



NORTH ISLAND COMMUNITY FOREST LP

Forest Stewardship Plan

April 2020

Final Revision July 2020

Final Submission

Authorized Preparer of the Forest Stewardship Plan

Ione M. Brown, RPF
Hecate Integrated Resources Ltd

April 30, 2020
Date

Authorized Licensee for the Forest Stewardship Plan



Mike Green, Manager NICF

April 29, 2020
Date



Table of Contents

Table of Contents	iii
Acronyms & Definitions Applicable to this FSP	vi
Forest Stewardship Plan	1
1. Introduction.....	1
2. Application of Forest Stewardship Plan	1
2.1. Licences and Holders	1
2.2. Term of this FSP	1
2.3. Forest Development Units.....	1
2.4. Areas Subject to Cutting Permit or Road Permit	2
3. Results and Strategies	3
3.1. Vancouver Island Land Use Plan - Higher Level Plan Order.....	4
3.2. Order Establishing Provincial Non-Spatial Old-Growth Objectives	7
3.3. Order Establishing Old Growth Management Areas	8
3.4. Objectives Set By Government FRPA Section 149(1)	8
4. Visual Quality.....	17
5. Measures for Invasive Plants.....	18
6. Measures for Natural Range Barriers.....	19
7. Stocking Standards	19
Appendices	23



List of Appendices:

Appendix A - Forest Stewardship Plan Mapping

Appendix B - Stocking Standards

Appendix C – Vancouver Island Land Use Plan Higher Level Plan

Appendix D – Non-Spatial Old Growth Order

Appendix E – Order Establishing Objectives for Old Growth Management Areas

Appendix F – Wildlife Notices and Orders

Appendix G – Invasive Plants

Appendix H – Referrals and Correspondence



This page is intentionally left blank

Acronyms & Definitions Applicable to this FSP

Act – “Act” when used in terms of this FSP, refers to the *Forest Act* of British Columbia

CFA – means Community Forest Agreement

FDU - Forest Development Unit is the area(s) identified in a FSP where forest development may occur during the term of the plan and within which, during the term of the plan, timber to be harvested or roads to be constructed are entirely located.

FSP – Forest Stewardship Plan

FPPR – *Forest Planning and Practices Regulation* (B.C. Reg. 14/04) under *FRPA*

FRPA – means the *Forest and Range Practices Act*

Known Scenic Area – means an area of land established as a scenic area under the *Forest Practices Code of British Columbia Act* on or before October 24, 2002, and continued as a scenic area under Section 180(c) of the *Act* (grandparented objectives) or established under the Government Action Regulation.

LU – Landscape Unit, a planning or management unit set out on the landscape

OGMA - Old Growth Management Area is a legally established and spatially defined area of old growth forest (or recruitment forest) that has been identified during landscape unit planning or an operational planning process. OGMA's are legally established by Ministerial Order.

OPR – *Operational Planning Regulation* which was a regulation under the *Forest Practices Code of B.C.* This regulation is referenced in relation to the Vancouver Island Land Use Plan, in effect as of October 2000.

Primary forest activity – as defined in *FPPR* Section 1(1) means one or more of the following; a) timber harvesting, b) silviculture treatments, or c) road construction, maintenance and deactivation.

Qualified Person – means a person who by experience and/or education is considered knowledgeable and able to provide advice on a given subject in a given situation.

Qualified Professional – means a person who by education, experience and professional credentials is considered knowledgeable and able to provide expert advice on a given subject in a given situation and is licensed or regulated by a governing body or association.

UWR – Ungulate Winter Range which are identified habitats for critical winter survival of ungulates (deer and/or elk), in areas under this FSP.

VILUP – Vancouver Island Land Use Plan which was formalized as a Higher Level Plan (HLP) Order in 2000. The Vancouver Island Summary Land Use Plan is background and guidance under the HLP.



WHA – Wildlife Habitat Areas are those areas that have been legally established (or proposed) for a particular wildlife species of concern for a region.

WTRA – Wildlife Tree Retention Area; areas set aside by forest tenure holders on a cutblock basis either within or adjacent to cutblock areas to provide for diversity and wildlife habitat, or other features for the area



Forest Stewardship Plan

1. Introduction

The North Island Community Forest Limited Partnership (LP) holds a Community Forest Agreement (CFA) that was awarded in March 2011 and is owned in equal partnership between the Village of Port Alice, District of Port Hardy and the Town of Port McNeill. The CFA is run by a Board of Directors, appointed by the three communities to conduct the activities of the CFA as outlined in the Agreement.

2. Application of Forest Stewardship Plan

2.1. Licences and Holders

The holders of the Forest Stewardship Plan (FSP) have prepared this FSP as required under s.3(4) of the *Forest and Range Practices Act (FRPA)* in order to carry out primary forest activities within Forest Development Units (FDUs).

The Forest Licence and Tenure Holder under the FSP:

- Community Forest Agreement K3Z held by the North Island Community Forest LP, hereafter known as NICF.

2.2. Term of this FSP

Commencement of Term

The Term of this Forest Stewardship Plan, as per Section 6(1) of the *FRPA*, commences on the date that this FSP is approved by the Designated Decision Maker (DDM).

Length of Term

The FSP is proposed for a length of five years.

The FSP may be:

- Terminated earlier if the FSP holder elects to replace it with another approved FSP, or
- Extended pursuant to the *Act* and its regulations.

2.3. Forest Development Units

The maps attached to this FSP show the designations and content requirements described in Section 14(3) of the *FPPR* that were in effect on the Date of Submission. There are three proposed FDUs for this FSP. All timber harvesting and road building activities will be restricted to within the FDUs shown on the map. The FDUs are meant to follow the boundaries of Landscape Units (LUs) as they both overlap the tenure boundary and bound a logical planning area.



The following FDUs are included under this FSP as proposed:

- FDU 1 - Holberg Landscape Unit
- FDU 2 - Keogh Landscape Unit
- FDU 3 - Marble Landscape Unit

The FSP describes the elements as per *FPPR* s.14 that have been identified as of the Date of Submission of this FSP and where those elements are applicable under the FSP. Those elements, which are described, if applicable, are found either in the text of this FSP or on the FSP map where concerning a land use designation, and are as follows;

- Areas under Cutting permit(s) and Road Permit(s) held by the agreement holder
- Area in which commercial harvesting is prohibited by another enactment
- Community Watershed
- Lakeshore Management Zone, including specifying the width of the zone, if the zone is identified on a map accompanying the establishment of the lakeshore management zone
- Fisheries Sensitive Watersheds
- Lakeshore management zone
- Old growth management area
- Scenic area
- Ungulate winter range, and
- Wildlife habitat area

Additional elements may be described on the FSP mapping.

2.4. Areas Subject to Cutting Permit or Road Permit

Cutting Permits and Road Permits in effect as of the date of submission of this FSP are not part of the review for this FSP. These areas are shown on the FSP map.



3. Results and Strategies

FRPA, Section 1 defines “objectives set by government” as

- a) objectives prescribed under Section 149(1) of the *FRPA*;
- b) objectives established under Section 93.4 of the *Land Act* by the Minister responsible for the administration of the *Land Act*; or,
- c) objectives established by the Haida Gwaii Management Council under Section 4(1) of the *Haida Gwaii Reconciliation Act*.

In addition to the above objectives, the area is subject to grandparented objectives that result from previous executive orders as they relate to the Vancouver Island Land Use Plan.

As per *FRPA* s.5(1)(b), the FSP must specify intended results or strategies, each in relation to (i) objectives set by government and (ii) other objectives that are established under the Act or the regulations and that pertain to all or part of the area subject to the FSP.

In the following sections, the FSP holder has set out results and/or strategies to meet all objectives required for areas under the FSP. The standards for these results or strategies will be as follows:

- **Results** are written to be measurable or verifiable outcomes in respect of each particular objective, and describe the situation or circumstance where the outcomes will be applied.
- **Strategies** are written to be measurable or verifiable steps or practices that will be carried out in respect of each particular objective, and the situation or circumstance where the steps or practices will be applied.



3.1. Vancouver Island Land Use Plan - Higher Level Plan Order

The Vancouver Island Land Use Plan (VILUP) was established through Higher Level Plan (HLP) Order in October 2000. The Order has established land use objectives for Special Management Zones (SMZs) and Enhanced Forestry Zones (EFZs) within the VILUP area. Resource Management Zones (RMZs) encompass both Enhanced and General Resource Management zones. EFZs 5 and 6 fall within areas under this FSP. The HLP is found in Appendix C of this FSP.

RMZ 7 is referred to as a General Management Zone (GMZ). Although the FSP falls within GMZ 7, there are no objectives within the HLP itself that apply to the FSP. No results or strategies are required for RMZ 7.

The VILUP Summary document (2000) is used as background information for establishing the importance of certain values in these areas and will be used as a resource when planning for development in areas under the FSP.

The objectives from the Higher Level Plan (VILUP) that are applicable to this FSP are listed in the following section. Results and/or strategies have been developed to meet these objectives.

Higher Level Plan Objectives

Resource Management Zone (EFZ 5 and EFZ 6) Enhanced Forestry Zone (with the exception for the parts of this zone which is designated as a Community Watershed (Calbrick Creek):

Reference HLP Order Objective 7: To increase the short term availability of timber,

- a) A cutblock may be larger than 40 ha pursuant to section 11(2)(a) of the *OPR*; and
- b) Pursuant to section 68(4) of the *OPR*, a cutblock is greened-up if it is adequately stocked and the average height of those trees that are:
 - i. the tallest tree in each 0.01 ha plot included in a representative sample, and
 - ii. a commercially valuable species or other species acceptable to the District Manager,is at least 1.3 metres;
unless the District Manager determines that a cutblock referred to under (a) or (b) would significantly impact specific hydrological, wildlife, biodiversity, scenic, or recreation values.

Results and Strategies

For the purpose of carrying out primary forest activities and to increase the short term availability of timber;



1. a cutblock may be larger than 40 ha pursuant to VILUP HLP s.7(a) and pursuant to *FPPR* Section 64(1)(a); and
2. for the purposes of VILUP HLP s.7(b) a cutblock is considered greened-up if it meets the criteria set out in paragraph a) or b), below, if:
 - a. at least 75% of the net area to be reforested of the existing cutblock is stocked so that the average height of the tallest 10% of the trees is a minimum of 3 metres in height, and
 - i. is stocked with the applicable stocking standards, as described in s.16 of the *FPPR*, and found in Appendix B, Stocking Standards in this FSP,
 - ii. the area is stocked with at least 500 trees per hectare of a commercially valuable species that are at least 1.3 metres in height;
 - b. the portion of the net area to be reforested of the existing cutblock that is closest to the new cutblock is stocked such that:
 - i. the area must be at least half of the net area to be reforested,
 - ii. the average height of the tallest 10% of the trees per hectare is a minimum of 3 metres, and
 1. the area meets the stocking standards that apply to the cutblock as set out in s.16 of the *FPPR* with at least 500 trees per hectare of a commercially *valuable* species that are *at least* 1.3 metres in height,

unless the District Manager determines that a cutblock referred to under 1) or 2) above, would significantly impact specific hydrological, wildlife, biodiversity, scenic, or recreation values.

In order to mitigate significant impacts to specific hydrological, wildlife, biodiversity, scenic or recreation values, cutblocks described in subsection 1) or 2) above, will be consistent with the results and strategies set forth in this FSP to meet objectives for wildlife, wildlife and biodiversity, riparian and visual quality objectives. The FSP Holder;

- i. will have hydrological assessments completed by a Qualified Professional to assess the hydrological effects of the proposed cutblocks, and
- ii. will plan and develop primary forest activities in a manner which is consistent with the findings and recommendations of such assessments noted in (i) above.



Applicable Areas

The results and/or strategies apply to primary forest activities in portions of FDUs that are within VILUP EFZs 5 and 6, save and except for community watersheds, as follows:

FDU 1 (Holberg)	Enhanced Forestry Zone
FDU 2 (Keogh)	Enhanced Forestry Zone

Reference HLP Order Objective 8: Avoid or mitigate adverse hydrological impacts, which may result from the practices referred to in Objective 7, in watersheds with significant watershed sensitivity and significant fisheries values as determined by the District Manager.

Strategy

In reference to HLP Objective 8, in areas where primary forest activities are proposed in watersheds that have been identified by the District Manager as having significant watershed sensitivity and significant fisheries values:

- a) a hydrological assessment will be completed by a Qualified Professional, and
- b) the FSP holder will plan and develop primary forest activities in a manner which is consistent with the findings and recommendations of the hydrological assessment in a) above.

Applicable Areas

The strategies apply to portions of the FDUs below that are within VILUP EFZs 5 and 6, save and except for areas designated as community watersheds:

FDU 1 (Holberg)	Enhanced Forestry Zone 5
FDU 2 (Keogh)	Enhanced Forestry Zone 6

Reference HLP Order Objective 9: When proposing the species composition for the purposes of *OPR* s.39(3)(o), a person may, pursuant to *OPR* s.41, select a single species that is ecologically suited to the area, if a mix of species was present on the area before the timber was harvested.

Reference HLP Order Objective 9.1: The area that may be subject to selection of a single species pursuant to objective 9 is limited to no more than 20 percent of the forested area of any variant within a given EFZ.

Result

For the purposes of HLP Objectives 9 and 9.1 above, the FSP Holder(s) will reforest areas where primary forest activities have been carried out following the stocking standards as found in Appendix B of this FSP.



Applicable Areas

The results above apply to:

FDU 1 (Holberg)	Enhanced Forestry Zone 5
FDU 2 (Keogh)	Enhanced Forestry Zone 6

Reference HLP Objective 10: To avoid severe social and economic consequences, as determined by the District Manager, the full target of 13% for old growth retention in CWHv1 may be reduced by up to one third provided that ecologically suitable second growth forest is identified to recruit the shortfall.

Result

For purposes of HLP Objective 10, the FSP holder will comply with the objectives of the established OGMA within General Resource Management Zone 7 to ensure that primary forest activities do not cause the target percent of old growth retention to fall below the amounts specified in the Order, except as permitted in the Order.

Applicable Areas

The results above apply to:

FDU 3 (Marble)

3.2. Order Establishing Provincial Non-Spatial Old-Growth Objectives

The Non-Spatial Old Growth Order (NSOGO) was signed by the Minister of Sustainable Resource Management (note Ministry in effect as of the date of approval) and took effect June 30, 2004. This order applies to areas under this FSP and supplements s.9 of the *FPPR*. This Order and the Results and/or Strategies applied to meet the Objectives of this Order will remain in effect as of the date of submission of this FSP, until such time as this Order is replaced by Old Growth Management Areas (OGMA) for all FDUs under this FSP.

Result

1. *The FSP holder(s) will comply with the objectives within the established OGMA within the Marble LU (FDU #3).*

Strategies

2. *The FSP holder will comply with the objectives within the NSOGO until such time as legal OGMA are established.*
3. *There are draft OGMA in place for the Holberg and Keogh Landscape Units (FDUs #1, #2) which identify an amount equal to or greater than, the minimum specified percent targets of*



old forest and old forest recruitment for each landscape unit. The FSP holder will communicate, collaborate and coordinate with other FSP holders, to the extent practicable, sharing the same Landscape Unit to ensure that the target percentage old forest is retained.

Applicable Area

This Order applies to all FDUs.

3.3. Order Establishing Old Growth Management Areas

Old Growth Management Areas within the Marble Landscape Unit have been established by Order of the Minister July 26, 2010.

Result

The FSP holder will comply with the applicable objectives of the legal order for OGMA within the Marble LU.

3.4. Objectives Set By Government FRPA Section 149(1)

A FSP must specify intended Results or Strategies to be used by the holder(s) of this FSP to be consistent with each Objective set by government under Section 149(1) of the *FRPA* or under Section 93.4 of the *Land Act*.

3.4.1. Soils

Reference FPPR Section 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.

Result

The FSP holder will comply with the objectives set by government for soils.

The default limits (practice requirements) for soils disturbance and for permanent access structures as per s.35 and s.36 of the *FPPR* will apply and no result and/or strategy is required for these sections.

Applicable Area

All FDUs under this FSP.

3.4.2. Timber

Reference FPPR Section 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,
- b) ensure that delivered wood costs, generally, after taking into account 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
- c) 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.

Result or Strategy

The holders of this FSP are exempt from the requirement to develop a result or strategy for Timber. FPPR Section 12(8) states that a person who is required to prepare a FSP is exempt from the requirement to prepare results or strategies for an Objective set by government for timber, except as provided for the VILUP Land-Use Objectives 7 and 8 (addressed in Section 3.1).

Applicable Area

All FDUs under this FSP.

3.4.3. Wildlife

Reference FPPR Section 7: 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
- c) The winter survival of specified ungulate species.

Notice – The "Notice" under s.7(2) of the FPPR (B.C. Reg. 14/04) includes "Indicators of the amount, distribution and attributes of wildlife habitat required for the survival of the species at risk in the North Island – Central Coast Forest District". This Notice is included in Appendix F (Wildlife Orders and Notices) and will hereafter be referred to as the "Notice". The Notice is not an Objective but provides indicators by Forest District. The Notice does not include approved Wildlife Habitat Areas.

Reference FRPA Section 149.1(1): – the Lieutenant Governor in Council may establish an area as an Ungulate Winter Range (UWR) and establish Objectives for the UWR and may also establish an area as a Wildlife Habitat Area (WHA) and Objectives for the WHA, or specify a General Wildlife Measure (GWM). This Section also authorizes the categories of wildlife and the circumstances under which the above may be established.

All available Wildlife Orders and the Section 7(2) Notice are found in Appendix F.



Strategies to meet the Objective and Legislation under FPPR Section 7

The FSP holder(s) will comply with the objectives set by government for wildlife (FPPR Section 7).

Where an area is identified by the FSP holder(s) as having populations of species at risk but does not have the attributes listed within the Notice, a Qualified Professional will be brought in to assess and provide recommendations for conserving wildlife habitat consistent with the Section 7 Notices. The FSP holder(s) will conserve and track the amount, distribution and attributes of wildlife habitat in a manner consistent with the Notice.

Applicable Area

The strategies above apply to all areas under this FSP.

3.4.4. Individual Species at Risk

Coastal Tailed Frog (*Ascaphus truei*)

Result or Strategy

Coastal Tailed Frog are not known to be found within areas under this FSP, therefore the s.7(2) Wildlife Notice for this species does not apply to the FDUs under this FSP.

No result or strategy is required.

Applicable Area

All FDUs under this FSP.

Queen Charlotte Goshawk (*Accipiter gentiles laingi*)

Strategy

In all FDUs, where the holder of this FSP conducts primary forest activities, the holder will comply with the Notice for Species at Risk as long as the Notice is in effect and wildlife habitat areas are still required to meet the goals of the Notice.

Where an area has been identified by the FSP holder as having populations of species at risk, or where an active nest has been found, during planning or development within areas under the FSP, these areas will be managed on a site-specific basis consistent with the recommendations of a Qualified Professional. If an active site or nest is found, prescriptions will be completed by the Qualified Professional and followed by the FSP holder(s) as documented in the Site Plan.

Goshawk habitat and nest surveys were completed by the Ministry of FLNRORD in 2018. This information is available to the FSP holder for planning purposes in FDU 3 (Marble LU).



Applicable Area

All FDUs under this FSP.

Great Blue Heron (*Ardea herodias fannini*)

Strategy

In all FDUs, where the holder of this FSP conducts primary forest activities, the holder will conduct those activities to be consistent with the Notice including indicators of the amount, distribution and attributes of wildlife habitat required for the survival of the species at risk outlined in Schedule 1(2) for Great Blue Heron. The Holder will comply with this Notice as long as the Notice is in effect and wildlife habitat areas are still required to meet the goals of the Notice.

Where an area has been identified by the FSP holder as having populations of species at risk, or where an active nest has been found, during planning or development within areas under the FSP, these areas will be managed on a site-specific basis consistent with the recommendations of a Qualified Professional. If an active site or nest is found, detailed prescriptions will be completed by the Qualified Professional and followed by the FSP holder(s) as documented in the Site Plan.

Applicable Area:

All FDUs under this FSP.

Marbled Murrelet (*Brachyramphus marmoratus*)

Strategy

In all forest development units, where the holder of this FSP conducts primary forest activities, the holder will comply with the Notice for Species at Risk for Marbled Murrelet as long as the Notice is in effect and wildlife habitat areas are required to meet the goals of the Notice.

If the holder(s) of the FSP identifies Marbled Murrelet habitat during planning or development within areas under the FSP, then a qualified professional will determine the suitability of this habitat for spatial identification as proposed wildlife habitat areas. In keeping with the *FPPR* s. 7(2) Notices, the FSP holder will identify and maintain an area equal to the total amount of suitable habitat specified in the Notice for the Non-Contributing Landbase within the Plan area.

There are draft WHAs that have been identified for Marbled Murrelet within the areas of the North Island Community Forest. Once these areas are finalized, there will be no harvesting or road construction activities proposed for those areas that will be designated as suitable Marbled Murrelet habitat unless there is no other practicable option and if approval is granted by the Delegated Decision Maker.



Applicable Area

All FDUs under this FSP.

Ungulate Winter Range

Result

Where primary forest activities are proposed, the FSP holder(s) will comply with the Ungulate Winter Range Orders that have been established within the former areas of TFL #6 and TFL #39 that overlap the areas under this FSP for black-tailed deer (*Odocoileus hemionus columbianus*) and Roosevelt Elk (*Cervus elaphus roosevelti*). The FSP holder will also comply and follow the general wildlife measures that are provided in the Orders.

If any of the UWR areas should be decreased or increased, or the UWR should be cancelled, then the strategy for this FSP will be amended or cancelled accordingly.

Applicable Area

All FDUs under this FSP.

Wildlife Habitat Areas

Result

Where primary forest activities are proposed, the FSP holder will comply with the Wildlife Habitat Areas that have been established within areas under this FSP and also comply with any general wildlife measures that are provided in the Orders.

If any of the WHA areas should be decreased or increased, or any WHAs be cancelled, then the strategy for this FSP will be amended or cancelled accordingly.

Applicable Area

All FDUs under this FSP.

3.4.5. Water Quality, Fish, Wildlife and Biodiversity within Riparian Areas

Reference FPPR Section 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.

Result

1. The FSP holder(s) will comply with the requirements listed in the FPPR for Section 47 (Stream Riparian Class), Section 48 (Wetland Riparian Class), Section 49 (Lake Riparian Classes), Section 50 (restrictions in a riparian management area), Section 51 (restrictions in a riparian reserve zone), Section 52(2) (restrictions in a riparian management zone), and



Section 53 (Temperature Sensitive Stream), where these requirements apply to areas under the FSP.

Strategies

1. The FSP holder will retain trees as required within the RMA of all streams, lakes and wetlands as necessary for the protection of wildlife habitat and biodiversity values, as further described in Sections 3.4.3, 3.4.4, 3.4.7 & 3.4.8 under this FSP.
2. The FSP holder will retain a Qualified Professional to determine the retention levels necessary at the site level to meet the objectives set by government for water quality, fish, wildlife and biodiversity within riparian areas, at the landscape level. The Qualified Professional will:
 - 2.1.1. Consider the factors listed in *FPPR* Schedule 1, s.2 to determine the type of management regime on a site specific basis, and
 - 2.1.2. *Design riparian retention for streams that are a direct tributary to an S1, S2 or S3 stream, or that flow directly to the ocean, to be consistent with Section 52(2) of the FPPR*
3. The FSP holder will conduct activities in the riparian management area that incorporate the recommendations made by the Qualified Professional and will minimize sediment and coarse woody debris inputs into streams to the extent practicable.
4. Riparian areas will be assessed by a Qualified Professional for windthrow risk. Recommendations to reduce the risk, if required, will be incorporated into the site level planning to minimize potential impact to stream banks, streams and fish habitat from windthrow.
5. Where some or all of the forest required in subsection (1) has been previously altered or harvested, to the extent practicable, the holder(s) of this FSP will recruit functional riparian forest in that management zone or area.

Applicable Area

All FDUs under this FSP.

3.4.6. Fisheries Sensitive Watersheds

Reference *FPPR* Section 8.1: The Objective set by government for fish habitat in fisheries sensitive watersheds is to prevent the cumulative hydrological effects of primary forest activities in the fisheries sensitive watershed from resulting in material adverse impact on the habitat of the fish species for which the fisheries sensitive watershed was established.

The Objective set by government for fisheries sensitive watersheds applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests.



Result

There are currently no Fisheries Sensitive Watersheds within any areas where the FSP holder intends to operate. In the event that either the FSP holder plans to operate within a Fisheries Sensitive Watershed, or new Watersheds are established, the FSP holder will comply with the objectives set in s.8.1 of the *FPPR*.

Applicable Area

All FDUs under this FSP.

3.4.7 Water in Community Watersheds

Reference *FPPR* Section 8.2:

1. Community Watershed means a community watershed
 - a) That is continued under s.180(e) of the FRPA, and
 - b) For which a water quality objective has not been
 - i. Continued under s.181 of the FRPA, or
 - ii. Established under the Government Action Regulations.
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 to 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 licence pertaining to the waterworks.
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.



Strategies

The Calbick Creek Community Watershed falls within the area under the FSP but not within the tenure of the FSP holder. The communities of Coal Harbour and the Quatsino First Nation rely on this watershed as a drinking water source.

Harvesting activities which may impact water quality associated with a Community Watershed, as determined by a Qualified Professional, will be preceded by engagement with the water user(s). Engagement will occur prior to the initiation of proposed development. The FSP holder(s) will ensure that the locations of water intakes and/or related infrastructures are known and that all primary forest activities are planned so that water quality or water supply impacts are avoided.

Currently, there is no requirement for the FSP holder to conduct a Community Watershed Assessment.

Applicable Area

FDU #1 (Holberg Landscape Unit)

3.4.8 Wildlife and Biodiversity – Landscape Level

Reference FPPR Section 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.

Result

The FSP holder will comply (FPPR s.12.1(3)) with the maximum cutblock size as per FPPR s.64 and the adjacency requirements as per s.65.

Applicable Area

All FDUs under this FSP.

3.4.9 Wildlife and Biodiversity – Stand Level

Reference FRPA Section 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.

Strategies

1. For the purpose of conducting primary forest activities the holder of this FSP will comply with the practice requirements outlined in s.66 and s.67 of the FPPR for wildlife tree retention.



2. Unless specified in subsection 3), wildlife tree retention areas may not be harvested before the trees on the net area to be reforested of the cutblock to which the wildlife tree retention area relates have developed attributes that are consistent with a mature seral condition.
3. Wildlife tree retention areas that are not specifically required to protect or conserve a non-timber resource or feature may be harvested provided, prior to harvesting, a Qualified Professional performs an evaluation that determines the wildlife tree retention areas are replaced with an equivalent area that is:
 - a. Ecologically and structurally similar or better to the wildlife tree retention area to be harvested, and
 - b. Is geographically as close as practicable to the cutblock.

Applicable Area

All FDUs under this FSP.

3.4.10 Cultural Heritage Resources

Reference *FPPR* Section 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*.

Strategies

The North Island Community Forest LP will comply with the objectives set by government for cultural heritage resources through the following strategies:

1. The FSP holder will make all reasonable efforts to engage annually or more frequently with each First Nation to share information specifically regarding plans for primary forest activities in areas that are under this FSP. During these (or other) meetings, the FSP holder's plans and mapping at the landscape and operational level will be provided that show proposed areas for primary forest activities over the short and long-term.
2. The FSP holder will request information from each First Nation concerning locations and traditional use needs for cultural heritage including future traditional use needs for western redcedar and yellow cedar and, where available, will use this information to inform planning decisions for future development activities.
3. The holder of this FSP will engage Qualified Professionals to conduct archaeological assessments prior to conducting primary forest activities as determined to be required through engagement with First Nations or from previous archaeological resource information or by the Ministry of FLNRORD. The FSP holder will then:



- a. comply with the recommendations that result from archaeological assessments completed by a qualified professional, and
 - b. will also engage and request information from First Nations regarding the management zone widths and design of buffers to protect cultural heritage features.
4. The FSP holder will work with affected First Nations to develop specific policies/protocols for cultural resources, in particular a strategy for the cedar resource, within the FSP holder's tenure area.
5. It is recognized that cedar (western redcedar and yellow cypress) are a cultural heritage resource. Opportunities for continued traditional use by First Nations will be finalized in the specific protocols for future cedar resource availability, as described in subsection 4) above, but will be provided for through the following means:
- a. planting of cedar on ecologically suitable sites, and
 - b. through protection of cedar in wildlife tree retention areas, old growth management areas, wildlife habitat areas, ungulate winter range areas and riparian retention areas.

Applicable Area

All FDUs under this FSP.

4. Visual Quality

Reference FRPA s.180, FPPR s.1.1, s.9.2 and GAR s.17: Visual quality objectives for TFLs 6 and 39, which are followed for the purposes of this FSP as the area of the North Island Community Forest were formerly a part of TFL 6 (established under GAR 7(2) dated September 24, 2010) and TFL 39, are addressed by the scenic areas established for the TFL under the *Forest Practices Code of British Columbia Act* and continued under s.180 of the *FPPR*.

Objective:

The objective that applies to the holder of this FSP is to ensure that the forested landscape with visual quality objectives established under GAR and Scenic Areas continued under the *FRPA* which is altered as a result of primary forest activities falls within the specified levels of alteration in the regulation.

Result

Where the FSP holder(s) conducts primary forest activities within known scenic areas, the holder(s) will ensure it meets both the basic definition of the VQO and is within the allowable alteration limits in perspective view, from significant public viewpoints, for the relevant category of visually altered forest landscape described in *FPPR s. 1.1*.



Applicable Area

All FDUs under this FSP.

5. Measures for Invasive Plants

Reference *FPPR* Section 17: The holder(s) of the FSP must specify measures, according to *FRPA* Section 47, in the FSP to prevent the introduction or spread of prescribed species of plants that are invasive plants listed under the Invasive Plants Regulation (B.C. Reg. 18/2004), if the introduction or spread is likely to be the result of the person's forest practices. Appendix G lists those plant species that are invasive under the *Invasive Plants Regulation* (B.C. Reg. 18/2004).

Where the holder of the FSP conducts primary forest activities in all FDUs under this FSP, the holder will carry out the following measures to prevent the introduction or spread of prescribed species of invasive plants, and all knotweed species:

1. Where vegetation is identified as an invasive plant species (including all knotweed species) under the Invasive Plant Species Regulation, take site specific measures to control the introduction or spread of that plant species as required. Qualified Professionals will educate supervisors, engineering, forestry and road crews annually, or as required, in the identification of applicable Invasive Plant Species. The FSP holder will also direct that road building and harvesting equipment be inspected and that soil and vegetative material be removed (cleaned) before leaving (or arriving to) work areas.
2. Where new occurrences of Invasive Plant Species (including all knotweed species) are detected they will be reported to the Coastal Invasive Plant Committee by filing a report in the "Invasive Alien Plant Program" (IAPP) or Report-A-Weed application. High priority species, those listed in Appendix G (2016 Coastal Priority Plant List), will be reported within 1 month of detection. Where other invasive species are identified they will be reported annually to the IAPP.
3. Where exposed areas not planted with tree seedlings are within 100m of existing invasive plant infestations or where roads are located within or immediately adjacent to an Ecological Reserve, WHA or UWR, the FSP holder(s) will use native grass seed or seed that meets or exceeds the Canada Common #1 Forage specifications in the Seeds Act, to ensure that introduction of weed seed that is invasive is minimized.
4. Re-vegetate with the appropriate mix of tree species to meet regeneration and free-to-grow commitments, while maintaining natural seral stage succession and ecosystem functioning; and
5. Where the activity would likely prevent the introduction or spread of invasive plant germination.



6. Measures for Natural Range Barriers

Reference *FPPR* Section 18: The holder(s) of the FSP must carry out measures specified in a FSP to mitigate the removal or ineffectiveness of a range barrier caused, directly or indirectly, through carrying out a forest practice.

There are no range tenures within the areas under this FSP; therefore, no Results or Strategies are required to be written for this FSP.

7. Stocking Standards

Reference *FPPR* Section 16: Under *FRPA* Section 29, major licensees that harvest timber to which an FSP applies must establish in accordance with the FSP and prescribed requirements, a free growing stand.

As per *FPPR* Section 16(1), the holders of this FSP will specify stocking standards that are to be determined on a block by block basis under *FPPR* s. 44(1). Stocking standards are listed in Appendix B of this FSP and apply to all FDUs under the FSP.

There is no commercial thinning, removal of individual trees or similar intermediate cuttings planned for the term of this FSP. No application of the single tree selection silviculture system or shelterwood silviculture systems are proposed under this plan. Therefore, no stocking standards to address multi layered stands are proposed.

Even Aged Management

The stocking standards in Appendix B apply to harvest units and/or standards units where even aged management is practiced. The standards are based on the biogeoclimatic zone, subzone/variant and site series where the appropriate standards will be applied within each FDU.

The regeneration date, stocking standards and free growing tree heights as per *FPPR* Section 44(1)(a) and (b) are outlined in Appendix B.

Climate Change

The primary forest activities will generally take place within the Coastal Western Hemlock very wet maritime areas. The MFLNRORD produced an update to the “Reference Guide for Forest Development Stocking Standards” (revised March 2019) in response to climate change projections showing a possible shift in tree species and ecological suitability for reforestation on certain sites.

At this time, there are no recommended changes to species selection in the Biogeoclimatic Zones (subzones/variants) that are located in areas under this FSP. The FSP holder will continue to monitor the recommended stocking standards and species suitability for areas where primary forest activities are conducted and amend the Stocking Standards as necessary.



Forest Health

All stems considered to be crop trees will meet or exceed the Free Growing Damage Criteria as outlined in the Single Entry Dispersed Retention Stocking Standard (2014) Damage Criteria for Managed Stands in Coastal British Columbia, s.1.4, for trees in Layers 3 and 4.

Hemlock Dwarf Mistletoe

Mistletoe is occasionally present in hemlock stands throughout the plan area, but is not normally significant enough to be a planning concern.

To mitigate the rate of spread of mistletoe infection, the FSP holder will limit the Hw accepted in the regenerating layer as well spaced or Free Growing trees where overstory trees are infected at the edge or within the cutblock area. For layers 3 and 4 trees, Hw will not be accepted as a crop tree if any infection occurs on the stem or a live branch, or is within 15 metres horizontal distance from the dripline of an overstory tree that is infected. Non-host species (Fd, Cw, Yc) or less susceptible species (Ba, Ss) will be planted and/or targeted to mitigate the effects of dwarf hemlock mistletoe on the regenerating stand.

White Pine Blister Rust

Unless rust resistant stock is planted, white pine will not contribute to the number of well-spaced stems per hectare.

Where non resistant, naturally regenerated, white pine is required to meet the minimum number of well-spaced stems per hectare pruning will be done in one or two stages within the free growing window to remove lower branches to a height of 3 meters and the number of well-spaced stems per hectare will be limited to 10% unless a site specific/cutblock variance is approved.

Spruce Leader Weevil

Unless weevil resistant stock is planted, Sitka spruce cannot contribute to the number of well-spaced stems per hectare and is limited to 10% - 30% of the well-spaced stems per hectare where weevil resistant stock is used.

Root Diseases

Root disease within the planning area is not normally a concern. Both *Phellinus* and *Armillaria* occur, but are generally restricted to small isolated pockets of 1 hectare or less.

Stands will be assessed for the presence of root rot during the preparation of site plans. A Qualified Professional will determine where remedial treatments are necessary and will occur. For example, in areas where it is determined that stands are moderately to highly infected and larger than 0.1 hectare the following strategies will be employed, either individually or in combination, to reduce the impact of root rot on the next crop:



- a) Phellinus
 - i. Post harvest stumping on slopes less than 35% on sites where Douglas-fir is the preferred species.
 - ii. Planting alder and/or cedar and/or white pine on sites suitable to these species. Alder will be considered for sites where it has the potential to reach sawlog dimensions and can in future contribute to the Allowable Annual Cut where applicable under this FSP.
- b) Armillaria
 - i. Post harvest stumping on slopes less than 35% on the most severely infected sites
 - ii. Focusing silviculture efforts to maintain vigorous tree growth, e.g. planting larger stock, planting alternative species where ecologically suitable, time of planting, fertilization, timely and repeated brushing as required to maintain vigour.

Alder Management

Standards for alder management have been included in Appendix B Stocking Standards. Alder is anticipated to naturally seed into harvested areas within 5 years over the Plan area and management for deciduous species is intended on a small scale on ecologically suitable areas throughout areas under this FSP.

Alder may be considered a preferred crop tree in certain situations where the following criteria will apply:

- a) Alder will be considered commercially viable with a stand density of between 1,000 and 1,500 stems per hectare,
- b) Limited to site series where listed under Appendix B, and
- c) Expect that the rotation age will be between 30 - 60 years.
- d) Alder may be used as a preferred species in situations of moderate to severe root rot where it is determined that a rotation of alder would be of long term benefit.

Free Growing Damage Criteria for deciduous management will follow the guidance from the Coastal Resource Information Team (CRIT) Hardwood Management in the Coast Forest Region Discussion Paper (pages 11, 12), as follows:

1. Unless otherwise stated in regulation or an approved FSP stocking standard, an acceptable broadleaf crop tree must:
 - Not have a tree pith that is laterally displaced more than 30 cm from the location of the root-crown pith.
 - Not originate from a cut stump.
 - Have one dominant live leader.
 - Not have a wound that is greater than 10% of the stem circumference nor is greater than 10% of the total length of the stem.



NORTH ISLAND COMMUNITY FOREST LP

- Not have any fungal infections or insect infestations affecting tissues below the bark surface, visible without destructive sampling.
- Not be browsed so as to limit its ability to become a crop tree.