to medium in scale but with some angular characteristics.	The alteration must borrow from natural line and form to such an extent and on such a scale that are comparable to natural occurrences or events.	16 – 25	7.1 - 18.0
Maximum Modification	Consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, (i) is very easy to see, and (ii) is (A) very large in scale, (B) rectilinear and geometric in shape, or (C) both.	Alterations may be out of scale or show detail quite different from natural occurrences or events.	26 – 40	18.1 - 30.0

The FSP defines viewpoint criteria and includes a minimum viewing time that is based on the *Visual Landscape Inventory: Procedures and Standards Manual (May 1997).* This is generally consistent with the definition in the 2022 VIA Handbook of a significant public viewpoint. If there are no areas that meet the criteria for a viewpoint, a VIA will still be done; the lack of a viewpoint will be factored into the assessment of how consistent the block design is with the VQO.

The Kalum SRMP provides for a de facto visual quality objective for the Upper Copper River. Result **CTR17-54** addresses this requirement. Should a VIA be carried out to meet the requirements of this result, then the viewpoint should be taken from the opposite bank of the Copper River at water level.

Natural events or other developments, such as linear corridors, may cause disturbance to the landscape and subsequently effect VQOs. To ensure there is not an undue impact on timber supply from these events or developments, mechanisms exist that exempt the FSP Holder from having to consider the impact of a utility corridor or natural catastrophic event when determining consistency with the VQO. The District Manager Policy – Utility Corridors Impacts to Visual Quality Polygons (2014) outlines how such features are to be considered in Visual Impact Assessments. Natural catastrophic events will be considered on a case-by-case basis and when such events have compromised the established VQO or VSC, recovery of timber may require DM exemption from the VQO.

SD3.10.1 MRVA/FREP: Visual Quality Objectives

According to the 2021 online MRVA report for the CMRD, the overall stewardship trend for visual quality objectives within the Kalum TSA is shown to be increasing.

Recommendations in the MRVA report include:

- Use techniques to create more natural looking openings, e.g., appropriate block size, natural shapes, lower/lateral location on landform, strategic retention; avoid angular corners, rectilinear edges, or creating skyline gaps.
- Use partial cutting to retain higher levels of stems.
- Reduce opening size in Retention and Partial Retention VQO areas.

These recommendations are consistent with the approaches taken through the strategy **CTR17-22** and results **CTR17-23** and **CTR17-54** described in this FSP.

SD3.11 Forage and Associated Plant Communities

Forage in the context of this FSP is related to food required for livestock (i.e., for Range activities). There are no objectives for Forage. Subsequently, there are no results or strategies required. Nonetheless, some of the results or strategies within the FSP may have an impact on forage for wild species.

Forage for wild species occurs naturally. Forage for grizzly bear and moose UWR is managed within this FSP through reduced stocking requirements and minimum inter-tree distance when activities occur on certain plant associations. Wildlife movement through low elevation passes is maintained, allowing species to forage over their normal range. These results and strategies are captured in the FSP results **CTR17-08, CTR17-45, and CTR17-46**.

SD3.12 Cross reference of Results and Strategies to all FRPA Resource values

The following table shows how the results and strategies relate to the eleven forest values as described under the *Forest and Range Practices Act*.

(Y = Result or strategy relates to this value)

FSP Result or strategy Reference #	Soils	Timber	Wildlife	Water	Fish	Biodiversity	Cultural Heritage Resources	Recreation Resources	Resource Features	Visual Quality	Forage
CTR17-01	Y			Y	Y	Y					
CTR17-02	Y			Y	Y						
CTR17-03	Y			Y	Y						
CTR17-04	Y			Y							
CTR17-05		Y				Y	Y				
CTR17-06			Y			Y					
CTR17-08			Y			Y					
CTR17-10			Y			Y					
CTR17-11			Y			Y					
CTR17-13			Y	Y	Y	Y					
CTR17-14			Y	Y	Y	Y					
CTR17-15			Y	Y	Y	Y					
CTR17-16			Y	Y	Y	Y					
CTR17-17			Y	Y	Y	Y					
CTR17-18	Y		Y	Y	Y						
CTR17-19	Y			Y	Y						
CTR17-20	Y			Y							
CTR17-21	Y			Y							
CTR17-22								Y		Y	
CTR17-23								Y		Y	
CTR17-24							Y				
CTR17-25							Y				
CTR17-27							Y				
CTR17-28						Y	Y				
CTR17-29							Y				
CTR17-30								Y			
CTR17-31								Y			
CTR17-32								Y			
CTR17-33								Y			
CTR17-34								Y			
CTR17-35		Y	Y			Y					
CTR17-36		Y	Y			Y					
CTR17-37			Y			Y					
CTR17-38		Y	Y			Y					
CTR17-40			Y			Y					
CTR17-41		Y	Y			Y					
CTR17-42						Y					
CTR17-43						Y					
CTR17-44						Y					
CTR17-45			Y			Y					
CTR17-46			Y			Y					
CTR17-47			Y			Y					

FSP Result or strategy Reference #	Soils	Timber	Wildlife	Water	Fish	Biodiversity	Cultural Heritage Resources	Recreation Resources	Resource Features	Visual Quality	Forage
CTR17-48			Y			Y					
CTR17-49			Y	Y	Y	Y					
CTR17-50			Y			Y					
CTR17-51			Y	Y	Y	Y					
CTR17-52	Y					Y					
CTR17-53	Y					Y					
CTR17-54				Y	Y			Y		Y	
CTR17-55						Y					
CTR17-56			Y			Y					
CTR17-58					Y						
CTR22-01		Y				Y					
CTR22-02					Y						
CTR22-03				Y	Y						
CTR22-04			Y								
CTR22-05			Y			Y					
CTR22-06			Y	Y	Y	Y					

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SD4 ADDITIONAL INFORMATION

SD4.1 Additional FSP Information

SD4.1.1 Areas under Cutting Authority

The FSP maps show the blocks and roads that are currently under Cutting Permit (CP) or Road Permit (RP) and are under stewardship of the FSP Holder. In addition, cutblocks that are held by others under Timber Sales Licence, Cutting Permit, Forest Service Roads or Road Permit are also shown on the FSP maps.

SD4.1.2 Stocking Standards

The Stocking Standards in this FSP are based on established standards that have undergone extensive review, including the consideration of economically and ecologically viable species and the forest health risks associated with those species.

All the licensees in the CMNRD worked together and created one set of stocking standards that was approved for each licensee's forest development plan (FDP). This set of stocking standards was approved by the District Manager on March 11, 2003. Since that time, further updates to the stocking standards have been submitted and approved in subsequent FSPs,

Previously approved stocking standards form the basis of the stocking standards for this FSP.

SD4.1.3 Invasive Plants

The FSP must address invasive plants (FPPR s. 17) and the basis for the following measures for control of the invasive plant species identified in the *Invasive Plants Regulation* is a report on the subject prepared by Acer Resource Consulting Ltd.[31] – see **Appendix SDC**. While several options are presented in the report, only the ones considered practical and effective are used.

Use certified seed only in erosion control and grass-seeding activities.

Uncertified seed can contain weed plant seeds. Avoid planting invasive species by using only seed which has been certified as weed-free. Perennial native grasses and legumes should be used for re-vegetation purposes. As a minimum, the seed grade used should be Canada Common #1 Forage Mixture.

Road construction, logging and silviculture machinery that is to be transported from more than 200 km away from the CMNRD, and that is to do work under the authority of this FSP, must be washed before entering an FDUs described in this FSP.

Invasive species' seeds can adhere to equipment, so any heavy-duty equipment is to be washed, including skidders, brushers and other vehicles and equipment that are being transported more than **200 km** to the FSP area. This includes undercarriages, tire treads, mud flaps, and tracks. Road construction, logging, and silviculture machinery includes skidders, brushers, excavators, drills, loaders, and other heavy machinery. It also includes pickup trucks and ATVs if the vehicle has been off pavement.

SD4.1.4 Natural Range Barriers

Where applicable (FRPA s. 48), the FSP must specify measures to mitigate the effect of removing or rendering ineffective natural range barriers (FPPR s. 18).

[31] B. Pollard, RPBio, January 2005

For the purposes of this FSP, the definition of Natural Range Barrier is in relation to the movement of livestock. There are no agricultural range activities of note within the FSP area.

For the purposes of this FSP, the definition of Natural Range Barrier is taken from the Glossary of Forestry Terms in BC (March 2008): “a river, rock face, dense timber or any other naturally occurring feature that stops or significantly impedes livestock movement to and from an adjacent area”.

As of December 2022, the FDU overlaps with one range tenure in the Clore FDU. The range tenure appears to be a grazing tenure. The western boundary of the range tenure follows the Clore River, Copper River and Limonite Creek. The natural boundary created by these rivers and creeks may be considered a natural range barrier. At the time of writing this supporting document, none of the activities under this FSP are expected to remove or render ineffective a natural range barrier; however, wording has been provided as a measure in the FSP for ongoing consideration of natural range barriers.

SD4.1.5 Cumulative Effect

SD4.1.5.1 Multiple FSPs

Where applicable, the FSP must address the cumulative effect of multiple FSPs in an area (FPPR s. 19).

There are approved FSPs that overlap with this FSP for TFL 1 and FL A16835.The results and strategies from these FSPs have been compared and activities under the FSPs are not inconsistent with each other. The FSPs also share similar approaches to landscape level issues, including proportionality for old growth and seral stage analyses, so are consistent with each other in this respect as well. As of December 2022, many of the FSPs in the District are being replaced. The replacement FSPs will be reviewed to determine if they are consistent with this FSP.

SD4.1.5.2 Forest and Range Evaluation Program

The Multiple Resource Value Assessment (MRVA) Report and other reports produced by the Forest and Range Evaluation Program provide information on the ecological state of the 11 resource values in FRPA and evaluate whether the objectives in relation to these values are being achieved. The MRVA reports provide information on the outcomes of the FSPs and practices of forest professionals and can be used in an ongoing manner to inform, clarify, or assess cumulative effects. Recent MRVA and FREP reports applicable to the FSP area have been reviewed and are addressed in section SD3.

SD4.1.5.2 Environmental Stewardship Initiative Project and Reports

The Environmental Stewardship Initiative (ESI) is a partnership between First Nations and the Provincial Government that aims to collaborate on ecosystem stewardship projects including: research; cumulative effects assessments; restoration and enhancement; and education and training. The FSP area overlaps with two ESI forums. Most of the FSP area falls within the North Coast Regional Stewardship Forum. The eastern portion of the FSP area also overlaps with the Skeena Sustainability Assessment Forum.

SD4.1.6 FSP Maps

The boundaries of the FDUs were chosen primarily to match internal administrative boundaries; other factors that influenced the shape and number of FDUs include watershed boundaries, trapline boundaries and First Nations asserted traditional territories.

SD4.2 Items not addressed in FRPA

SD4.2.1 Botanical Forest Products

While the FRPA legislation is silent on the need to address botanical forest products (or non-timber forest products), it is expected that this may be identified as a resource feature in the future. Therefore, it is worthwhile mentioning that the botanical forest products in the FDUs consist of mushroom picking, sustenance harvest of medicinal plants and other activities.

SD4.2.1.1 Medicinal Plants

Through the review of traditional use information for First Nation groups, there has been some limited information identifying possible areas that were used for gathering medicinal plants. Unfortunately, the area information is quite general, and the species of plants gathered at these sites is not clear. Generally, the maintenance of representative mature and immature timber types over the landscape, should ensure that medicinal plants are available for gathering.

SD4.2.1.2 Mushrooms

Mushroom picking is a highly variable and unregulated activity that can be very lucrative when the harvest is good, and prices are high. While there are several mushroom species that qualify as botanical forest products on the FSP area, **pine mushroom** (*Tricholoma magnivelare*) is the most popular. Pine mushroom harvesting provides income to both local and transient mushroom pickers and buyers. The forest and pine mushroom industries can be in conflict since logging may remove pine mushroom host trees or suitable habitat, reducing picking opportunities. Alternatively, timber development increases the area accessible by road, which increases the area accessible to the average mushroom picker. Regulation of pine mushroom activities to allow better monitoring of the industry has been discussed intermittently.

Recent research suggests that most pine mushrooms grow in soils with a poor nutrient and submesic moisture regime. Although these sites are not the most productive for timber production, merchantable timber exists on these sites. However, this information is still somewhat uncertain as ground-truthing is difficult; many people are unwilling to share information regarding where they have found mushrooms. This has made managing forests to maintain options for mushroom picking difficult.

A recurring suggestion from mushroom pickers or the public is to consider designating pine mushroom habitat areas as old growth management areas providing long term protection for these areas. This strategy of preserving mushroom ground may be short sighted, since mushroom production peaks in thrifty stands of timber approximately 50 to 200 years old. The best strategy for the resource includes timber harvesting practices that maintains a constant amount of forests in the maximum mushroom producing age group. For example, harvesting 10 percent of the mushroom ground every 20 years will ensure there is a continuous supply of thrifty forests. Strategy **CTR17-35** and result **CTR17-36** aid in achieving this goal.

The specific locations harvested are generally not shared between mushroom pickers and forest planners. It is critical that interested persons or First Nations provide input during the FSP public review and comment period and throughout site level information sharing processes to mitigate any impacts timber development may have on all forest resources, including pine mushroom habitat.

The only area where Productive Pine Mushroom Habitat has been spatially delineated is the north west portion of Ksi Gahlt'in FDU in an area where the Kiteen and Cranberry River flow into the Nass River. The identification of productive pine mushroom habitat is due to Schedule G of the Land Use Objective for the Kalum SRMP (2006) – (Kiteen area only). Result **CTR17-55** is consistent with the objective for pine mushrooms in the LUO.

SD4.2.2 Climate Change

The FSP Holder has considered the current circumstances as well as changes that are predicated for the forested land base from climate change.

It is expected that tree species suited to lower elevations will migrate upwards in elevation and tree species at lower latitudes will move north. The stocking standards have been adjusted to allow for the migration of species that may become better suited to certain ecosystems within the FDU as their range shifts from north to south or from lower to higher latitudes. For example, Douglas fir and larch are now acceptable in the ICHmc2.

In addition, the Chief Forester has introduced Climate Based Seed Transfer standards for reforestation. These standards match seed sources with the climatically suitable planting sites based on the predicted near-term changes occurring as a result of climate change – this is an adaptation strategy referred to as assisted migration. When planting a block, licencees must use the Chief Foresters Standards for Seed Use.

The FSP Holder will review and incorporate additional information on climate change for the area of the FSP as it becomes available. For example, cumulative effects assessments carried out by Environmental Stewardship Forums may start to incorporate climate change considerations – these will be useful to the FSP Holder when considering climate change in their planning and operations.

Other commitments, such as the District wide patch and seral analysis will help preserve forest diversity as a way to maintain ecosystem resilience to climate change. Connectivity and wildlife movement will be considered when designating wildlife tree retention area and other reserves.

SD5 PUBLIC, AGENCY AND FIRST NATION REVIEW AND COMMENT SUMMARY

The Forest Stewardship Plan is made available to interested parties and to the public for review and comment. The public is made aware that the FSP is available for review through advertisements that are placed in local newspapers. The FSP Holder will information share and may meet with First Nations' groups to discuss the plan.

Written comments that are received by the FSP Holder during information sharing and the public review and how they have been addressed will be provided as part of this document when it is submitted to the MOF for approval.

Review and comment on this FSP by First Nations, government agencies, stakeholders, or the public may result in changes or updates of the FSP or this supporting document. Details of these changes or updates are provided behind Tab 5 to this document.

SD5.1 Advertisements

Newspaper insertions advertising the 60-day review period appeared in the following local newspapers:

- The Terrace Standard on September 15 and September 22, 2022.
- The Kitimat Northern Sentinel on September 15 and September 22, 2022.

Copies of these advertisements are provided behind Tab 1 of this document.

SD5.2 Review and Comment / Documentation and Referral

SD5.2.1 Public Review Letters

Copies of letters or emails sent to non-First Nation or non-Agency stakeholders, and any subsequent correspondence are provided behind Tab 2 of this document when it is submitted to the MOF.

SD5.2.1.1 Public

Members of the public are expected to provide comment through the public review of the plan.

One letter was received from a member of the general public during the public review period. The FSP Holder responded to this letter and copies of the emails and letters are provided in Tab 2. No changes were made to the FSP or this Supporting Document.

SD5.2.1.2 Recreation groups

SD5.2.1.2.1 Commercial Recreation

Commercial recreation groups in the area are expected to provide comment through the public review of the plan. In some cases, letters were sent to groups holding commercial recreation tenures that overlap the FDUs, informing them that the FSP was available for review and comment. Copies of letters or emails sent to commercial recreation groups are provided behind Tab 2 of this document.

No comments were received from commercial recreation groups or tenure holders during the public review period.

SD5.2.1.2.2 Non-commercial Recreation

Individual recreationists are expected to provide comment through the public review of the plan. No comments were received during the public review period.

SD5.2.1.3 Trapline Holders, Guide-Outfitters

Letters were sent to trapline holders and guide-outfitters whose areas overlap the FDUs, informing them that the FSP was available for review and comment. Copies of letters or emails sent to trapline holders and guide-outfitters are provided behind Tab 2 of this document. No comments were received during the public review period.

SD5.2.1.4 Other Forest Tenure Holders

Notifications were sent to the forest licensees whose normal operating areas overlap with this FSP. Copies of the emails to forest licensees are provided behind Tab 2 of this document. No comments were received during the public review period.

SD5.2.2 First Nations and NLG

Information sharing letters were sent to First Nations groups whose traditional territory overlaps with the FDUs. Correspondence, meeting notes, and file notes of discussions between the FSP Holder and First Nation groups are provided behind Tab 3.

The FDUs overlap with the traditional territory of the following First Nations groups:

- Gitanyow Hereditary Chiefs
- Gitga'at First Nation
- Gitxaala Nation
- Gitxsan Hereditary Chiefs (Haakasxw, Lelt, Luulak, Sakum Higookxw, Denimget, Wii Hlengwax and Yal)
- Haisla First Nation
- Kitselas First Nation
- Kitsumkalum First Nation
- Lax Kw'alaams Band
- Metlakatla First Nation
- Office of the Wet'suwet'en
- Skin Tyee Nation
- Wet'suwet'en First Nation
- Witset First Nation

The FSP also overlaps with the treaty interests of the Nisga’a Lisims Government.

The FSP is adjacent to Tsetsaut/Skii Km Lax Ha territory but any overlap is attributed to a mapping discrepancy, no information sharing was carried out with Tsetsaut/Skii Km Lax Ha.

SD5.2.2.1 Gitanyow Hereditary Chiefs

The FSP overlaps with the Territory of the Gitanyow Hereditary Chiefs. An information sharing letter was sent to Gitanyow regarding the FSP. There were also subsequent exchanges by email. See communication record for more details. No changes had been made to the FSP at the time of submission.

SD5.2.2.2 Gitga'at First Nation

The FSP overlaps with Gitga’at First Nation Territory. An information sharing letter was sent to

Gitga'at First Nation regarding the FSP and subsequent follow-up emails were sent. Gitga'at responded that they did not have any comments at this time.

SD5.2.2.3 Gitxaala Nation

The FSP overlaps with Gitxaala First Nation Territory. An information sharing letter was sent to Gitxaala First Nation regarding the FSP. Subsequent follow-up emails were sent to Gitxaala. At the time of submission, Gitxaala had not provided a response.

SD5.2.2.4 Gitxsan Hereditary Chiefs

The FSP overlaps with the house territories of the following Gitxsan Hereditary Chiefs: Denimget, Haakasxw, Lelt, Luulak, Sakum Higookxw, Wii Hlengwax and Yal. Information sharing letters were sent to each Gitxsan Hereditary Chief and/or their representative regarding the FSP. Subsequent emails were sent. Hard copies were mailed to the Simgiget'm Gitwangak Society. At the time of submission, no comment had been received from Gitxsan Hereditary Chiefs.

SD5.2.2.5 Haisla Nation

The FSP overlaps a small portion of Haisla First Nation Territory. An information sharing letter was sent to Haisla First Nation. At the time of submission, no comment had been received from Haisla.

SD5.2.2.4 Kitselas

The FSP overlaps with Kitselas First Nation Territory. An information sharing letter was sent to Kitselas First Nation regarding the FSP. Kitselas provided a response with comments and recommendations related to: access management; mountain goats; moose; grizzly bear; stand level biodiversity; CMTs and cedar; and planning and harvesting of second growth. Haisla Resources provided a letter in response. Representatives of Kitselas and Coast Tsimshian Resources met on November 10, 2022 to discuss the FSP. As a result of the comments from Kitselas, CTR made changes to the FSP, including: a change to the WTRA Result; the addition of a new result for visual screening; and changes to this Supporting Document to address comments from Kitselas on access management, WTRAs, and cedar.

SD5.2.2.7 Kitsumkalum First Nation

The FSP overlaps with Kitsumkalum First Nation Territory. An information sharing letter was sent to Kitsumkalum First Nation regarding the FSP. Representatives of Kitsumkalum and Coast Tsimshian Resources met on October 21, 2022 to discuss the FSP. A number of topics were discussed including: joint FSPs; old-growth deferrals and second growth; cedar; wildlife tree retention; habitat connectivity; riparian buffers; Kitsumkalum community high use areas; and firewood. CTR made changes to this Supporting Document to address comments from Kitsumkalum related to WTRAs and cedar.

SD5.2.2.8 Lax Kw'alaams Band

The FSP overlaps Lax Kw'alaams Territory. An information sharing letter was sent to Lax Kw'alaams regarding the FSP. At the time of submission, no response had been received.

SD5.2.2.9 Metlakatla First Nation

The FSP overlaps Metlakatla First Nation Territory. An information sharing letter was sent to

Metlakatla First Nation regarding the FSP and subsequent attempts to reach Metlakatla were made via email. At the time of submission, no comments had been received.

SD5.2.2.10 Nisga'a Lisims Government

The FSP overlaps the treaty interests, specifically the Nass Area and Nass Wildlife Area, of the Nisga'a Lisims Government (NLG). A letter was sent to NLG providing information on the FSP and subsequent follow-up emails were sent and received. NLG responded with a question about basal area retention on S6 streams. A minor change was made to the FSP to clarify the basal area retention requirements on S6 streams.

SD5.2.2.11 Office of the Wet'suwet'en

The FSP overlaps a small portion of Wet'suwet'en Territory. An information sharing letter and subsequent follow-up emails were sent to Office of the Wet'suwet'en regarding the FSP. A representative of Office of the Wet'suwet'en responded and indicated that the area of overlap with the FSP is small and mostly in the alpine areas, but may contain culturally significant areas.

SD5.2.2.12 Skin Tyee Nation

The FSP overlaps a small portion Skin Tyee First Nation Territory. An information sharing letter was sent to Skin Tyee First Nation regarding the FSP and subsequent attempts to reach Skin Tyee were made via email. At the time of submission, no response had been received.

SD5.2.2.13 Wet'suwet'en First Nation

The FSP overlaps a small portion of Wet'suwet'en Territory. An information sharing letter was sent to Wet'suwet'en First Nation regarding the FSP and subsequent attempts to reach Wet'suwet'en were made via email. At the time of submission, no response had been received.

SD5.2.2.14 Witset First Nation

The FSP overlaps a small portion of Wet'suwet'en Territory. An information sharing letter was sent to Witset First Nation regarding the FSP and subsequent attempts to reach Witset were made via email. At the time of submission, no response had been received.

SD5.2.3 Agencies

Referral to provincial and federal agencies is carried out if requested by the Delegated Decision Maker (as per FPPR s. 21(a)) or if the FSP Holder feels there is a need to refer to an agency. Information related to meetings, correspondence, and discussions between the various governmental agencies and the FSP Holder is provided behind Tab 4 when this document is submitted to the MOF.

SD5.2.3.3 BC Ministry of Forests

An expectations meeting was held with Coast Mountains Natural Resource District staff on August 3, 2022. Since then, professionals working on behalf of the FSP Holder have maintained informal contact with MOF staff to ensure that information and understandings are current. An FSP Expectations Letter dated October 14, 2022 was issued by the District Managers of the Skeena Region to all licencees in the Region. The FSP Holder has reviewed the expectations and feels that the FSP and this supporting document are consistent with the recommendations.

The following table lists the specific recommendations and how they are addressed in the FSP or Supporting Document.

Expectation from District Managers' Letter	How the Expectation is addressed in the FSP or Supporting Document
UN Declaration on the Rights of Indigenous Peoples: *"We expect FSP holders to engage fulsomely with Indigenous Groups in the development of their FSP. Results and strategies should consider the potential impacts to aboriginal rights and interest and provide opportunity for Indigenous Groups to influence forest management."*	The FSP Holder has made an effort to engage fulsomely with First Nations while preparing this FSP. An initial notification was sent out to First Nations two months prior to the public review process commencing to provide additional time for engagement to occur prior to submission of the FSP. The FSP Holder sent a minimum of two follow-up emails. The FSP Holder has also met with First Nations who requested to discuss comments, concerns or recommendations for the FSP. Changes have been made to the FSP and Supporting Document in response to comments or recommendations from Nations.
Cumulative Effects: *"Our expectation is that as Forest Professionals, consideration is given to the factors listed above in development of results and strategies to further support our assessment of the cumulative impacts of your FSP."*	Section 4.1.5 of this Supporting Document speaks to cumulative effects, FREP and Integrated Stewardship Forum reports, and how they are considered by the FSP Holder.
Forest Development Unit Alignment with Indigenous Territorial Boundaries: *"Where feasible and appropriate, licensees are encouraged to geographically align their Forest Development Unit boundaries with First Nation territories."*	The Ksi Gatlin FDU has been created to align with the Gitanyow Land Use Plan boundaries. The remaining FDUs align with tenure boundaries and landscape units, some of which align with First Nations territorial boundaries.
Old Growth in the Skeena Region: *"The expectation is that FSPs in the Skeena Region will manage biodiversity in a way that promotes sustainable and resilient forest management and is consistent with the latest provincial direction on Old Growth."*	Section 1.2.11 of this Supporting Document addresses the latest provincial direction on old growth and how old growth is currently being managed under the FSP.
Forest Management alignment with Government Action Regulations: *"We expect FSP preparers to be familiar with this guidance and include it in FSPs wherever practicable. We also expect FSP preparers to apply best management practices for species listed under the federal Species at Risk Act (SARA) or by the Conservation Data Centre of BC including, but not limited to: Northern and Coastal goshawk, woodland caribou, fisher, marbled murrelet and Coastal tailed tree frog."*	The FSP Holder is familiar with the non-legal guidance in Orders and has discussed important wildlife species, species at risk, and management for these species in Section 3.3 of this Supporting Document.
Land Use Plans: *"Our expectation is that licensees make efforts to align with any existing land use plans (legal or non-legal (Gitxsan)) and use this as an opportunity to build relationships and support reconciliation efforts."*	The FSP is consistent with all legal land use plans. Section 1.2 of the FSP describes both legal and non-legal plan areas that overlap the FDUs, including the non-legal Gitwangak Land Use Plan.
Stakeholders and Public Engagement: *"Relevant to your upcoming FSP submissions we ask that you consider how best to convey proposed cut block, road, and access related information, either within your FSP or through a process described in your FSP that makes such information available in a fashion and timeframe that enables affected or interested parties to understand your operations."*	The FSP maps show the FSP Holder's 5-year planning cutblocks. These maps have been made available for public review. The CMNRD Steering Committee has discussed jointly sharing planning blocks with the public. The FSP Holder is supportive of these discussions. The FSP Holder shares their 5-year plan with other licences in the District on an annual basis. The FSP Holder also shares their plans for cutblocks and roads with First Nations and NLG during

Expectation from District Managers' Letter	How the Expectation is addressed in the FSP or Supporting Document
	information sharing, as per Strategies CTR17-24 and CTR17-25.
Climate Change: *"We expect forest professionals to consider the best available information relevant to predicted impacts of climate change and apply their professional judgment on how climate change may result in unanticipated consequences to forest operations."*	Section 4.2.2 of this Supporting Document describes how climate change is addressed by the FSP Holder.
Landscape-level Biodiversity: *"Therefore, we expect your FSP to commit to practices designed to achieve the seral stage targets that apply to the forest development unit and to ensure that these targets are not compromised."*	Strategies CTR17-35 and CTR17-36 address patch and seral targets. The FSP Holder participates in the multi-licencee CMNRD Patch and Seral Analysis which identifies areas that fall outside of the patch and seral targets and what needs to be done to move toward the targets.

SD6 SOURCES OF INFORMATION

Information is current to September 2022, unless otherwise stated

Information Source

Information Source	Publisher	Date of publication
BIODIVERSITY		
Biodiversity Guidebook https://www.for.gov.bc.ca/hfd/library/documents/bib19715.pdf	MOF	September 1995
Landscape Unit Planning Guidebook 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/policies-guides/lup_guide.pdf	MOF and MOE, Lands and Parks	1999
Managing and Tracking Wildlife Tree Retention Areas under the FRPA, FRPA General Bulletin No 15 https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/integrated-resource-bulletins/frpa-general-no-15-managing-and-tracking-wildlife-tree-retention-areas-under-frpa-apr-18-2008.pdf	MFLNRO	July 2014
Old Growth Management Area Amendment Policy, Skeena Region (Drafted by Skeena Region Forest Licensees and BC Timber Sales Skeena and Babine) http://www.env.gov.bc.ca/wld/documents/frpa/2010%20OGMA%20Amendment%20Policy%20Skeena.pdf	MFLNRO	August 2010
Order Establishing Provincial Non-Spatial Old Growth Objectives 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/policies-guides/old_growth_order_may18th_final.pdf	MSRM	June 30, 2004
Patch and Seral Analysis for the Coast Mountains Resource District (Internal publication)	CMRD Steering Committee	December 2020 (Latest version)
Wildlife Tree Retention: Guidance for District and Licensee Staff, FRPA General Bulletin No 8 https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/integrated-resource-bulletins/frpa-general-no-8-wildlife-tree-retention-area-dec-2011.pdf	MFLNRO	December 2011
CULTURAL HERITAGE RESOURCES, ARCHAEOLOGY		
Archaeological Overview Assessment for the Kalum TSA – prepared for the Kalum Forest District by Millennia Research	MOFR	1994

Information Source	Publisher	Date of publication
Archaeology Branch – Site for restricted access to RAAD - Remote Access to Archaeological Data; Archaeological Impact Assessment Guidelines https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/archaeology	MFLNRO	Website last visited September 2022
Guidelines for Managing Cedar for Cultural Purposes http://www.for.gov.bc.ca/ftp/DSI/external/!publish/Stewardship/SIFD_Objectives_Matrix/7_Cultural_Heritage/Guidelines/Cedar_Guidelines_MOF_Consultation_Final_Jan_2005.pdf	MOF, Coastal Forest Region	January 2005
ECOSYSTEM CLASSIFICATION		
A Field Guide to Site Identification and Interpretation for the Prince Rupert Forest Region (Land Management Handbook 26) http://www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh26.htm	MOF	1993
BEC Map for the Kalum Subunit, Coast Mountains Resource District (Map 2 of 2) https://www.for.gov.bc.ca/ftp/HRE/external/!publish/becmaps/PaperMaps/wall/DKM_KalumSubunit_CoastMountainsResourceDistrict_SkeenaRegion_2of2__wall.pdf	MOF	September 2022
FIRST NATIONS		
Haisla Land Use Plan	Kitamaat Village Council	Received January 2006
Gitanyow Huwilp Recognition and Reconciliation Agreement http://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow_recognition_and_reconciliation_agreement_oct_2016.pdf	Gitanyow Hereditary Chiefs and Province of BC	2016
Delgamuukw decision https://publications.gc.ca/Collection-R/LoPBdP/BP/bp459-e.htm	Canadian Parliamentary Research Branch	Website last visited September 2022
Information on the Delgamuukw decision https://www.bctreaty.ca/sites/default/files/delgamuukw.pdf	BC Treaty Commission	Website last visited September 2022
NISGA'A NATION		
Coast Tsimshian Resources Limited Partnership replacement Forest Stewardship Plan Summary of assessment of impacts on Nisga'a Interests	MOFLNRORD	Received November 2017
FISHERIES AND WATERSHEDS		
Coastal Watershed Assessment Procedure Guidebook, 2nd Edition, Version 2.1 https://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do;jsessionid=CB47E211B9AB16F3B471BC496CABBE2B?subdocumentId=17446	Forest Practices	August 1999
Coastal Watershed Procedure – Deep Creek and Spring Creek Community Watershed & Addendum to the March 5, 2003 report: Coastal Watershed Procedure – Deep Creek and Spring Creek Community Watersheds	Brian Roberts, M.Sc., P.Ag., G.I.T., BC Timber Sales	March 5, 2003 January 19, 2004

Information Source	Publisher	Date of publication
Order – Fisheries Sensitive Watersheds – Skeena Region http://www.env.gov.bc.ca/wld/frpa/fsw/order/f-6-001_f-6-005.pdf	MOE	Dec 28, 2005
Lakelse Lake Sockeye Recovery Plan https://psf.ca/wp-content/uploads/2021/10/Download-PDF860-1.pdf	DFO	April 2005
Standards and Best Practices for Instream Works http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf	MOE	March 2004
Skeena Region Reduced Risk In-stream Work Windows and Measures http://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/working-around-water/work_windows_measures_skeena.pdf	MOE, Skeena Region	May 2005
Terms and Conditions for changes in and about a stream specified by MWLAP Habitat Officers, Skeena Region http://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/working-around-water/terms_conditions_skeena.pdf	MOE	November 2004
Water Quality Objectives - Kitimat River (Jan 20 1987); Lakelse Lake (Feb 3, 1986) http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/water-quality-objectives	MOE	Website last visited September 2022
Williams and Sockeye Creeks Pilot Watershed Status Evaluation Report, FREP WSEP Note #2 https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/frep/extension-notes/210902_williams-sockeye_final_wsep_v40.pdf	FREP	September 2021
LAND USE PLANS, PROTECTED AREAS, PARKS		
A Protected Areas Strategy for British Columbia: The Prince Rupert Region PAS Report http://wlapwww.gov.bc.ca/ske/pas/	MWLAP	1996, 1998 Link no longer valid

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BC Parks • Atna River Park – Management Plan (2010) • Burnie River Protected Area • Burnie-Shea Park and Burnie River Protected Area – Management Area (2010) • Exchamsiks River Provincial Park and Protected Area - Management Direction Statement (2000) • Gitnadoiks River Park • Gitnadoiks River Protected Area • Hai Lake – Mount Herman Park • Khyex Conservancy • Khutzeymateen Provincial Park – Management Plan (2011) • Kitsumkalum Lake Provincial Park • Kitsumkalum Lake North Protected Area • Kleanza Creek Provincial Park – Management Direction Statement (2000) • Ksi X'anmaas Conservancy • Lakelse Lake Wetlands Provincial Park • Lakelse Lake Provincial Park – Management Direction Statement (2000) • Lower Skeena River Provincial Park • Lundmark Bog Protected Area • Nisga'a Memorial Lava Bed Provincial Park – Master Plan (1997) • Seven Sisters Park and Protected Area – Management Plan (2003) • Skeena River Ecological Reserve • Lower Skeena River Provincial Park • Sleeping Beauty Mountain Provincial Park • Swan Creek Protected Area • Williams Creek Ecological Reserve http://www.env.gov.bc.ca/bcparks/explore/	BC Parks, MOE	Website last visited September 2022
Fiddler Creek Total Resource Plan, Kalum Forest District	Kalum Forest District, MOF	December 1995
Gitanyow Land Use Plan (found in Schedule A and B of the Gitanyow Huwilp Recognition and Reconciliation Agreement) http://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow_recognition_and_reconciliation_agreement_oct_2016.pdf	Gitanyow Hereditary Chiefs and Province of BC	2016
Interim Land and Marine Resources Plan of the Allied Tsimshian Tribes of Lax Kw'alaams	Allied Tsimshian Tribes of Lax Kw'alaams	June 3, 2004
Kalum Land and Resource Management Plan https://www2.gov.bc.ca/gov/content/industry/crown-land-water/land-use-planning/regions/skeena/kalum-lrmp	MSRM	May 2002
Kalum Sustainable Resource Management Plan https://www2.gov.bc.ca/gov/content/industry/crown-land-water/land-use-planning/regions/skeena/kalum-lrmp/kalum-srmp	Integrated Land Management Bureau, MAL	April 2006
Landscape and Stand Scale Structure and Dynamics, and Conservation Ranking of Skeena River Floodplain Forests http://bvcentre.ca/library/landscape_and_stand_scale_structure_and_dynamics_and_conservation_ranking_o	Adrian de Groot, Sybille Haeussler, Dave Yole	November 2005

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Order establishing Land Use Objectives in the Kalum SRMP Area 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/order_establishing_luos.pdf	Integrated Land Management Bureau, MAL	April 28, 2006
Ministerial Order Land Use Objectives Regulation Amendment to Land Use Objectives for the Kalum Sustainable Resource Management Plan (2006) – (Skeena Islands only) 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	MFLNRO	Dated December 4, 2017
Ministerial Order Land Use Objectives Regulation Amendment to Land Use Objectives for the Kalum Sustainable Resource Management Plan (2006) – (Kiteen area only) 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	MFLNRO	Dated December 4, 2017
Thunderbird Integrated Resource Management Plan	--	--
LEGISLATION		
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The Forest and Range Practices Act and associated regulations The Forest Practices Code of British Columbia Act and associated regulations and guidebooks The Forest Act The Foresters Act The Wildfire Act The Land Act The Heritage Conservation Act https://www.bclaws.gov.bc.ca/civix/content/complete/?xsl=/templates/browse.xsl	Government of BC	Website last visited September 2022
The Fisheries Act https://laws-lois.justice.gc.ca/eng/acts/f-14/ The Species At Risk Act http://laws-lois.justice.gc.ca/eng/acts/S-15.3/	Government of Canada	Website last visited September 2022
What's New in FRPA (2005) https://www.for.gov.bc.ca/ftp/hfp/external/!publish/Training/Frpa/2005/Final_materials/Companion%20Guide/FRPA%20Forestry%20Companion%20Guide--ver-2-2%20(Mar%204).pdf	Government of BC	May 2005
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BCTS and Gitxaala Forest Products Ltd. approved FSP for operations within the Coast Mountains Natural Resource District, 2016-2021 (Amendment 1)	BCTS and Gitxaala Forest Products Ltd.	Effective July 4, 2016
A&A Trading and Terrace Community Forest approved FSP for Forest License A16836 and Community Forest License K1X, 2016-2021 Amendment 1	A&A Trading Limited and Terrace Community Forest	Effective December 19, 2016

Information Source	Publisher	Date of publication
Kalum Ventures Limited, Kitselas Forestry LP, Kitselas First Nation approved FSP for Operations in the Coast Mountains Natural Resource District, 2018-2023 (Amendment 1)	Kalum Ventures Limited, Kitselas Forestry LP, Kitselas First Nation	Effective August 28, 2018
Skeena Sawmills Forest Stewardship Plan for Operations in the Coast Mountains Resource District, 2017-2021 (Amendment 1)	Skeena Sawmills	Effective September 21, 2017
MISC		
BC Ministry of Forests information on Forest Landscape Plans https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/forest-landscape-plans	BC MOF	Website last visited May 20, 2022
DataBC - Provincial geographic information and services https://data.gov.bc.ca/	Government of BC	--
Environmental Stewardship Initiatives Website https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations/collaborative-stewardship-bc/environmental-stewardship-initiative	Government of BC	Website last visited November 2022
Forest & Range Evaluation Program (including various reports) http://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/integrated-resource-monitoring/forest-range-evaluation-program	Forest and Range Evaluation Program, MFLNRO	Website last visited September 2022
Forest Stewardship Plan Expectations and considerations for the Skeena Region, Coast Mountains, Skeena Stikine and Nadina Districts	Barry Dobbin, District Manager Coast Mountains Beth Eagles, District Manager Nadina Cam Bentley, District Manager Skeena Stikine	October 14, 2022
FREP Report 27: State of Stream Channels, Fish Habitats, and their Adjacent Riparian Areas: Resource Stewardship Monitoring to Evaluate the Effectiveness of Riparian Management, 2005–2008 http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/frep/frep-docs/frep_report_27.pdf?fileName=frep_report_27.pdf	Forest and Range Evaluation Program, MFLNRO	December 2010
FREP Report 41: Assistant Deputy Minister Resource Stewardship Report: Regional Results of the Forest and Range Evaluation Program, 2016-2017 http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/frep/frep-docs/reports/adm_resource_stewardship_report_frep_results_2016.pdf	Forest and Range Evaluation Program, MFLNRO	January 2017

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Multiple Resource Value Assessment Report for the Coast Mountain Natural Resource District https://governmentofbc.maps.arcgis.com/apps/MapSeries/index.html?appid=e2ebe950412a4d7c9c41eae38b48f788	Forest and Range Evaluation Program, MFLNRO	April 2021
Land Management Handbook 66: Compendium of forest hydrology and geomorphology in British Columbia https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/Lmh66.htm	Ministry of Forest and Range Forest Science Program	2010
PERSONAL COMMUNICATIONS		
Personal communication: Anne Hetherington, Rare and Endangered Species & Ecosystem Specialist, Skeena Region	Ecosystems Branch MFLNRO	Jan 14, 2005 April 17, June 22 and 27, September 15, 2016
Personal communication: Brad Pollard, RPBio; Principal, Acer Resource Consulting	n/a	Jan 14, 18, April 20, Aug 16, Oct 27, 2005
Personal communication: Bruce La Haie RPF, Stewardship Forester	MFLNRO	September 9, 2016
Personal communication: Carl Johansen, Recreation Officer, North Coast, Queen Charlotte Islands, Kalum Recreation District	Recreation Sites and Trails Branch, MFLNRO	December 2, 2015 June 6 and 28, 2016 September 8, 2016
Personal communications: E. Tetz, RPF, BCTS Silviculture Practices Forester	n/a	March 2, 2006
Personal communication: Gail Campbell, RPF; BCTS	n/a	June 26, 2006
Personal communication: J. Corstanje RPF, Practices Forester, BCTS	BCTS	March 28, 2006
Personal communications: K. Derow, RPF, Ministry of Forests and Range	n/a	March 3, 2006
Personal communication: MOFR Representative	MOFR	May 2, 2005
RECREATION – PUBLIC, COMMERCIAL		
FSP Review and Comment Requirements Relative to Tenured Commercial Recreational Operations on Crown Land, FRPA Administrative Bulletin No 14 https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/integrated-resource-bulletins/frpa-admin-no-14-tourism-modified.pdf	MFNRO	March 4, 2010
Order to Establish Objectives for a Recreation Site, Recreation Trail, or Interpretive Forest Site – Signed and dated orders are in Kalum Forest District File 16660-04	Kalum Forest District, MOF	Nov 8, 1996; July 25, 1997; July 2, 1998; Mar 26, 1999; Aug 11, 1999

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Annosus root disease in pre-commercially thinned stands in coastal British Columbia http://cfs.nrcan.gc.ca/publications?id=5352	D.J. Morrison and A. L. Johnson, Natural Resources Canada, Canadian Forest Service, Pacific Forestry Center	1999
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British Columbia's Northern Interior Forest Region: Spruce/White Pine Weevil Stand Establishment Decision Aid https://jem-online.org/index.php/jem/article/view/16/47	Hodgkinson, R., K. White, and A. Stock in the BC Journal of Ecosystems and Management 11(3), page 51-54	2011
Defoliation Free Growing Damage Standard for Determinate Growth Conifers https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/silviculture/silviculture-surveys/defoliation_guidelines_for_determinate_species.pdf	MOFR	March 2, 2005
Dothistroma Strategy Management Plan – Skeena Business Area, R. Chan et al	BC Timber Sales (BCTS)	Undated (post 2003)
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Ecological and genetic differentiation between hybrid spruce populations in the Nass-Skeena Transition Zone in Northwest British Columbia: Recommendations for seed sources	J. King	2014 Draft

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Ecological descriptions of pine mushroom (Tricholoma magnivelare) habitat and estimates of its extent in northwestern British Columbia http://www.sciencedirect.com/science/article/pii/S0378112700007180	Kranabetter, J.M., R. Trowbridge, A. Macadam, D. McLennan and J Friesen in the Forest Ecology and Management Journal 158(1-3), page 249-261	2002
Ectomycorrhizal mushroom distribution by stand age in western hemlock – lodgepole pine forests of northwestern British Columbia http://www.nrcresearchpress.com/doi/abs/10.1139/x05-095#citart1	Kranabetter, J.M., J. Friesen, S. Gamiet, and P. Kroeger. 2005 in the Canadian Journal of Forest Research 35(7), pages 1527-1539	2005
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FIA – FGC Project Report: North Coast Sitka-hybrid white spruce weevil site hazard assessment and rating development	Krakowski, J. and J. King	2011
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Field guide to pests of managed forests in British Columbia	Finck, K.E., P. Humphreys and G.V. Hawkins Canadian Forest Service Publications	1989
Fire Management Stocking Standards Guidance Document https://www.for.gov.bc.ca/hfp/silviculture/Fire%20Management%20Stocking%20Standards%20Guidance%20%20Document%20March%202016.pdf	MLFNRO	February 2016 (Version 1)
Free Growing Damage Criteria for Multi-layered Stands in British Columbia https://www.for.gov.bc.ca/hfp/silviculture/FH%20multi-storey%20damage%20criteria_v6%20_2_.pdf	MFLNRO	February 9, 2007

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Guide to the Evaluation of FSP Stocking and Related Standards http://www.for.gov.bc.ca/ftp/HFP/external/!publish/FSP%20stocking%20standards/GuideFSPstkstds.doc	MOF	Feb 7, 2005
Guiding Principles and Considerations when Planning the Harvest of Second Growth, Kalum Resource District https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/district-contacts/kalum_2nd_growth_guidelines.pdf	Kalum 2nd Growth Working Group	June 28, 2011
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Kalum Forest Health Strategy, 2003-2005; prepared by R Brouwer, for the Kalum DFAM group; March 2004	TimberSong Consulting	March 26, 2004
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Tree Wounding and Decay Guidebook https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/forest-health/managed-stand-pests/tree_wounding_and_decay_guidebook.pdf	Forest Practices Branch, MOF	February 2007
Type 2 Strategic Silviculture Analysis – Analysis Report; prepared by forest ecosystems solutions ltd., for the Kalum Forest District	Prince Rupert Forest Region, MOF	November 2001
Wildfire Threat Assessment Guide and Worksheets (including the Fuel Assessment Worksheet found in Appendix B) https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/fire-fuel-management/fuels-management/2020-wildfire-threat-assesment-guide-final.pdf	MFLNRORD	June 2020
TIMBER		
Kalum Timber Supply Review https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/timber-supply-review-and-allowable-annual-cut/allowable-annual-cut-timber-supply-areas/kalum-tsa	MOFR	Website last visited September 2022
Provincial Timber Management Goals, Objectives and Targets https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/silviculture/timbergoalsobjectives2017apr05_revised.pdf	MFLNRORD	Oct 2017
Provincial Timber Management Goals, Objectives and Targets, Management Unit Targets: Kalum TSA Provincial Timber Management Goals, Objectives and Targets, Management Unit Targets: TFL 1	MOF	2022
VISUALS		
District Manager Policy – Utility Corridors Impacts to Visual Quality Polygons https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/district-contacts/2014_memo_utility_corridors.pdf	Coast Mountains Natural Resource District, MFLNRO	Nov 20, 2014

Information Source	Publisher	Date of publication
Scenic Area designation and Establishment of VQOs – District Manager letters	Kalum Forest District, MOF	Jan. 7, 1997 Sept. 8, 1998 March 23, 2000
Visual Impact Assessment Guidebook, 2nd Addition https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/visual-resource-mgmt/visual_impact_assessment_guidebook.pdf	MOF	January 2001
Visual Impact Assessment Handbook https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/visual-resource-mgmt/visual_impact_assessment_handbook.pdf	MOF	May 2022
Visual Landscape Inventory: Procedures and Standards Manual https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/vli.pdf	MOF	May 1997
WILDLIFE		
A Scientific Basis for Managing Northern Goshawk Breeding Areas in the Interior of British Columbia: Best Management Practices https://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=41162	A. Kari Stuart-Smith, William L. Harrower, Todd Mahon, Erica L. McClaren, and Frank I. Doyle in FORREX Series 29	2012
Goshawk Expectation Letter	Eamon O'Donoghue, Regional Executive Director, Skeena, MFLNRO	May 29, 2016
Grizzly Bear Candidate Wildlife Habitat Area (WHA) Submission: Kalum Landscape Unit	MFLAP	March 2006
Grizzly Bear Candidate Wildlife Habitat Area Submission: Fiddler-Nelson Landscape Unit http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=10214	MOE	Jan 2007
Grizzly Bear Habitat Assessment and Candidate WHA Submission: Western Portions of the Kitimat River Area of TFL 3 41 http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=16192	West Fraser Mills Ltd	April 2009
Identified Wildlife Management Strategy Including accounts and measures for Bull Trout, Grizzly Bear, Great Blue Heron, Coastal Tailed Frog, Wolverine, and Marbled Murrelet http://www.env.gov.bc.ca/wld/frpa/iwms/iwms.html	MOE	2004 Website last visited September 2022

Information Source	Publisher	Date of publication
Minister's orders respecting identified ungulate range and species at risk http://www.env.gov.bc.ca/wld/frpa/species.html	MOE	Ungulate: May 6, 2005 July 18, 2011 Species at Risk: May 3, 2004 May 30, 2005 June 5, 2006 July 18, 2011
Notice – Indicators of the Amount, Distribution, and Attributes of Wildlife Habitat Required for the Winter Survival of Ungulate Species in the Kalum TSA. http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/UWR/Timber_Supply_Areas/Kalum_TSA/Notice/Kalum%20TSA_UWR.pdf	MOE	Dec 2004
Notice – Indicators of the Amount, Distribution, and Attributes of Wildlife Habitat Required for the Survival of Species At Risk in the Kalum Forest District http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Kalum_FD/Notice/Kalum%20FD_SAR.pdf	MOE	Dec 2004
Occupancy and Status of Northern Goshawk Breeding Areas in the Coast Mountains (Kalum), Nadina and Skeena Stikine Resource Districts	Frank Doyle, Wildlife Dynamics Consulting	December 2015
Order – Coastal Tailed Frog Wildlife Habitat Areas (6-058 to 6-067) http://www.env.gov.bc.ca/cgi-bin/apps/faw/wharesult.cgi?search=wlap_region&wlap=Skeena	MOE	April 16, 2006
Order – Moose Goat Ungulate Winter Range U-6-009 https://www.env.gov.bc.ca/wld/frpa/uwr/approved_uwr.html	MOE	April 22, 2015
Order –Mountain Goat Ungulate Winter Range U-6-001 http://www.env.gov.bc.ca/wld/documents/uwr/UWR%206-009%20FRPA%20order_signed%20doc.pdf	MOE	November 24, 2005 July 12, 2006 June 5, 2010 October 24, 2014
Red and Blue listed animal species, plant species, and ecological communities. http://a100.gov.bc.ca/pub/eswp/	Conservation Data Centre, MOE	Website last visited September 2022
Wildlife Habitat Features Page http://www.env.gov.bc.ca/wld/frpa/habitatfeatures.html	MOE	Website last visited September 2022

APPENDIX SDA: EVALUATION TOOL

This evaluation tool is provided to assist the Delegated Decision Maker (DDM) in determining consistency of the results and strategies in the FSP with the Objectives set by Government. The discussion of how to measure and/or verify a strategy or result is only provided to demonstrate that they are measurable or verifiable - it is not meant to constrain the Ministry of Forests in any way.

The structure of the tool is a table format that first describes an objective set by government, and then lists the strategies and/or results that are consistent with that objective. Where a reference number is **bolded**, the result or strategy was created specifically for that objective. Where a reference number is not bolded, it was created for another objective, but is noted as being consistent with the current objective as well.

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
Objective(s):	FPPR s. 5: "The objective set by government for soils is, without unduly reducing the supply of timber from British Columbia's forests, to conserve the productivity and the hydrologic function of soils. "		
CTR17-01	Result	Addresses an area of known soil sensitivity in an area that has been singled out in various public planning processes. (i.e., Kalum LRMP).	Road account can be reviewed. Can confirm that ECA calculations were done, and results can be reviewed after five years. Can confirm that road & channel assessment was done, and operations are consistent with actions identified in the assessment
CTR17-02	Result	Limits ECA within the major watersheds (or portions of the major watershed within the FDUs) to 30%, subject to assessment to maintain hydrological stability of the watershed and soils.	ECA calculations can be incorporated into the patch and seral process or maintained independent of that process by the licensee, Crown or First Nation(s).
CTR17-03	Strategy	Mandates that primary forest activities resulting in greater than 30% ECA is conducted in accordance with any recommendations resulting from the assessment required to keep them compliant with this FSP.	Measurement and/or verification is dependent on the provision of assessment(s).
CTR17-04	Strategy	Takes an action on roads, which are known conduits for the movement of erodible soils. Regular inspections will allow the risk of erosion to be mitigated.	Information can be requested to determine if inspections were scheduled, carried out, and any items identified were prioritized for action.
CTR17-20	Result	Ensures that any harvesting in these Community Watersheds results in conservation of hydrological function of soil, but allows activities to occur, thereby limiting timber supply impact.	See below
CTR17-21	Result	No harvesting in these very small watersheds results in no hydrological impact on soils, without a timber supply impact (i.e., Virginia Brook and Drake Creek Community watersheds).	See below
FPPR s. 35,36	n/a	FPPR practice requirements elected	n/a
Objective(s):	FPPR s. 6: "The objectives set by government for timber are to (a) maintain or enhance an economically valuable supply of commercial timber from British Columbia's forests, and (b) ensure that delivered wood costs, generally, after considering the effect on them of the relevant provisions of this regulation and of the Act, are competitive in relation to equivalent costs in relation to regulated primary forest activities in other jurisdictions, and I ensure that the provisions of this regulation and of the Act that pertain to primary forest activities do not unduly constrain the ability of a holder of an agreement under the *Forest Act* to exercise the holder's rights under the agreement."		

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
CTR17-05	Result	Stocking standards as identified are a way of ensuring that new forests will be viable from a commercial perspective, and this will ensure that costs of operating in future forests can be written off against known species of value.	Review of RESULTS and Annual declarations.
CTR17-06	Result	This result enables maintenance of the supply of potential deciduous timber for future markets.	Verification is reliant on accurate mapping of these sites by the licensee. RESULTS data will have to be reviewed against Site plans to verify this result.
CTR22-01	Strategy	The Fire Management Stocking Standard (FMSS) protects urban areas/structures/infrastructure. On blocks where FMSS are applied, economically viable timber may be reduced; however, the FMSS should enhance the timber value by protecting adjacent stands from fire.	Review of RESULTS and Annual declarations. Stocking standards are utilized to determine the silviculture plan for an area – this would be referenced in Site Plans. Documentation on file showing how the Fuel Assessment Rating was determined.
CTR17-35	Strategy	Provides for a distribution of seral stages and patch sizes across larger areas, providing for the maintenance of timber supply.	See below
CTR17-36	Result	Provides for a distribution of seral stages and patch sizes across larger areas, providing for the maintenance of timber supply.	See below
CTR17-38	Strategy	Provides operational flexibility in the management of OGMAs, thereby not unduly constraining the FSP Holder.	See below
CTR17-41	Strategy	Allows FSP Holder to move WTRA designated by other licensees, providing operational flexibility while ensuring biodiversity is being maintained.	See below
Objective(s):	FPPR s. 7(1): "The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for (a) the survival of species at risk; (b) the survival of regionally important wildlife; and I the winter survival of specified ungulate species." Sections 9, 10, 11, 12, and 13 of the *Government Actions Regulation* (GAR) allows • the establishment of, and general wildlife measures for, "species at risk", "regionally important species", and "specified ungulate species". • designation of, and objectives for, ungulate winter range (UWR) • designation of "species at risk" *(coastal tailed frog, grizzly bear, and Marbled Murrelet)*, "regionally important species" *(n/a)*, and "specified ungulate species" *(Mountain Goat and Moose)*. As of January 2005, notices providing descriptions of habitat area, distribution, and attributes have been released by the Minister of WLAP for *coastal tailed frog, grizzly bear, and Marbled Murrelet; Mountain Goat and Moose*		
CTR17-08	Result	Forage is an essential requirement for the survival of a species, and the revised stocking creates or maintains forage habitat.	Review of RESULTS and Annual declarations.
CTR22-04	Result	Visual screening should benefit wildlife by reducing disturbance and hunting pressures created by cutblocks and roads.	Review of site plan to confirm prescription to retained brush is included. Verification of 10 m visual buffer is reliant on direct observation.

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
CTR17-10	Strategy	This strategy was developed to address the objectives regarding goshawks within the Kiteen area. Goshawks are not currently provincially listed as at risk or regionally important, but they are identified for special management throughout the 2017 Kalum SRMP LUOR Order.	Assessments can be requested by the DDM as authorization criteria. Verification of mechanized and/or forestry-related human activity is reliant on direct observation.
CTR17-11	Result	This set of results was taken directly from the 2017 Kalum SRMP LUOR Order.	These results and strategy CTR17-10 mandate generation of a goshawk nesting/post-fledging/foraging area management plan prior to commencement of primary forest activities adjacent to such areas. The management plans can be requested by the DDM as authorization criteria.
CTR17-35 *Note: Applies to the FPPR s. 7 Notice for Marbled Murrelet.*	Strategy	Allows the establishment of a range of patch sizes - this is shown to be of benefit to Marbled Murrelet and grizzly bear (as per IWMS habitat characteristics).	See below
CTR17-36 *Note: Applies to the FPPR s. 7 Notice for Marbled Murrelet.*	Result	Allows the establishment of a range of patch sizes; this is shown to be of benefit to Marbled Murrelet and grizzly bear (as per IWMS habitat characteristics).	See below
CTR17-37 *Note: Applies to the FPPR s. 7 Notice for and Marbled Murrelet*	Result	Retains old seral stage forest which provides habitat characteristics for grizzly bear and Marbled Murrelet, as identified in the IWMS for these species.	See above
CTR17-38 *Note: Applies to the FPPR s. 7 Notice for Marbled Murrelet*	Strategy	Retains old seral stage forest which provides habitat characteristics for grizzly bear and Marbled Murrelet, as identified in the IWMS for these species.	See below
CTR17-45 *Note: Applies to the FPPR s. 7 Notices for grizzly bear*	Result	See below	See below
CTR17-46 *Note: Applies to the FPPR s. 7 Notices for grizzly bear*	Result	See below	See below

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
CTR17-50 *Note: Applies to the FPPR s. 7 Notices for grizzly bear*	Result	See below	See below
CTR17-56	Result	This strategy requires that impacts on den sites are reduced by retaining forested buffers.	For identified den sites, forested buffer or other management provided by QP is prescribed in the Site Plan.
Objective(s):	FPPR s. 8: "The objective set by government for water, fish, wildlife and biodiversity within riparian areas is, without unduly reducing the supply of timber from British Columbia's forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas."		
CTR17-01	Result	Addresses an area of known soil sensitivity, thereby limiting potential impact on riparian areas in an area that has been singled out in various public planning processes (i.e., Kalum LRMP).	See above
CTR22-06	Result	Retains basal area in riparian management zones, maintaining water quality, and contributing to fish & wildlife habitat and biodiversity (e.g., also contributes to the habitat attributes for Coastal Tailed Frog).	As per result – Basal Area retention can be represented by area and can be in clumps or distributed along the entire stream.
CTR17-13	Result	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	All blocks and/or roads authorized via the FSP in the Ksi Gahlt'in FDU have riparian retention as per the strategy.
CTR17-14	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	Inspection of riparian reserve and/or management zones for retention of blowdown will have to be added to FREP and C&E workloads. Map notations for all RRZs and RMZs authorization under this FSP will have to generated to ensure no log salvage or free use permits are authorized by the DDM.
CTR22-02	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	Inspection of streams for retention of blowdown will have to be added to FREP and C&E workloads.
CTR17-15	Result	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	All blocks and/or roads authorized via the FSP that overlap any portion of the ecosystem network will be evaluated against the criteria for ecosystem network amendment by the DDM prior to authorization.
CTR17-16	Result	This result was taken directly from the 2017 Kalum SRMP LUOR Order.	All blocks and/or roads authorized via the FSP that overlap with any portion of the Special Habitats for General Wildlife will be evaluated against the criteria for infringement on those areas by the DDM prior to authorization.
CTR17-17	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	All blocks and/or roads authorized via the FSP that overlap with any portion of the Water Management Unit and have riparian features present within the Total Area Under Prescription within the Water Management Unit will be evaluated against the criteria for infringement on the hydroriparian areas associated with those riparian features by the DDM prior to authorization.

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
CTR17-18	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	All blocks and/or roads authorized via the FSP that overlap with any portion of the Water Management Unit and have riparian features present within the Total Area Under Prescription within the Water Management Unit will be evaluated against the criteria for infringement on the hydroriparian areas associated with those riparian features by the DDM prior to authorization.
CTR17-19	Result	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	Review roads within the Water Management Unit to determine if status.
CTR22-03	Strategy	This strategy requires that activities on alluvial fans and floodplains are designed and carried out in accordance with an assessment by a QP	Assessments can be requested by the DDM as authorization criteria. Verification of mechanized and/or forestry-related human activity is reliant on direct observation.
CTR17-58	Strategy	This strategy confirms the other results and strategies that will be applied to address potential impacts on fish bear streams.	See comments for other results and strategies.
CTR17-49	Result	Limits activities within an area adjacent to the Skeena River, therefore providing protection to the riparian area around the river.	See below
CTR17-51	Result	Limits activities within an area adjacent to the Lakelse River, therefore providing protection to the riparian management area around the river.	See below
FPPR s. 47-51, 52(2), 53	n/a	FPPR practice requirements elected.	n/a
Objective(s):	FPPR s. 8.1: "(2) Until December 31, 2005 the objective set by government for fish habitat in fisheries sensitive watersheds is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities in the fisheries sensitive watershed from resulting in a material adverse impact on the habitat of the fish species for which the fisheries sensitive watershed was established. (3) The objective set by government under subsection (2) applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests."		
FPPR s. 55-57	n/a	*No Fisheries Sensitive Watersheds within FSP area*	n/a
Objective(s):	FPPR s. 8.2: "(2) The objective set by government for water being diverted for human consumption through a licensed waterworks in a community watershed is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities within the community watershed from resulting in (a) a material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or (b) the water from the waterworks having a material adverse impact on human health that cannot be addressed by water treatment required under (i) an enactment, or (ii) the license pertaining to the waterworks."		
CTR17-20	Result	Ensures that any logging in these Community Watersheds results in no hydrological impact but allows activities to occur, thereby limiting the timber supply impact.	No harvesting begins without having clear-cut equivalency calculated, or an assessment in place and a confirmation that the allowable thresholds have been met.
CTR17-21	Result	No harvesting in these very small watersheds results in no hydrological impact, without a timber supply impact (i.e., Virginia Brook and Drake Creek Community watersheds). In other community watersheds, equivalent clearcut area thresholds have been established that will protect natural flow regimes.	No harvesting normally permitted in Virginia Brook and Drake Creek Community Watersheds. If harvesting, there must be a description in the Site Plan that indicates the forest health, fire, wind factors(s) and evidence that there was an agreement between a representative of the FSP Holder and Ministry on the need for timber harvesting.
FPPR s. 59-61	n/a	FPPR practice requirements elected.	n/a

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
Objective(s):	FPPR s. 9: "The objective set by government for wildlife and biodiversity at the landscape level is, without unduly reducing the supply of timber from British Columbia's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape."		
CTR17-05	Result	Stocking standards as identified are biologically based and will ensure that appropriate tree species choices are made.	See above
CTR17-08	Result	Forage is an essential requirement for the survival of a species, and the revised stocking creates or maintains forage habitat for wildlife and contributes to biodiversity at the landscape level.	See above
CTR17-35	Strategy	Provides for a distribution of seral stages and patch sizes across larger areas, providing for diversity at the landscape level.	See below
CTR17-36	Result	Provides for a distribution of seral stages and patch sizes across larger areas, providing for diversity at the landscape level.	See below
CTR17-37	Result	Provides guidance to allow for OGMA retention.	See below
CTR17-42	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	No harvesting in identified red listed community. If harvesting, there must be a description in the Site Plan that indicates the why access through community was needed.
CTR17-43	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	No harvesting in identified red listed community, and windfirm buffer is identified in Site Plan. If harvesting, there must be a description in the Site Plan that indicates the why access through community was needed.
CTR17-44	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	70% of identified blue listed communities in a cut block are retained as described in the Site Plan.
CTR17-45	Result	Allows for conservation of movement habitat in a low-level pass, which will contribute to biodiversity.	See below
CTR17-46	Result	Allows for conservation of movement habitat in a low-level pass, which will contribute to biodiversity.	See below
CTR17-47	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	All blocks and/or roads authorized via the FSP that overlap with any portion of the Ecosystem Network will be evaluated against the criteria for structural connectivity by the DDM prior to authorization.
CTR17-48	Strategy	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	All blocks and/or roads authorized via the FSP that overlap the 200 m buffer around the Ecosystem Network will be evaluated against the criteria for in the strategy by the DDM prior to authorization.
CTR17-49	Result	Adds to the biodiversity of the area by ensuring conservation of rare plant associations.	See below
CTR17-50	Result	Provides grizzly bear forage opportunities in identified watersheds, moose will benefit from the additional forage as well.	See below
CTR17-51	Result	Identifies landscape level conservation within Special Resource Management – Lakelse subzones.	See below
CTR17-55	Result	This strategy was taken directly from the 2017 Kalum SRMP LUOR Order.	Patch and seral analysis or other similar analysis of identified pine mushroom habitat.
FPPR s. 64, 65	n/a	FPPR practice requirements elected.	n/a

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
Objective(s):	FPPR s. 9.1: "The objective set by government for wildlife and biodiversity at the stand level is, without unduly reducing the supply of timber from British Columbia's forests, to retain wildlife trees."		
CTR22-06	Result	Provides for retention of trees in an RMZ.	See above
CTR17-28	Result	This result provides for removal of limited amounts of trees from WTRAs for an identified traditional use of Cedar.	See below
CTR22-05	Result	Wildlife trees to be retained in a harvest unit as per Kalum SRMP	See below
CTR17-40	Result	Wildlife trees to be retained in all cutblocks and cutblock aggregates within the Kiteen planning area as per the 2017 SRMP LUOR Order.	CP applications and RESULTS data can be reviewed to verify this result.
CTR17-41	Strategy	Allows for operational flexibility while also retaining wildlife trees	See below
CTR17-51	Result	A requirement for WTRA retention is identified within the Lakelse subzone.	See below
FPPR s. 66-67 Exemption	n/a	FPPR practice requirements exempted. The Kalum SRMP provides direction on wildlife tree retention on all the Landscape Units in the FDU, therefore, the default practices (FPPR s. 66, 67) for wildlife tree retention will not apply.	n/a
Objective(s):	The Minister of Sustainable Resource Management made an *Order Establishing Provincial Non-Spatial Old Growth Objectives*, effective June 30, 2004. This Order establishes landscape units (LU) and biodiversity emphasis for each LU, and retention levels for old growth by natural disturbance type. This "Old Growth Order" requires an analysis of each LU with respect to the amount of old-growth remaining by biogeoclimatic ecological classification.		
		Not Applicable to this FSP – Superseded by Kalum SRMP	
Objective(s):	FRPA s. 181: "All objectives in respect of areas continued under section 180 that were in effect immediately before the effective date are continued as objectives under this Act." GAR s. 17: "A visual quality class for a scenic area is continued under this regulation as visual quality objective if (a) the visual quality class has been (i) set out before October 24, 2002 in a letter from the district manager to the holder of an agreement under the *Forest Act*, or (ii) included in the most recent tree farm license visual landscape inventory prepared by the holder of a tree farm license and approved by the regional manager, and (b) in existence on the coming into force of this section. (a) FPPR s. 9.2(2): "The objective set by government in relation to visual quality for a scenic area, that was established on or before October 24, 2002, and (b) for which there is no visual quality objective is: to ensure that the altered forest landscape for the scenic area (c) in visual sensitivity class 1 is in either the preservation or retention category, (d) in visual sensitivity class 2 is in either the retention or partial retention category, (e) in visual sensitivity class 3 is in either the partial retention or modification category, (f) in visual sensitivity class 4 is in either the partial retention or modification category, and in visual sensitivity class 5 is in either the modification or maximum modification category."		
CTR17-22	Strategy	Consistency is achieved in that the process defines how VSCs will be handled and evaluated as VQOs, and then indicates how management around the VQOs will occur.	VIAs will be done - if concern that VIA were not done or VQO not met, C&E can request the VIA.
CTR17-23	Result	Addresses VSCs as well as VQOs	VIAs will be done - if concern that VIA were not done or VQO not met, C&E can request the VIA.
Objective(s):	FPPR s. 10: "The objective set by government for cultural heritage resources is to conserve, or, if necessary, protect cultural heritage resources that are (a) the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and (b) not regulated under the Heritage Conservation Act."		

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
CTR17-24	Strategy	This strategy allows for information sharing and review between CTR and First Nations regarding forest development that will be occurring within First Nations territories. Consistency with the cultural heritage resources objective is achieved by providing a method for conservation and protection of known cultural heritage resource information, and for continual updates to cultural heritage resource information.	At a minimum, an annual meeting will be held if there are planned activities occurring within the next year. Where no activities are planned, a telephone, email or letter exchange will occur. Summaries of the process are provided to the District Manager and copied to the First Nation representative.
CTR17-25	Strategy	This strategy allows for information sharing and review between CTR and the Nisga'a Lisims Government regarding forest development that will be occurring within lands subject to Nisga'a Treaty rights.	At a minimum, an annual meeting will be held if there are planned activities occurring within the next year. Where no activities are planned, a telephone, email or letter exchange will occur. Summaries of the process are provided to the District Manager and the First Nation representative.
CTR17-27	Strategy	This strategy allows the identification and review of traditional use and cultural heritage information that has not been captured in the development of this FSP. Consistency with the cultural heritage resources objective is achieved by providing for stand-level mitigation of identified cultural heritage resources when necessary.	Information on previously unidentified cultural heritage resource features and a description of any mitigative measures will be provided to the District Manager and First Nations representative.
CTR17-28	Result	This result provides for the maintenance of a resource for an identified traditional use of cedar. Consistency with the cultural heritage resources is achieved by allowing cultural harvest of cedar (a cultural heritage resource of continued importance) within retention areas. Consistency with other objectives (i.e., the objective for water, fish wildlife and biodiversity at the stand level and within riparian areas) is achieved by allowing cedar harvest provided the function of retention area is maintained.	No more removal than allowed from retention areas. Measurement method is described.
CTR17-29	Strategy	This strategy provides specifically for post-contact CMTs, which have been identified to be of continuing importance to several First Nations.	Post-contact CMTs are documented, and information is communicated as in **CTR17-27.**
Invasive Plants:	FRPA s 17: For the purpose of section 47 *[invasive plants]* of the Act, a person who prepares a forest stewardship plan must specify measures in the plan to prevent the introduction or spread of species of plants that are invasive plants under the Invasive Plants Regulation, if the introduction or spread is likely to be the result of the person's forest practices.		
Use certified seed only in erosion control and grass-seeding activities.		Uncertified seed can contain weed plant seeds. Avoid planting invasive species by using only seed which has been certified as weed-free. Perennial native grasses and legumes should be used for re-vegetation purposes	Seed purchase records.
Wash road construction, logging, and silviculture machinery that is to be transported more than 200 km to the FDU.		Prevents transport of invasive plants.	Inspection records.
Natural Range Barrier:	FPPA s 18: "For the purpose of section 48 *[natural range barriers]* of the *Act*, a person who prepares a forest stewardship plan must specify measures to mitigate the effect of removing or rendering ineffective natural range barriers."		

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
Section 3.4 Natural Range Barriers		Wording provided to ensure ongoing consideration of natural range barriers.	If blocks or roads authorized under this FSP occur in an area where there is a Range Tenure, communication records and documentation of mitigation measures can be requested.
Objective(s):	**RECREATION TRAILS & SITES (Higher Level Plan Objectives):** As of March 2012, the following are Recreation Sites/Trails that have established Higher Level Plan Objectives and are within an FDU under this FSP:		
CTR17-30	Result	Retention wording is directly from the objectives. Wording regarding the crossing of trails is necessary to ensure no undue impact on timber supply.	No disturbance of trails within 10 m, except where approved. Documentation of referral or consultation with Ministry responsible for the trail can be requested or is provided in Cutting Permit, Road Permit, or Forest Service Road submission.
CTR17-31	Result	Retention wording provided to ensure no disturbance of shoreline areas.	No disturbance of foreshore within 10 m.
CTR17-32	Strategy	Strategy allows small scale timber harvesting and silvicultural practices within the Red Sand Lake Interpretive Forest Site.	Any planned activity will be referred to the Ministry responsible for the Site.
CTR17-33	Result	Wording is as per the objective, except for a clarification that allows access (unlikely) for planning or silviculture activities (this is consistent with the need for a competitive timber industry).	If C&E identifies any motorized activity outside of the window, can investigate and confirm if for a planning/silvicultural activity. Exemption provided by the Ministry responsible for the trail.
CTR17-34	Result	Ensures access is not denied and that there will be road maintenance; result does not preclude the road being at a better than 4WD status.	Roads under FSP Holder control are at 4WD or better access.
Objective(s):	Kalum SRMP - Objective 1: Maintain a range of forest seral stages by biogeoclimatic variant, within each landscape unit, consistent with Tables 1, 2, and 3.		
CTR17-35	Strategy	Provides for a distribution of seral stages and patch sizes across larger areas, providing for diversity at the landscape level.	Seral, Patch analysis results.
CTR17-36	Result	Provides for a distribution of seral stages and patch sizes across larger areas, providing for diversity at the landscape level.	The same methodology for LU Seral/Patch distribution is to be used to evaluate movement towards patch size and seral stage distribution on a periodic basis (1 - 5 years). If C&E believes that the result is not being achieved, they can conduct an analysis based on the information provided by the licensee in its last annual reporting.
Objective(s):	Kalum SRMP - Objective 2: Maintain old seral stage forest within each undeveloped watershed listed in Table 4 and shown on Map 3 consistent with Table 5.		
		Not Applicable to this FSP	

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
Objective(s):	Kalum SRMP - Objective 3: Maintain or recruit old seral stage forest, reflective of the full range of ecosystems, including some with interior forest conditions, throughout each rotation within the Old Growth Management Areas shown on Map 4. Forest harvesting activities in the OGMAs are limited to insect or disease control measures that are necessary to mitigate severe damage to the habitat attributes in the OGMAs, or other resource values in the landscape.		
CTR17-37	Result	Wording is like objective.	If any harvesting occurs within an OGMA, review circumstances leading to harvest.
Objective(s):	Kalum SRMP - Objective 4: Provide operational flexibility in managing OGMAs by allowing up to 10 hectares or 10% of the individual OGMA area, whichever is less, to be disturbed for one or more of the following purposes: • allowing road development where no practicable alternative exist; • to better reflect physical features that were intended to form the actual boundaries of the OGMA; • to improve harvest boundary alignment in a way that will contribute to the maintenance of the OGMA; • to address a compelling forest health issue; or, • to shift the location of the contiguous area of the OGMA to improve the retention of old forest attributes as identified through field assessment. The allowable disturbance described above is conditional upon a forest agreement holder identifying and reserving from harvesting an alternative area(s) within the same BEC variant within a landscape unit, provided the alternative area: • is of equal or greater extent in total than the area to be disturbed; and, • will result in equal or greater retention of key old forest attributes that are understood to be important for biodiversity conservation.		
CTR17-38	Strategy	Wording is like objective.	If any harvesting occurs within an OGMA, review circumstances leading to harvest.
Objective(s):	Kalum SRMP - Objective 5: Maintain structural diversity in managed stands by retaining wildlife tree patches in each cut block, over the rotation, consistent with the targets in Table 6. Shift or vary targets shown in Table 6 among cut blocks within a cut block aggregate based on risks to biodiversity.		
CTR22-05	Result	Wildlife trees to be retained in a harvest unit as per Kalum SRMP.	Area of wildlife tree retention is within defined limits.
CTR17-41	Strategy	Allows for operational flexibility while also retaining wildlife trees.	Harvest of WTRA designated by other licensee is consistent with the FSP of the other licensee, or mature seral condition has been achieved on the cut block.
Objective(s):	Kalum SRMP - Objective 6: Maintain the natural composition of dominant tree species across each landscape unit and throughout the rotation.		
CTR17-05	Result	Stocking standards as identified are biologically based and will ensure that appropriate tree species choices are made.	See above
Objective(s):	Kalum SRMP - Objective 7: Attain a landscape pattern of patchiness that, over a long term, reflects the natural disturbance patterns as per Table 7.		
CTR17-35	Strategy	See above	See above
CTR17-36	Result	See above	See above
Objective(s):	Kalum SRMP - Objective 8: Maintain forest stand structure and function for continued wildlife movement through the level pass between the Kiteen (Ksi Gahlt'in) and Cedar drainages identified on Map 5. • Within polygon "A", retain 100 % of forested area. • Within polygon "B", timber harvesting will be limited to partial cutting systems.		
CTR17-45	Result	Allows for conservation of movement habitat in a low-level pass, which will provide for species survival.	100% of the forested area located in polygon "A" is retained. Within polygon "B", timber harvesting is limited to partial cutting systems (i.e., seed tree; shelterwood; single-tree or group selection; retention).

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
Objective(s):	Kalum SRMP - Objective 9: Maintain forest stand structure and function to facilitate wildlife movement, in the level pass between the Williams and Thomas/Clore watersheds identified on Map 5.		
CTR17-46	Result	Allows for conservation of movement habitat in a low-level pass, which will provide for species survival.	No commercial harvest from within the identified corridor (unless as described).
Objective(s):	Kalum SRMP - Objective 10: Conserve rare plant communities on the Skeena Islands identified on Map 6.		
CTR17-49	Result	Provides a mechanism for ensuring that rare plant associations are conserved (i.e., retained from harvest unless a certain seral stage requirement is met).	No harvest in High Conservation Area except for road building for stated purposes. Site plan indicates how buffers were retained around specified features.
Objective(s):	Kalum SRMP - Objective 11: Maintain natural level of forage supply for grizzly bears in the watersheds identified on Map 7 by: a. providing an adequate supply of berry feeding; b. maintaining natural levels of forage supply as present in old growth forests; c. on the rich and wetter sites implement regeneration and free to grow standards consistent with Table 8. Vary from these standards based on site specific factor, provided parts a) and b) in this objective will be achieved; and, d. within McKay-Davies and Copper watersheds, no more than 30% of the forested land base, excluding hardwood, will be between 25 and 100 years old.		
CTR17-50	Result	Seral stage distribution has been identified through the SRMP as being of benefit to grizzly bear, and this area was singled out as of importance.	Seral stage analysis.
Objective(s):	Kalum SRMP - Objective 12: Maintain wildlife habitat and biodiversity within the Lakelse River Special Resource Management Zone (Map 8). • In Subzone 1 - no harvesting of timber or blowdown salvage will occur. • In Subzone 2 - early seral stage target is a maximum of 27%; the maximum opening size is 15 hectares; a minimum 15 % retention within the cut blocks is required to add structural diversity; and in any five-year planning cycle at least 50% of the volume harvested is to be harvested by using a selection silviculture system.		
CTR17-51	Result	The early seral stage requirement allows for a balancing of seral stages over time and the limitation of less than 50% clear-cut harvest systems will also buffer the potential for an over-supply of early seral.	In Subzone 2: Early seral stage at less than 27%. Cut blocks less than 15 ha clear-cut (net). At least 15% retention in clear-cut blocks. If any cutting, at least 50% partial cut systems at the end of the FSP term.
Objective(s):	Kalum SRMP - Objective 13: Maintain biological diversity and ecosystem representation within the Upper Kitsumkalum Valley by not harvesting timber within the Upper Kitsumkalum SRMZ (Map 8). Road construction is acceptable to access the timber outside of SRMZ where there is no other practicable route alternative.		
CTR17-52	Strategy	Strategy ties to the Timber objective - addresses COST. Strategy also clarifies the intent of "no logging" in the LRMP: i.e., it does not say "no road construction"	Rationale is provided with the CP/RP
Objective(s):	Kalum SRMP - Objective 14: Conserve uncommon reticulated fens (Map 8) within the Miligit Valley area.		
CTR17-53	Result	No logging or road construction with the uncommon, reticulated fens in the identified areas.	Identified on FSP maps.
Objective(s):	Kalum SRMP - Objective 15: Maintain a feeling of remoteness and pristine viewscape on the Upper Copper River (Zymoetz River) above the Limonite Creek (within the Kalum SRMP area). The following are practice requirements: a. permit only one bridge crossing at any time; and, b. retain a minimum of 100 meters no harvest reserve on both sides of the river. Less than 100 meters reserve is acceptable where this makes "best" operational/environmental practice, or for other site specific-reasons, provided the objective is met.		
CTR17-54	Result	Is consistent with the SRMP and provides for a Preservation VQO along a limited area.	Either a 100 m reserve strip along the river, or a Site Plan describing how the Preservation VQO is achieved.

FSP Ref #	Strategy or Result?	How it is consistent with the Objective(s)	How it can be Measured or Verified
Objective(s):	Kalum SRMP - Objective 16: Maintain the visual quality of the area visible from the Sue Channel/Hawkesbury Island protected area (Map 8) by: • applying single tree or group selection silviculture system; and, • limiting the maximum opening size to 1-2 tree lengths.		
n/a	n/a	**Not Applicable to this FSP**	n/a
Objective(s):	Kalum SRMP - Objective 17: Maintain the quality, quantity, and natural flow regimes of water in watersheds identified on Map 9 as newly established Community Watersheds. Ensure a clearcut equivalency of less than 20% of the watershed area in sub-basins larger than 250 hectares, unless a different threshold is determined as being more appropriate as a measure of maintenance of natural flow regimes.		
CTR17-20	Result	See above	See above
CTR17-21	Result	See above	See above

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APPENDIX SDB: IDENTIFIED SPECIES AT RISK

This appendix may be updated as additional information is gathered on the distribution of species or communities within the FDUs and the potential for forestry activities to interact with the species or community.

Table SDB-1. Species at Risk Identified through FRPA (GAR Section 13).

Category/Species	Date designated	Potentially within FSP area?[32]	Notice of Habitat Attributes, Amount & Distribution in place?[33]
Amphibians			
Blotched Tiger Salamander	May 6, 2004	No	No
Coastal/Pacific Tailed Frog	**May 6, 2004**	**Yes**	**Yes**
Coeur d'Alene Salamander	May 6, 2004	No	No
Great Basin Spadefoot	May 6, 2004	No	No
Northern Leopard Frog	May 6, 2004	No	No
Northern Red-legged Frog	**May 6, 2004**	**Yes**	No
Coastal/Pacific Giant Salamander	May 6, 2004	No	No
Rocky Mountain Tailed Frog	May 6, 2004	No	No
Birds			
American White Pelican	**June 6, 2006**	**Yes**	No
Ancient Murrelet	**May 6, 2004**	**Yes**	No
Bay-breasted Warbler	June 6, 2006	No	No
Black-throated Green Warbler	June 6, 2006	No	No
Brewer's Sparrow, *breweri* subspecies	June 6, 2006	No	No
Burrowing Owl	May 6, 2004	No	No
Cape May Warbler	June 6, 2006	No	No
Cassin's Auklet	**June 6, 2006**	**Yes**	No
Connecticut Warbler	June 6, 2006	No	No
Flammulated Owl	May 6, 2004	No	No
Grasshopper Sparrow	June 6, 2006	No	No
Great Blue Heron, *fannini* subspecies	**May 6, 2004**	**Yes**	No
Great Blue Heron, *herodias* subspecies	**June 6, 2006**	**Yes**	No
Hairy Woodpecker, *picoideus* subspecies	June 6, 2006	No	No
Lewis's Woodpecker (including Georgia Depression pop'n)	**May 6, 2004**	**Yes**	No
Long-billed Curlew	**May 6, 2004**	**Yes**	No
Marbled Murrelet	**May 6, 2004**	**Yes**	**Yes**
Nelson's Sharp-tailed Sparrow	June 6, 2006	No	No
Northern Goshawk, *laingi* subspecies	**May 6, 2004**	**Yes**	No
Northern Pygmy-owl, *swarthi* subspecies	**June 6, 2006**	**Yes**	No
Northern Saw-whet Owl, *brooksi* subspecies	May 30, 2005	No	No
Prairie Falcon	June 6, 2006	No	No
Sage Thrasher	**May 6, 2004**	**Yes**	No
Sandhill Crane	June 6, 2006	No	No
Sharp-tailed Grouse, *columbianus* subspecies	June 6, 2006	No	No
Short-eared Owl	**May 6, 2004**	**Yes**	No
Spotted Owl	May 6, 2004	No	No
Western Screech-Owl, *macfarlanei* subspecies	May 6, 2004	No	No

[32] Determined through a query of the BC Species and Ecosystems Explorer for species within the FDUs on June 22, 2022.
[33] Management not required under the FSP until this information is in place

Category/Species	Date designated	Potentially within FSP area?[32]	Notice of Habitat Attributes, Amount & Distribution in place?[33]
White-headed Woodpecker	May 6, 2004	No	No
White-tailed Ptarmigan, *saxatilis* subspecies	**June 6, 2006**	**Yes**	No
Williamson's Sapsucker, *natalie* subspecies	June 6, 2006	No	No
Williamson's Sapsucker, *thyroideus* subspecies	June 6, 2006	No	No
Yellow-breasted Chat	May 6, 2004	No	No
Fish			
Bull Trout	**June 6, 2006**	**Yes**	No
Cutthroat Trout, *lewisi* subspecies	June 6, 2006	No	No
Vananda LakeCreek Benthic Stickleback	May 6, 2004	No	No
Vananda LakeCreek Limnetic Stickleback	May 6, 2004	No	No
Invertebrates			
Gillett's Checkerspot	June 6, 2006	No	No
Half-moon Hairstreak	June 6, 2006	No	No
Johnson's Haristreak	June 6, 2006	No	No
Quatsino Cave Amphipod	**June 6, 2006**	**Yes**	No
Sonora Skipper	June 6, 2006	No	No
Mammals			
American Badger	May 6, 2004	No	No
American Water Shrew	June 6, 2006		
Bighorn Sheep	June 6, 2006	No	No
Caribou (including northern mountain [pop.15], southern mountain [pop.1], & boreal [pop.14] populations)	**May 6, 2004**	**Yes**	No
Fisher	**June 6, 2006**	**Yes**	No
Fringed Myotis	May 6, 2004	No	No
Grizzly Bear	**May 6, 2004**	**Yes**	**Yes**
Keen's Myotis	May 6, 2004	No	No
Pacific Water Shrew	**May 6, 2004**	**Yes**	No
Spotted Bat	May 6, 2004	No	No
Vancouver Island Marmot	May 6, 2004	No	No
Wolverine (subspecies *luscus, vancouverensis*)	**May 6, 2004**	**Yes**	No
Plants			
Scouler's Corydalis (*Corydalis scouleri*)	May 6, 2004	No	No
Tall Bugbane (*Actaea elata*)	May 6, 2004	No	No
Plant Communities			
Alkali saltgrass – Nuttall's alkaligrass	June 6, 2006	No	No
Antelope-brush/ bluebunch wheatgrass	June 6, 2006	No	No
Antelope-brush/ needle-and-thread grass	June 6, 2006	No	No
Douglas-fir/ Alaska oniongrass	June 6, 2006	No	No
Douglas-fir/ common juniper/ clad lichens	June 6, 2006	No	No
Douglas-fir/ common snowberry/ arrowleaf balsamroot	June 6, 2006	No	No
Douglas-fir/ dull Oregon-grape	June 6, 2006	No	No
Hybrid white spruce/ ostrich fern	June 6, 2006	No	No
Ponderosa pine/ bluebunch wheatgrass – silky lupine	June 6, 2006	No	No
Vasey's big sagebrush/ pinegrass	June 6, 2006	No	No
Water birch/roses	June 6, 2006	No	No
Western hemlock – Douglas-fir/ electrified cat's-tail moss Dry Submaritime 2	June 6, 2006	No	No
Western redcedar – Douglas-fir/ vine maple	June 6, 2006	No	No
Western redcedar – Douglas-fir/ devil's club	June 6, 2006	No	No
Western redcedar/ devil's club/ ostrich fern	June 6, 2006	No	No
Reptiles			
Gopher Snake, *deserticola* subspecies	May 6, 2004	No	No
North American Racer	June 6, 2006	No	No

Category/Species	Date designated	Potentially within FSP area?[32]	Notice of Habitat Attributes, Amount & Distribution in place?[33]
Western Rattlesnake	June 6, 2006	No	No

Table SDB-2. Species and Plant Communities with a BC Conservation Status listing of Red or Blue that may be found in the FDUs[34]

Category/Species	BC Status	Biogeoclimatic Units (if known)
Amphibians		
Northern Red-legged Frog	Blue	CDF; CWH; MH
Wandering Salamander	Blue	CDF; CWH
Birds		
American Bittern	Blue	BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBPS; SBS
American Golden-Plover	Blue	BAFA; BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBS; SWB
American White Pelican	Red	BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBPS; SBS
Ancient Murrelet	Blue	CDF; CWH
Band-tailed Pigeon	Blue	CDF; CWH; ICH; IDF; MS; SBS
Barn Swallow	Blue	BAFA; BG; BWBS; CDF; CWH; ESSF; ICH; IDF; IMA; MH; MS; PP; SBPS; SBS; SWB
Black Scoter	Blue	CDF; CMA; CWH; MH
Black Swift	Blue	BAFA; BG; CDF; CMA; CWH; ESSF; ICH; IDF; IMA; MH; MS; PP; SBPS; SBS; SWB
Brant	Blue	BWBS; CDF; CWH; IDF; SBPS
California Gull	Blue	BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBS
Canada Goose, *occidentalis* subspecies	Red	
Caspian Tern	Blue	BG; BWBS; CDF; CWH; ICH; IDF; PP; SBS
Cassin's Auklet	Red	CDF; CWH
Common Murre	Red	CDF; CWH
Double-crested Cormorant	Blue	BWBS; CDF; CWH; ICH; IDF; PP; SBPS; SBS
Eared Grebe	Blue	MH; MS; PP; SBPS; SBS; BAFA; BG; BWBS; CMA; CWH; ESSF; ICH; IDF; IMA
Great Blue Heron, *fannini* subspecies	Blue	CDF; CWH
Great Blue Heron, *herodias* subspecies	Blue	BG; ICH; IDF; MS; PP; SBS
Gyrfalcon	Blue	BAFA; BG; BWBS; CDF; CWH; ICH; IDF; SBPS; SBS; SWB
Horned Puffin	Red	CDF; CWH
Hudsonian Godwit	Red	BWBS; CDF; CWH; IDF; MS; SWB
Lark Sparrow	Blue	BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBPS; SBS

[34] Determined through a query of the BC Species and Ecosystems Explorer for species within the FDUs on June 20, 2022. This list is restricted to species that breed in the District and does not include migrants.

Category/Species	BC Status	Biogeoclimatic Units (if known)
Lewis's Woodpecker	Blue	BG; CDF; CWH; ICH; IDF; PP; SBS
Long-billed Curlew	Blue	BG; CDF; CWH; ICH; IDF; PP; SBPS; SBS
Long-tailed Duck	Blue	SBS
Marbled Murrelet	Blue	CDF; CWH; MH
Northern Fulmar	Red	CDF; CWH
Northern Goshawk, *atricapillus* subspecies	Blue	BWBS; ESSF; ICH; IDF; MS; PP; SBPS; SBS; SWB
Northern Goshawk, *laingi* subspecies	Red	CDF; CWH
Northern Pygmy-owl, *swarthi* subspecies	Blue	CDF; CWH; MH
Olive-sided Flycatcher	Blue	BWBS; CDF; CWH; ESSF; ICH; IDF; MH; MS; PP; SBPS; SBS; SWB
Peregrine Falcon, *pealei* subspecies	Blue	CDF; CWH
Pine Grosbeak, *carlottae* subspecies	Blue	CMA; CWH; MH
Purple Martin	Blue	BWBS; CDF; CWH; ICH
Red Knot	Red	CDF; CWH
Red-necked Phalarope	Blue	BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBPS; SBS; SWB
Rough-legged Hawk	Blue	BAFA; BG; BWBS; CDF; CWH; ESSF; ICH; IDF; IMA; MS; PP; SBPS; SBS; SWB
Rusty Blackbird	Blue	BG; BWBS; CDF; CWH; ESSF; MS; PP; SBPS; SBS; SWB
Sage Thrasher	Red	BG; CDF; CWH; ICH; IDF; PP
Short-billed Dowitcher	Blue	BG; BWBS; CDF; CWH; ICH; IDF; PP; SWB
Short-eared Owl	Blue	BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBPS; SBS; SWB
Smith's Longspur	Blue	BAFA; BG; BWBS; CDF; CMA; CWH; IDF; MS; PP; SBS; SWB
Surf Scoter	Blue	BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBPS; SBS; SWB
Swainson's Hawk	Red	BG; BWBS; CDF; ICH; IDF; MS; PP; SBS
Thick-billed Murre	Red	CWH
Tufted Puffin	Blue	CDF; CWH
Upland Sandpiper	Red	BG; BWBS; CDF; CWH; ICH; IDF; SBPS; SBS; SWB
Wandering Tattler	Blue	BWBS; CDF; CWH; IDF; SBS; SWB
Western Grebe	Red	BG; BWBS; CDF; CWH; ICH; IDF; MS; PP; SBPS; SBS
Western Screech-Owl, *kennicottii* subspecies	Blue	CDF; CWH; MH
White-tailed Ptarmigan, *saxatilis* subspecies	Blue	CMA; MH
Fish		
Bull Trout	Blue	BG; BWBS; CWH; ESSF; ICH; IDF; MS; PP; SBPS; SBS; SWB
Cowichan Lake Lamprey	Red	CWH
Cutthroat Trout, *clarkii* subspecies	Blue	BWBS; CDF; CWH; ICH; SBS
Eulachon	Blue	CWH
Green Sturgeon	Blue	CDF; CWH
Inconnu	Blue	BWBS; CWH

Category/Species	BC Status	Biogeoclimatic Units (if known)
Misty Lake "Lake" Stickleback	Red	CWH
Misty Lake "Stream" Stickleback	Red	CWH
Invertebrates		
Afranius Duskywing	Red	CMA; CWH; ESSF; ICH; MH
Arctiostrotus perrieri	Blue	
Astarte Fritillary, *distincta* subspecies	Blue	BAFA; BWBS; CMA; CWH; ESSF; ICH; IDF; IMA; MS
Black Petaltail	Blue	CWH
Broadwhorl Tightcoil	Blue	CDF; CWH; MH
Clodius Parnassian, *claudianus* subspecies	Blue	CDF; CMA; CWH; MH
Frigid Lymnaea	Blue	BAFA; BWBS; CMA; CWH; ESSF; ICH; MH; SBS; SWB
Haida Gwaii Slug	Red	CWH
Hairy-necked Tiger Beetle	Blue	BAFA; BG; CMA; CWH; ESSF; ICH; IDF; IMA; MH; MS; PP; SBPS; SBS
Large Marble, *ogilvia* subspecies	Blue	BAFA; BWBS; ESSF; SBS; SWB
Margined White, *guppyi* subspecies	Blue	BAFA; BWBS; CMA; CWH; SWB
Northern Tightcoil	Blue	ESSF; ICH
Plains Forktail	Red	BWBS; ICH
Quatsino Cave Amphipod	Blue	CWH
Rocky Mountain Capshell	Blue	ESSF; SBS
Spring White, *beringiensis* subspecies	Blue	BWBS; ESSF; SBS; SWB
Striated Fingernailclam	Blue	BAFA; BG; BWBS; CDF; CMA; CWH; ESSF; ICH; IDF; IMA; MH; MS; PP; SBPS; SBS; SWB
Sunset Physa	Blue	BAFA; BG; CDF; CMA; CWH; ESSF; ICH; IDF; IMA; MH; MS; SBPS; SBS
Western Meadow Fritillary, *sigridae* subspecies	Blue	BAFA; BWBS; ESSF; SBS; SWB
Western Thorn	Blue	CDF; CWH
Zerene Fritillary, *bremnerii* subspecies	Red	CDF; CWH
Mammals		
Caribou (Northern Mountain Population)	Blue	BWBS; ESSF; MH; SBS
Collared Pika	Blue	BAFA; CMA; ESSF; SWB
Dall's Sheep	Blue	BAFA; BWBS; CMA; SWB
Ermine, *anguinae* subspecies	Blue	CDF; CWH; MH
Grizzly Bear	Blue	BAFA; BWBS; CMA; CWH; ESSF; ICH; IDF; IMA; MH; MS; SBPS; SBS; SWB
Mountain Goat	Blue	SBPS; SBS; SWB; BAFA; BG; BWBS; CDF; CMA; CWH; ESSF; ICH; IDF; IMA; MH; MS; PP
Northern Myotis	Blue	BWBS; ICH; MH; SBS
Roosevelt Elk	Blue	CWH; MH

Category/Species	BC Status	Biogeoclimatic Units (if known)
Stone's Sheep	Blue	
Townsend's Vole, *cowani* subspecies	Red	CWH
Tundra Shrew	Red	BAFA; CMA; SWB
Western Water Shrew, *brooksi* subspecies	Blue	CDF; CWH
Wolverine, *luscus* subspecies	Blue	BAFA; BWBS; CMA; CWH; ESSF; ICH; IDF; IMA; MH; MS; SBPS; SBS; SWB
Wolverine, *vancouverensis* subspecies	Red	CMA; CWH; MH
Plants and Lichens		
Alaska holly fern	Blue	CMA; CWHvm; CWHwh; CWHws
arctic daisy	Red	CWHwm
Chamisso's montia	Blue	CWHds; CWHxm; SBPSxc
corrugated crackers	Blue	CWHvm; ESSFwv; ESSFwvp; ICHmc
cryptic paw	Blue	BAFAun; CWHds; CWHvm; CWHxm; ESSFwcp; ESSFwvp; ICHmc; ICHvk; ICHwk; MHmm; SBSvk
eminent bluegrass	Red	CWHvm
four-leaved mare's-tail	Blue	CDFmm; CWHds; CWHms
frosted glass-whiskers	Red	CWHws
Mackenzie's sedge	Blue	CWHwm
midlife vinyl	Blue	CDFmm; CWHdm; CWHds; CWHms; CWHvh; CWHwh; CWHws; CWHxm; IDFun
mountain crab-eye	Red	CWHws
mountain moonwort	Blue	ICHmc; ICHmw; ICHwk
northern Jacob's-ladder	Blue	BAFA; BWBSdk; BWBSvk; CMA; ESSFmv; IMA
northern parrya	Red	BAFA; CMA
northwest waterfan	Red	
oldgrowth specklebelly	Blue	CWHvh; CWHvm; CWHwh
pacific pretzel	Blue	CMAunp; CWHvh; CWHwh; MHwh
pebbled paw	Blue	BAFAun; BGxh; CWHwm; ESSFwc; ESSFwcp; ESSFwv; ESSFwvp; ICHmc; ICHmw; ICHvk; ICHwk; IDFdk; MHmm; MSdm; SBSdh; SBSdw; SBSwk
poor pocket moss	Red	CWH
pygmy waterlily	Blue	CWHvh; SBSmk; SBSwk
quilted stippleback	Blue	BAFAunp; BGxh; CDFmm; CWHvh; CWHxm; IDFun; IDFxh; SWBmk
Roell's brotherella	Red	CWH
smoker's lung	Blue	CWHvm; CWHws; ESSFvc; ESSFwcp; ESSFwk; ESSFwvp; ICHmc; ICHvc; ICHvk; ICHwk; MHmm; SBSvk
Vancouver Island beggarticks	Blue	CDFmm; CWHdm; CWHms; CWHxm
whitebark pine	Blue	ESSFmc; ESSFmcp; ESSFmk; ESSFmkp; ESSFmm; ESSFmmp; ESSFmv; ESSFmvp; ESSFmw; ESSFmwp; ESSFmww; ESSFvc; ESSFvcp; ESSFvcw; ESSFwc; ESSFwcp; ESSFwcw; ESSFwk; ESSFwm; ESSFwmp; ESSFwmw; ESSFwv; ESSFwvp; ESSFxc; ESSFxcp; ESSFxcw; ESSFxv; ESSFxvp; ESSFxvw; ICHdm; ICHdw;

Category/Species	BC Status	Biogeoclimatic Units (if known)
		ICHmc; ICHmk; ICHmm; ICHmw; ICHvk; ICHwk; IDFdc; IDFdk; IDFdm; IDFdw; IDFww; IDFxc; IDFxh; IMAun; IMAunp; MHmm; MHmmp; MSdc; MSdk; MSdm; MSdv; MSmw; MSxk; MSxv; SBPSxc; SBSdh; SBSmc; SBSvk; SBSwk; BAFAun; BAFAunp; CMAunp; CWHdm; CWHds; CWHms; CWHun; CWHvm; CWHws; ESSFdc; ESSFdcp; ESSFdcw; ESSFdk; ESSFdkp; ESSFdku; ESSFdkw; ESSFdm; ESSFdmp; ESSFdmw; ESSFdv; ESSFdvp; ESSFdvw
Wind River draba	Blue	BAFA; CMA; IMA
Plant Communities		
amabilis fir - Sitka spruce / devil's club	Blue	CWHvm1/08; CWHvm2/08
amabilis fir - western redcedar / devil's club Moist Submaritime	Blue	CWHms1/06; CWHms2/06; CWHws1/06
amabilis fir - western redcedar / oak fern	Blue	CWHms1/04; CWHms2/04; CWHws1/04; CWHws2/04
amabilis fir - western redcedar / salmonberry Very Wet Maritime	Blue	CWHvm1/07; CWHvm2/07
black cottonwood - red alder / salmonberry	Blue	CDFmm/08; CWHdm/09; CWHds1/09; CWHds2/09; CWHmm1/09; CWHms1/08; CWHms2/08; CWHvm1/10; CWHwm/06; CWHws1/08; CWHws2/08; CWHxm1/09; CWHxm2/09
black cottonwood - subalpine fir / devil's club	Blue	ICHmc1/Fm03; ICHmc2/Fm03; ICHvc/Fm03; ICHwc/06; ICHwc/Fm03; SBSvk/Fm03
black spruce / buckbean / peat-mosses	Blue	ICHmc2/Wb11; ICHmw3/Wb11; ICHvk2/Wb11; ICHwk3/Wb11; SBSdw2/Wb11; SBSmc2/Wb11; SBSwk1/Wb11
black spruce / skunk cabbage / peat-mosses	Blue	ICHmc2/Ws09; ICHvk2/Ws09; SBSvk/Ws09; SBSwk1/Ws09
buckbean - slender sedge	Blue	CDFmm/Wf06; CWHws1/Wf06; ICHwk1/Wf06; IDFdc/Wf06; IDFdk2/Wf06; SBSdk/Wf06
common spike-rush Herbaceous Vegetation	Blue	BGxw2/Wm04; CDFmm/Wm04; CWH/Wm04; ESSFdv/Wm04; ESSFdv1/; ESSFdv2/Wm04; IDFxm/Wm04; SBSdk/Wm04; SBSmk2/Wm04
few-flowered spike-rush / hook-mosses	Red	ESSFmc/Wf09; ESSFxc/Wf09; ESSFxc3/; ESSFxv1/Wf09; MSdm2/Wf09; MSxv/Wf09; SBPSxc/Wf09; SBSmc2/Wf09
glaucous bluegrass Herbaceous Vegetation	Blue	BAFA
hybrid white spruce - paper birch / devil's club	Blue	ICHmc2/54; SBSmh/07
Labrador-tea / western bog-laurel / peat-mosses	Blue	CDFmm/Wb50; CWHdm/Wb50; CWHvm1/Wb50; CWHxm1/Wb50; CWHxm2/Wb50
lodgepole pine / few-flowered sedge / peat-mosses	Blue	ESSFmc/Wb10; ESSFwc3/Wb10; ICHwk2/Wb10; SBSmc2/Wb10
lodgepole pine / kinnikinnick	Red	CWHws1/02; CWHws2/02
mountain alder / common horsetail	Blue	BWBSdk/Fl01; CWHwm/Fl01; ICHvc/Fl01; ICHvk1/Fl01; MSxv/Fl01; SBSvk/Fl01
mountain alder / red-osier dogwood / lady fern	Blue	ICHmc2/Fl02; ICHvc/52; ICHvc/Fl02; ICHwc/52; ICHwc/Fl02; ICHwk1/Fl02; ICHwk4/Fl02; SBSdk/Fl02; SBSmk2/Fl02; SBSvk/Fl02; SBSwk1/Fl02

Category/Species	BC Status	Biogeoclimatic Units (if known)
narrow-leaved cotton-grass - shore sedge	Blue	ESSFdc1/Wf13; ESSFdc3/Wf13; ESSFmc/Wf13; ESSFmw/Wf13; ESSFwc2/Wf13; ESSFxc/Wf13; ESSFxc3/; MSdm1/Wf13; SBSwk2/Wf13
Sandberg's bluegrass - slender wheatgrass	Red	ESSFmc; SBSdk/82; SBSmc2
saskatoon / slender wheatgrass	Red	ESSFmc; ESSFwv; ICHmc1; ICHmc2; SBSdk/81; SBSmc2
scheuchzeria / peat-mosses	Blue	ICHmc2/Wb12; ICHmk3/Wb12; SBSdw3/Wb12; SBSmc2/Wb12; SBSvk/Wb12
scrub birch / water sedge	Blue	BWBSdk/Wf02; BWBSmk/Wf02; BWBSmw/Wf02; ESSFdc1/Wf02; ESSFdc3/Wf02; ESSFdv/Wf02; ESSFdv1/; ESSFdv2/Wf02; ESSFmv2/Wf02; ESSFwc3/Wf02; ESSFwk2/Wf02; ESSFxc/Wf02; ESSFxc3/; ESSFxv2/Wf02; ICHmc2/Wf02; ICHvk2/Wf02; ICHwk2/Wf02; ICHwk3/Wf02; ICHwk4/Wf02; IDFdk1/Wf02; IDFdk3/Wf02; IDFdk4/Wf02; IDFdm2/Wf02; MSdc2/Wf02; MSdk/Wf02; MSdk1/; MSdk2/; MSdm1/Wf02; MSxk/Wf02; MSxk2/; MSxk3/; MSxv/Wf02; SBPSdc/Wf02; SBPSmc/Wf02; SBPSmk/Wf02; SBPSxc/Wf02; SBSdk/Wf02; SBSdw1/Wf02; SBSmc2/Wf02; SBSmm/Wf02; SBSvk/Wf02; SBSwk1/Wf02; SBSwk2/Wf02; SWBmk/Wf02
shore sedge - buckbean / peat-mosses	Blue	CWHws1/Wb13; CWHws2/Wb13; ICHmc1/Wb13; ICHvc/Wb13; ICHwk2/Wb13; SBSmk1/Wb13
Sitka sedge - Pacific water-parsley	Blue	CWHdm/Wm50; CWHvh2/Wm50; CWHwm/Wm50; CWHxm1/Wm50
Sitka sedge / peat-mosses	Red	CWHvh2/Wf51; CWHvm1/Wf51; CWHvm2/Wf51; CWHwh1/Wf51; CWHwm/Wf51; CWHws2/Wf51; ICHvc/Wf51; ICHwc/Wf51; MHmm1/Wf51
Sitka spruce / salmonberry Very Wet Maritime	Red	CWHvm1/09
Sitka spruce / salmonberry Wet Maritime	Blue	CWHwm/05
Sitka spruce / salmonberry Wet Submaritime 1	Red	CWHws1/07
Sitka spruce / salmonberry Wet Submaritime 2	Blue	CWHws2/07
Sitka spruce / skunk cabbage	Blue	CWHwm/09
Sitka willow - Pacific willow / skunk cabbage	Red	CDFmm/Ws51; CWH/Ws51; ICH/Ws51
Sitka willow / Sitka sedge	Blue	CWHvm1/Ws06; CWHvm2/Ws06; ICHvk1/Ws06; MSdc1/Ws06; MSdm1/Ws06; MSmw2/Ws06; SBSvk/Ws06; SBSwk1/Ws06
slender sedge / common hook-moss	Blue	BWBSdk/Wf05; BWBSmk/Wf05; ICHdk/Wf05; ICHmc1/Wf05; ICHmc2/Wf05; ICHmw1/Wf05; ICHmw3/Wf05; ICHvk1/Wf05; ICHwk1/Wf05; ICHwk2/Wf05; IDFdk1/Wf05; IDFdk3/Wf05; IDFdk4/Wf05; IDFdm2/Wf05; IDFxc/Wf05; MSdk/Wf05; MSdk1/; MSdk2/; MSdm1/Wf05; MSdm2/Wf05; MSdm3/Wf05; MSdm3w/Wf05; SBPSdc/Wf05; SBPSmk/Wf05; SBPSxc/Wf05; SBSdk/Wf05; SBSmc2/Wf05; SBSmk1/Wf05; SBSwk1/Wf05

Category/Species	**BC Status**	**Biogeoclimatic Units (if known)**
sweet gale / Sitka sedge	Red	CDFmm/Wf52; CWHmm1/Wf52; CWHmm2/Wf52; CWHvh2/Wf52; CWHwm/Wf52; CWHxm1/Wf52; CWHxm2/Wf52
tufted clubrush / golden star-moss	Blue	BWBSdk/Wf11; ESSFdc1/Wf11; ESSFdc2/Wf11; ESSFdc3/Wf11; ESSFdv/Wf11; ESSFdv1/; ESSFdv2/Wf11; ESSFwc2/Wf11; ESSFwc3/Wf11; ESSFwk1/Wf11; ESSFxc/Wf11; ESSFxc3/; ICHmc2/Wf11; ICHmw1/Wf11; ICHmw3/Wf11; ICHvk1/Wf11; MSdm2/Wf11; SBSdk/Wf11; SBSwk1/Wf11
western hemlock - amabilis fir / deer fern	Blue	CWHvm1/06; CWHvm2/06
western hemlock - lodgepole pine / red-stemmed feathermoss	Blue	CWHws1/03; CWHws2/03
western hemlock - western redcedar / salal Very Wet Maritime	Blue	CWHvm1/03; CWHvm2/03
western hemlock / cloudberry / peat-mosses	Red	ICHmc2/Wb04; ICHvc/Wb04; ICHwc/Wb04
western hemlock / kinnikinnick / clad lichens	Blue	ICHmc1/02; ICHmc2/02
western redcedar - Sitka spruce / skunk cabbage	Blue	CDFmm/Ws54; CWHdm/12; CWHdm/Ws54; CWHds1/12; CWHds1/Ws54; CWHds2/12; CWHds2/Ws54; CWHmm1/12; CWHmm1/Ws54; CWHms1/11; CWHms1/Ws54; CWHms2/11; CWHms2/Ws54; CWHvh1/13; CWHvh1/Ws54; CWHvh2/13; CWHvh2/Ws54; CWHvm1/14; CWHvm1/Ws54; CWHvm2/Ws54; CWHwh1/12; CWHwh1/Ws54; CWHwh2/06; CWHwh2/Ws54; CWHws1/11; CWHws1/Ws54; CWHws2/Ws54; CWHxm1/Ws54; CWHxm2/Ws54
western redcedar - western hemlock / sword fern	Blue	CWHmm1/04; CWHmm2/04; CWHvm1/04; CWHvm2/04
whitebark pine / clad lichens - curly heron's-bill moss	Blue	ESSFmk/02; ESSFmk/03

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APPENDIX SDC: INVASIVE PLANTS REPORT

ACER RESOURCE CONSULTING LTD

4820 Halliwell Ave.
Terrace, BC V8G 4R6
phone 250-638-0110
fax 250-638-1098
bpollard@acerresourceconsulting.com

January 14, 2005

Rick Brouwer, R.P.F.
Northwest Timberlands,
4915 Halliwell Avenue,
Terrace, BC

Dear Rick:

Re: Recommendations for Control of Invasive Plant Species through Responsible Forestry Operations

As we have discussed, the following is a series of recommendations designed to control the spread of noxious weeds. Most are based on controlling weed spread predominant in agricultural areas of the province but can also be applied to any activity where ground disturbing machines are imported temporally from other areas are used, or where site disturbance and re-vegetation could potentially introduce non-native species. The source for most of the recommendations is the Ministry of Highways Standard Specifications, the Ministry of Forests and the Ministry of Agriculture, Food and Fisheries.

1. **Re-seed immediately after soil disturbance.**
Many invasive plants require disturbed soils for establishment. Areas which are prone to disturbance, such as landings and road margins should be re-seeded as soon as possible.

2. **Use certified seed only.**
Uncertified seed can contain weed plant seeds. Avoid planting invasive species by using only seed which has been certified as weed-free. Perennial native grasses and legumes should be used for re-vegetation purposes.

3. **Wash equipment prior to transporting from one geographic area to another.**
Invasive species' seeds can adhere to equipment. Pick-ups, skidders, brushers and other vehicles and equipment should be thoroughly steam-cleaned before moving from one area to another. This includes undercarriages, tire treads, mud flaps, tracks, etc.

4. **Animals used in forestry operations.**
Many invasive plants can be spread by animals in the form of burrs attached to hair or seeds contained in mud and dirt. Animals should be groomed and their feet cleaned prior to transportation. Animals can also transport weed plants internally. Animals such as horses and sheep should be fed a weed-free diet and confined to a small pasture or corral before being moved to another geographic area. Dogs should be brushed to remove burrs and seeds before leaving an area.

5. **Transportation of gravel and fill.**

Fill should not be moved from one geographic area to another, although because of expense, this is seldom a problem with forestry operations.

6. Recreational sites.
Recreational sites can be made accessible through the construction of forestry roads. The influx of vehicles and boats can spread invasive aquatic plants such as Eurasian milfoil. Signs should be posted at recreational sites warning of the dangers of spreading such species.

7. Use of organic products in operations.
If organic materials such as hay bales are to be used for erosion control they must be weed free. Question the distributor or use inorganic products, such as silt fencing.

8. Do not pick or transport any roadside plants.
Many invasive species are escaped cultivars, which may look attractive. Do not re-plant any roadside plants, especially without proper identification. If a plant is to be picked for identification, place in a plastic bag and dispose of by burning. Do not compost!

9. Awareness of invasive species.
Invasive species can often be eradicated if identified and removed at an early stage. Personnel involved in forestry operations should have some awareness of identification and the risks of spreading invasive species. Contractors and others should be informed and have access to management strategies and identification guides.

10. Periodic inspections.
Ditches and stream banks should be periodically inspected for invasive species, as seeds can be spread by running water. Workers involved in stream assessments and ditch maintenance should have some familiarity with weed identification.

Identification guides can be obtained from the Ministry of Forests, the Ministry of Agriculture, Food and Fisheries, or online at www.weedsbc.ca or at www.agf.gov.bc.ca/cropprot/weedguid/weedguid.htm.

A list of plants under regulation by the Invasive Plants Regulation is available online at www.for.gov.bc.ca/tasb/legsregs/frpa/frparegs/invplants/ipr.htm

11. Reporting weed infestations.
Infestations of invasive plants not previously identified in an area should be reported to the Ministry of Forests or to the Ministry of Agriculture, Food and Fisheries.

Please feel free to contact me if you have any further questions.

Sincerely,

Brad T. Pollard, R.P.Bio.
Acer Resource Consulting Ltd.

APPENDIX SDD: FUEL ASSESSMENT WORKSHEET

Wildfire Threat Assessment Guide and Worksheets | *2020*

Appendix B – Wildfire Threat Assessment Worksheets

Wildfire Threat Assessment Worksheet - Fuel Assessment (Site Level)[1]		**Plot #**
Location:	Date:	Assessor/ Professional Designation:
Coordinates (Lat/Long – Degrees/Decimal minutes):		

Component/ Sub-Component		**Levels/Classes**				
	Forest Floor and Organic Layer					
1	Depth of organic layer (cm)	1- < 2 1	2- < 5 3	5- < 10 5	10-20 3	> 20 2
	Surface and Ladder Fuel (0.1 – 3.0 meters in height)					
2	Surface fuel composition	Moss, herbs, deciduous shrubs 4	Lichen, conifer shrubs 6	Dead fines fuel[4] (<1 cm) 8	Pinegrass 10	Sagebrush, Bunch grass, Juniper, Scotch broom 15
3	Dead and down material continuity (< 7cm)	Absent 0	Scattered < 10 coverage 4	10-25% coverage 8	26-50% coverage 12	> 50% coverage 15
4	Ladder fuel composition	Deciduous/ None 0	Mixwood 5	Other conifer 8	Elevated dead fuel 10	Spruce, Fir, Pine 15
5	Ladder fuel horizontal continuity	Absent 0	Sparse < 10% coverage 2	Scattered 10-39% coverage 8	Patchy 40-60% coverage 10	Uniform > 60% coverage 15
6	Stem/ha (understory)[5]	< 500 2	501-800 4	801-1 200 6	1 2501-1 5 000 8	> 1 500 10
	Stand Structure and Composition (Dominant and co-dominant stems)					
7	Overstory composition/ Crown Base Height (CBH)	Deciduous (< 25% conifer) All CBH 0	Mixwood (% conifer) 25% 50% 75% 0 2 3	Conifer with high CBH (> 10m) 3	Conifer with moderate CBH (5-9m) 4	Conifer with low CBH (< 4m) 5
8	Fuel strata gap[6] (m)		> 10 0	6-9 1	3-6 3	< 3 5
9	Stems/ha (overstory)[7]	< 400 0	401-600 2	601-900 3	901-1 200 4	> 1 200 5
10	Crown closure	< 20% 0	20-40% or Deciduous Overstory (any closure) 1	41-60% 2	61-80% 5	> 80% 4
11	Dead and dying (% of dominant and co-dominant stems)		Standing dead/ Partial down < 20% 2	Standing dead/ Partial down 21-50% 5	Standing dead/ Partial down 51-75% 8	Standing dead/ Partial down > 75% 10

Total Score[8]:	
Eco Province scoring used:	
Fuel Assessment Rating: (low, high etc.)	

Comments:

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TAB 1 ADVERTISEMENTS

Organized in reverse chronological order, with the most recent information at the front of this section.

This information is only provided to the Ministry of Forests Lands Natural Resource Operations and Rural Development.

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PRINCE RUPERT Port Authority CANADA'S LEADING EDGE

The **Prince Rupert Port Authority (PRPA)**, Canada's leading-edge port in trade growth, maritime safety, environmental stewardship and community partnerships, invites applications from highly motivated individuals for the following new position

LEGAL ASSISTANT

The Prince Rupert Port Authority (PRPA) is currently seeking suitable applicants for the position of Legal Assistant.

Reporting to the Senior In-House Counsel, the Legal Assistant is responsible for the efficient coordination and maintenance of the Commercial & Regulatory Affairs Department's responsibilities and functions and provides executive level legal and administrative support and oversight of Commercial & Regulatory Affairs Departments' files, activities, and schedule.

The ideal candidate would possess post-secondary education and a minimum of five years' of related experience as an executive assistant, legal assistant, or other comparable experience. In addition, the ideal candidate would also possess strong spoken and written communication skills and perform well individually in a team environment.

PRPA offers a competitive salary and a comprehensive benefits program. More details regarding this career opportunity are available at PRPA's website at: **www.rupertport.com**.

Individuals of Indigenous descent are strongly encouraged to apply.

Interested candidates are requested to submit their application in confidence by Wednesday, September 28, 2022 to:

Director, Human Resources
Prince Rupert Port Authority
200 – 215 Cow Bay Road
Prince Rupert, B.C., V8J 1A2
Fax: (250) 627-8980
Email: **careers@rupertport.com**

No telephone inquiries please.

PLEASE RECYCLE THIS NEWSPAPER.

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Merchandise for Sale

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ONLINE AUCTION - Sept. 27, 2022 - Surplus Grocery Store Equipment. 200 Plus lots incl. Coolers, Freezers, Meat Equip, Slicers, Mixers, Rational & MiWe Ovens, Canopy, Walk In Cooler & MORE. Lots will be at 3 locations - Coquitlam, Surrey & Maple Ridge. View, Register and Bid ONLINE at activeauctionmart.com On Site Viewing by Appt Only - call 778-838-2645 to book a time or with lot questions.

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Thursday, October 20th, 11:00am – 3:00pm
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2588 Rec Place Drive, Prince George, BC

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Legal Notices

Coast Tsimshian Resources LP

Invitation to review and provide comment on the Coast Tsimshian Resources LP Forest Stewardship Plan

Coast Tsimshian Resources LP has prepared a draft Forest Stewardship Plan (FSP) for operations under Tree Farm Licence 1 and Forest License A16835 within the Coast Mountains Natural Resource District. The FSP describes Forest Development Units (FDUs) and the results and strategies that will apply on the FDUs. The results and strategies ensure consistency with legal objectives for critical resource values. The objectives are described in the Forest and Range Practices Act, its associated regulations and the Kalum Sustainable Resource Management Plan. The term of the FSP will be five years. The FSP will be available for review and comment from **Thursday, September 15, 2022 to Monday, November 14, 2022** and can be accessed online or during regular operating hours at the following locations:

Online: https://www.westlandresources.ca/recentpublications

In person:
Terrace Public Library, 4610 Park Avenue, Terrace, BC
Kitimat Public Library, 940 Wakashan Avenue, Kitimat, BC
NothPac Forestry Office, 5101 Keith Avenue, Terrace, BC

Comments on the FSP should be in writing and should reference the 'Coast Tsimshian FSP'. Comments can be sent to the attention of:

Brittany Dewar, Westland Resources Limited,
2803 Kenney Street, Terrace, BC V8G 3E6
Email: bdewar@westlandresources.ca
Fax: (250) 638-0227

We ask that you provide these comments to us no later than November 14, 2022. All written input received during the review period will be forwarded to the District Manager of the Coast Mountains Natural Resource District of the BC Ministry of Forests.

Merchandise for Sale

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GOLD, SILVER & PLATINUM BUYERS purchasing all gold & silver bullion, jewelry, coins, nuggets, dust, scrap, pre-1968 coins, bulk silver, sterling +++ Numismatist purchasing entire coin collections & accumulations, Royal Canadian Mint coins, world collections, old S$$. +++ 250-864-3521.

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Legal Notices

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House For Rent 3 Bedroom, 1 Bathroom one storey - 942 s.q.f.t. with enclosed deck/yard/shed. **Rent per month: $2,000** **Utilities are not included.** **MINIMUM OF 1 YEAR LEASE.** Please call 250-641-0730 for any questions or viewings.

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Legal Notices **Legal Notices** **Legal Notices** **Legal Notices**

THE CITY OF TERRACE

CITY OF TERRACE
2022 TAX SALE

Pursuant to Section 403 of the Local Government Act, a Tax Sale will be held in the Municipal Council Chambers, 3215 Eby Street, Terrace, B.C., at 10:00 a.m., September 26th, 2022, for the disposition of the following properties. The following properties have delinquent taxes as of September 22nd, 2022:

Folio #	Address:	Legal Description:	Upset Price:
02728.000	5110 Hwy 16 W	Plan 4269, Lot 1, DL 362	$45,761.87
19241.000	41-3624 Kalum St	DL 838, LD 14, Mfr. Home Reg. #26969	$1,034.83

NOTICE TO PROSPECTIVE PURCHASERS:

1. Tax Sale properties are subject to tax under the Property Purchase Tax Act on the fair market value of the property.
2. Only commercial property is subject to G.S.T.
3. Taxes become payable if and when the transfer of title occurs following the expiration of the redemption period.
4. The municipality makes no representation, express or implied, regarding the properties for sale (including but not limited to condition, quality or related encumbrances).
5. For additional Tax Sale procedure details, please see the City of Terrace website, City of Terrace Annual Tax Sale Basic Information.

Lori Greenlaw
Collector/Director of Finance

Legal Notices

Coast Tsimshian Resources LP

Invitation to review and provide comment on the Coast Tsimshian Resources LP Forest Stewardship Plan

Coast Tsimshian Resources LP has prepared a draft Forest Stewardship Plan (FSP) for operations under Tree Farm Licence 1 and Forest License A16835 within the Coast Mountains Natural Resource District. The FSP describes Forest Development Units (FDUs) and the results and strategies that will apply on the FDUs. The results and strategies ensure consistency with legal objectives for critical resource values. The objectives are described in the Forest and Range Practices Act, its associated regulations and the Kalum Sustainable Resource Management Plan. The term of the FSP will be five years. The FSP will be available for review and comment from **Thursday, September 15, 2022 to Monday, November 14, 2022** and can be accessed online or during regular operating hours at the following locations:

Online: https://www.westlandresources.ca/recentpublications

In person:
Terrace Public Library, 4610 Park Avenue, Terrace, BC
Kitimat Public Library, 940 Wakashan Avenue, Kitimat, BC
NothPac Forestry Office, 5101 Keith Avenue, Terrace, BC

Comments on the FSP should be in writing and should reference the 'Coast Tsimshian FSP'. Comments can be sent to the attention of:

Brittany Dewar, Westland Resources Limited,
2803 Kenney Street, Terrace, BC V8G 3E6
Email: bdewar@westlandresources.ca
Fax: (250) 638-0227

We ask that you provide these comments to us no later than November 14, 2022. All written input received during the review period will be forwarded to the District Manager of the Coast Mountains Natural Resource District of the BC Ministry of Forests.

PLEASE RECYCLE THIS NEWSPAPER

Legal Notices

District of Stewart

Notice of Tax Sale - Monday, September 26, 2022
10:00 am at the Municipal Hall - 705 Brightwell Street
The following properties will be sold at Tax Sale, unless payment in full for the delinquent payment is received prior to the sale.

Folio #	Civic Address	Legal Address	Total Upset Price
14.014	710 19th Ave	Lots 6-7, Blk 1, Pln 4874, DL 336	$ 4,684.10
14.104	801 Eagle Drive	Lots 10, Blk 2, Pln 4874, DL 443	$ 4,552.99
149.000	415 5th Avenue	Lot 8, BLk 13, Pln 818A, DL 466	$ 2,304.64
481.000	404 16th Avenue	Lots 13-14, Blk 43, Pln 958, DL 469	$ 404.83
483.150	505 15th Ave	Lots 3-4, Blk 44, Pln 958, DL 469	$ 398.02
488.200	414 17th Avenue	Lots19-20, Blk 46, Pln 958, DL 469	$ 375.86
493.000	806 Eagle Drive	Lots 3-4, Blk 48, Pln 958, DL 469	$ 378.48
494.000	1210 Railway Street	Lot 7, Blk,48, Pln 958, DL 469	$ 207.35
497.000	606 17th Avenue	Lots 15-16, Blk 48, Pln 958, DL 469	$ 1,527.12
498.000	618 17th Avenue	Lots 21-23, Blk 48, Pln 958, DL 469	$ 549.51
70000.140	1414 Glacier Drive	Lot 14, Pln 25340,	$ 754.02

Any Person upon being declared the successful bidder must immediately pay by cash or certified cheque a minimum of not less than the upset price. Failure to pay this amount will result in the property being offered for sale again. Any balance must be paid by cash or certified cheque by 3:00pm the same day. Failure to pay the balance will result in the property being offered for sale again at 10:00 am on the following day.

The District of Stewart makes no representation express or implied as to the condition or quality of the properties being for sale. Prospective purchasers are urged to inspect the properties and make all necessary inquiries to municipal and other government departments, and in the case of strata lots to the strata corporation, to determine the existence of any bylaws, restrictions, charges or other conditions which may affect the value or suitability of the property.

The purchase of a tax sale property is subject to tax under the Property Tax Act on the fair market

Legal Notices

Tenders

Tenders

CITY OF TERRACE
TENDER

JANITORAL MAINTENANCE SERVICE FOR RCMP DETACHMENT BUILDING

Tender documents for Janitorial Maintenance Service for RCMP Detachment Building, is available starting Monday, September 19th, 2022 at the Public Works Building at 5003 Graham Avenue, weekdays between the hours of 8:30 a.m. and 4:30 p.m.

- All bidders must attend the tour of the facility commencing at the RCMP Detachment, at 9:00 a.m. on Friday, September 23rd, 2022. Further details will be available at that time.
- Tender Closing at 2:00 p.m. on Friday, September 30th, 2022.

Legal Notices

Legal Notices

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Brittany Dewar, Westland Resources Limited,
2803 Kenney Street, Terrace, BC V8G 3E6
Email: bdewar@westlandresources.ca
Fax: (250) 638-0227

We ask that you provide these comments to us no later than November 14, 2022. All written input received during the review period will be forwarded to the District Manager of the Coast Mountains Natural Resource District of the BC Ministry of Forests.

Legal Notices

Legal Notices

2001 Nissan Frontier - Blue
VIN: 1N6MD27461C395537
Debtor: Kenneth Apps
$19, 320.00
Time and Place of Sale:
11:00 am, September 16, 2022
At Dollar Auto
(1700 Nalabila Blvd. Kitimat)

KITIMAT

DISTRICT OF KITIMAT
NOTICE OF TAX SALE

As per section of 645 of the ***Local Government Act,*** a Tax Sale will be held in the Municipal Council Chambers, 606 Mountainview Square, Kitimat, B.C., at 10:00 a.m., September 26, 2022, for the disposition of the following properties:

RANGE 5, COAST DISTRICT, KITIMAT, B.C.

ROLL NUMBER	BLOCK	LOT	PLAN	CIVIC ADDRESS	UPSET PRICE
110.100	11	10	3335	40 Partridge St	$ 6,599.42
350.140	35	14	6043	32 Gannet Cresc	$ 8,875.23
1060.080	114	4	3637	133 Williscroft St	$ 6,425.99
1290.010	129	1	7925	4 Bayer St	$ 7,667.33
1800.605	180	5	9635	123 Baxter Ave	$ 2,069.61
2020.040	202	4	3578	80 Capilano St	$ 7,875.62
2170.151		SA	PRS56	77 Wedeene St	$ 4,434.11
2170.152		SB	PRS56	75 Wedeene St	$ 5,882.01
2170.154		SD	PRS56	71 Wedeene St	$ 4,406.97

NOTICE TO PROSPECTIVE PURCHASERS:

1. Tax sale properties are subject to tax under the Property Purchase Tax Act on the fair market value of the property.
2. Only commercial property is subject to G.S.T.
3. Both taxes become payable if and when the transfer of title occurs following the expiration of the redemption period.

D. RUTSATZ,
TREASURER/COLLECTOR

NOTICE OF TAX SALE

As per section 645 of the ***Local Government Act,*** and section 252 of the ***Community Charter,*** unless the outstanding taxes are paid by September 26, 2022, the following property may be sold by the legal remedy of distress:

	MHR	LOCATION
Manufactured Home	8606	B6 653 Columbia Ave W
Manufactured Home	53767	D1 653 Columbia Ave W
Manufactured Home	31915	E2 653 Columbia Ave W
Manufactured Home	84272	F8 653 Columbia Ave W
Manufactured Home	13674	H37 653 Columbia Ave W
Manufactured Home	79768	J31 653 Columbia Ave W
Manufactured Home	87513	6 - 584 Columbia Ave W
Manufactured Home	23152	32-584 Columbia Ave W

Employment

Help Wanted

Welder steel fabricators With minimum 5 years experience. Shift hours are 7:00 am to 5:30 pm, Monday to Thursday. Please apply in person with resume to Loewen Welding at 33655 Harris Road, from Monday to Thursday, between the hours of 8:00 am to 4:30 pm. No phone calls please.

Services

Financial Services

GET BACK ON TRACK! Bad credit? Bills? Unemployed? Need Money? We Lend! If you own your own home - you qualify. Pioneer Acceptance Corp. Member BBB. **1-877-987-1420 www.pioneerwest.com**

Looking for a new pet? Check out Classifieds to find the purrfect pet.

Merchandise for Sale

Misc. Wanted

GOLD, SILVER & PLATINUM BUYERS

purchasing all gold, silver & platinum coins, bars, ingots, rounds, wafers, jewelry, watches, nuggets, gold dust, 999+ bullion, maple leafs, monster boxes, bulk silver, dental gold, scrap gold silver, collectors coins, all sterling silver, tea sets, silverware sets, spoons, pre-1968 silver coins, Royal Canadian Mint coins, all coin collections, bank bags of coins, coin sets, old money, all world gold & silver coins, complete collections & estates.

CASH PAID! 250-864-3521

ANNOUNCEMENT? *Tell the world with a classified ad* **1-866-865-4460**

Rentals

Homes for Rent

House for Rent Beautiful newer construction family home for rent. Let the kids roam free in the fenced enclosed back yard. House is located in a newer lovely neighborhood on Smith St. Terrace bench, close to schools and parks. Spanning 1900 square feet, this three bedroom home has an attached garage. Open concept layout with highlights of the living room include big south facing windows with blinds. Step into the kitchen to find stainless steel appliances, an island and a dishwasher. The master bedroom comes with a walk in closet and an en suite bathroom with a shower. **Rent per month $3900 + utilities.** Minimum of a 1 year lease. Please call **250-615-7810** for any questions or viewings.

Legal Notices **Legal Notices** **Legal Notices**

Coast Tsimshian Resources LP

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Legal Notices **Legal Notices** **Legal Notices**

Regional District of Kitimat-Stikine

NOTICE OF PUBLIC INPUT TEMPORARY USE PERMIT

TAKE NOTICE THAT the Regional District of Kitimat-Stikine has received an application from Skeena River Lodge for a Temporary Use Permit.

THE SUBJECT PROPERTY:
The application affects the shaded property shown on the accompanying map, legally described as Lot 14 District Lot 2456 Cassiar District Plan 7577.

THE INTENT:
Skeena River Lodge has applied to use a portion of the subject property between September and October for a fishing lodge consisting of the existing main house with common area, 4 guest cabins, and a staff cabin for a period of 3 years, with option for a one-time renewal for an additional 3 years.

PUBLIC INPUT DETAILS:
Anyperson(s) wishing to provide input regarding this application are requested to do so in writing to the Regional District Board via email at planning@rdks.bc.ca or by letter, mailed or delivered to 300-4545 Lazelle Avenue, Terrace, B.C., V8G 4E1 no later than 4:30 p.m., Thursday, September 22, 2022, and please quote "TUP No. 014, 2022", in your written submission. Requests to provide a submission to the Planning Committee in-person or virtually should be directed to the Development Services department no later than Thursday, September 22, 2022.

If you wish to observe the Planning Committee Meeting at 3:30 p.m. and/or the Regional District Board Meeting at 7:00 p.m. on Friday, September 23, 2022, the links to the webcast can be found at **https://www.rdks.bc.ca/government/board/board_meeting_webcasts.**

The application and supporting materials may be inspected between the hours of 8:30 a.m. and 4:30 p.m., Monday to Friday, excluding holidays, in the office of the Regional District of Kitimat-Stikine or at **https://www.rdks.bc.ca/.**

Legal Notices **Legal Notices**

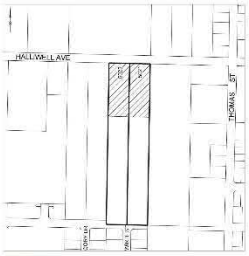
CITY OF TERRACE
NOTICE OF PUBLIC HEARING
ZONING BYLAW AMENDMENT

TAKE NOTICE THAT an application has been made to amend Schedule "B" (Zoning Map) of Zoning Bylaw No. 2069-2014.

THE SUBJECT LAND:
The application affects those portions of the lands, within the City of Terrace, shown hatched on the accompanying map and described as:

The East ½ of Lot 11, District Lot 980, Range 5, Coast District, Plan 1097 (5021 Halliwell Avenue) and,

The West ½ of Lot 11, District Lot 980, Range 5, Coast District, Plan 1097 (5023 Halliwell Avenue)



THE INTENT:
To amend Schedule "B" (Zoning Map) of Zoning Bylaw No. 2069-2014 by changing the zoning classification for the properties shown hatched on the accompanying map:

FROM: AR2 – Rural
TO: RS1 – Rural Suburban Residential

PURPOSE:
To permit a phased 3 lot subdivision on the subject properties.

BYLAW INSPECTION:

DOCUMENTS MAY BE INSPECTED online at www.terrace.ca/planningapplications or viewed at the Public Works Building at 5003 Graham Avenue, Terrace, B.C., between 8:30 a.m. to 4:30 p.m. Friday, September 16, 2022 and Monday September 26, 2022 excluding weekends and Statutory Holidays.

PUBLIC HEARING DETAILS:

PUBLIC HEARING TO BE HELD IN THE MUNICIPAL COUNCIL CHAMBERS, AT 7:00 P.M. ON MONDAY, SEPTEMBER 26, 2022. Any person who wishes to address Council at the time may do so in person at 3215 Eby Street or electronically/by phone via Microsoft Teams.

WAYS TO PARTICIPATE:
Written submissions (must be submitted by 11:00 A.M. on Monday, September 26, 2022 – via email at developmentservices@terrace.ca or by letter, mailed or delivered to 5003 Graham Avenue, Terrace, B.C., V8G 1B3.
In person – Public Attendance in Council Chambers is welcome but limited and we encourage those able to attend virtually to do so.
Electronic Participation – Join the meeting via the Microsoft Teams platform through a computer or mobile device. To learn more, see www.terrace.ca/participate or call 250-638-4712.
Telephone Participation – Join by phone: 1-437-703-4645. Phone Conference ID: 952 380 812# Long distance charges might apply.
Note: Public Hearings are available to watch through our website www.terrace.ca/city-hall/council-webcasts or www.facebook.com/CityofTerrace
More information on all participation options is available at www.terrace.ca/participate.

THIS NOTICE IS GIVEN IN ACCORDANCE WITH THE LOCAL GOVERNMENT ACT, R.S.B.C., 2015, AND AMENDMENTS THERETO.

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TAB 2 PUBLIC REVIEW CORRESPONDENCE AND NOTES

Organized in reverse chronological order, with the most recent information at the front of this section.

This information is only provided to the Ministry of Forests Lands Natural Resource Operations and Rural Development.

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TAB 3 FIRST NATIONS' CORRESPONDENCE AND NOTES

Organized by First Nation and then in reverse chronological order, with the most recent information at the front.

This information is only provided to the Ministry of Forests Lands Natural Resource Operations and Rural Development.

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TAB 4 AGENCY CORRESPONDENCE AND NOTES

Organized in reverse chronological order, with the most recent information at the front of this section.

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TAB 5 SUMMARY OF REVISIONS TO THE FSP

Significant changes made after the Public Review Version of the FSP and Supporting Document in response to comments or new sources of information are provided in this Tab.

Summary of changes to FSP Document

Public Review Version Reference (dated July 2022)	Submission Version Reference (dated Dec 2022)	Summary of Change	Reason for Change
N/A Section 3.2.8 Brush and Broadleaf Competition Criteria	New Result CTR22-04 Section 3.2.8 Brush and Broadleaf Competition Criteria	Result requires retention of regenerating deciduous trees and herbaceous brush after logging to provide visual screening. Change also made to criteria for brush competition in Section 3.2.8 to ensure consistency with the new result.	Change made in response to recommendations from Kitselas related to visual screening for wildlife.
Result CTR17-12	Result CTR22-06	Minor change to clarify the basal area retention requirements on S6 streams. Result number was changed from CTR17-12 to CTR22-06.	Change made in response to question from NLG on S6 stream retention.
Result CTR17-39	Result CTR22-05	An addition was made to require the FSP Holder to consider wildlife habitat features and other resource value features as anchors in the WTRA and to document these considerations in the Site Plan. Result number was changed from CTR17-39 to CTR22-05.	Change made in response to comment from Kitselas that WTRA placement should consider habitat values and features.

Summary of changes to Supporting Document

Public Review Version Reference (dated Sep 2022)	Submission Version Reference (dated Dec 2022)	Summary of Change	Reason for Change
SD1.2.6 Gitanyow Land Use Plan and Kiteen Land Use Objectives Regulation Order	SD1.2.6 Gitanyow Land Use Plan and Kiteen Land Use Objectives Regulation Order	Deleted table identifying how Kiteen Order is addressed in FSP and FPPR.	This table was originally prepared before the Kiteen LUO was made legal. Now that the Order is legal, this table is no longer needed.
SD2.1.3 Wildlife	SD2.1.3 Wildlife	Added a rationale for new result CTR22-04.	New Result added to address Kitselas comment. Rationale provides additional context for Result.
SD3.1.2 Road Construction	SD3.1.2 Road Construction	Reference made to PIC 2015 *Guiding Principles and Considerations when Planning and Implementing Road Deactivation.*	In response to request from Kitselas that these Guiding Principles be followed.
N/A	SD3.2.4 Provincial Timber Management Goals	Added section to describe Provincial Timber Management Goals and Kalum TSA and TFL 1 summaries and how they are being addressed.	The Kalum TSA and TFL 1 summaries were released after the start of public review.
SD3.4.4 Other watersheds	SD3.4.4 Other watersheds	Added summary of 2021 Watershed Status Evaluation Report for Williams & Sockeye Creeks.	Added to reflect an updated source of information made available after public review.
SD3.6.2.2 Wildlife Trees	SD3.6.2.2 Wildlife Trees	Added consideration of wildlife habitat features and other resource value features when selecting WTRAs, as per updated Result CTR22-05.	Change made in response to comment from Kitselas that WTRA placement should consider habitat values and features.
SD3.6.2.2 Wildlife Trees	SD3.6.2.2 Wildlife Trees	Added wording to describe additional considerations to be taken before amending a WTRA.	Addition made in response to discussion with Kitsumkalum related to WTRAs.
SD3.7.2 Cedar	SD3.7.2 Cedar	Described FSP Holder practices related to cedar regeneration and retention of non-merch and mature cedar trees.	Added in response to comments with Kitsumkalum and Kitselas related to cedar.
S D4.2.2 Climate Change	S D4.2.2 Climate Change	Added a brief summary on climate change.	Added to recognize the importance of considering climate change and to address expectations letter from MOF.
S D5 Public, Agency, and First Nation Review and Comment Summary	S D5 Public, Agency, and First Nation Review and Comment Summary	Summarized public review and First Nation information sharing.	Added to summarize comments from public, stakeholders and First Nations.
N/A	Appendix SDA: Evaluation Tool	Tool is provided to show consistency of results and strategies with objectives, and how they are measurable and verifiable.	Added to assist DDM review.