TIMBERWEST FOREST CORP.

JOHNSTONE STRAIT

FOREST STEWARDSHIP PLAN

Amendment to the Forest Stewardship Plan:
Approved September 2017
Amended September 2020
Extended September 2022

Submitted TBD

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1. INTERPRETATION

1.1 TENSES

In this Forest Stewardship Plan (FSP), the singular includes the plural and the plural includes the singular, unless the context indicates otherwise.

1.2 OBJECTIVES CANCELLED

If an objective for which a result or strategy is included under this FSP is cancelled, the result or strategy under this FSP pertaining to that objective is no longer applicable effective the date of cancellation of the objective.

2. SUBMISSION DATE, TERM & COMMENCEMENT DATE OF THIS FSP

2.1 SUBMISSION DATE

The date of submission of this FSP amendment is: TBD

2.2 TERM (FRPA S. 6(1)(a))

The Term of this FSP is 5 years beginning on the Commencement Date.

2.3 COMMENCEMENT DATE

The Commencement Date for the Term of this FSP is the date it is approved.

3. APPLICATION OF THIS FSP

3.1 FSP HOLDER

The holder of this FSP is TIMBERWEST FOREST CORP.

3.2 APPLICATION OF THIS FSP

Subject to exceptions under the Forest and Range Practices Act (FRPA), this FSP applies to:

- FL A29159
- FL A20913
- TFL 47 Blocks 2, 3, 5 to 11
- TL T0833 and TL T0769
- NRFLs A82372, A90802 and A90383

4. FSP MAP (FRPA S. 5(1)(A) & FPPR S. 14)

The *Forest and Range Practices Act* (FRPA) and the Forest Practices and Planning Regulation (FPPR) specify required elements that a Forest Stewardship Plan map must include. The FSP map must specifically identify land use designations such as Ungulate Winter Range (UWR), Old Growth Management Areas (OGMA), community watersheds and areas under Cutting Permit and Road Permit within each of the Forest Development Units (FDU).

FDU's E, F, G, T and Y are in effect. FIGURE 1 provides an overview of the FSP plan area.

4.1 AREAS TO WHICH FRPA S. 196(1) OR S. 196(2) OR FPPR S. 110 APPLIES

The appended FSP map set illustrates the cutblocks and roads included in Forest Development Plans (FDP) that are within a proposed Forest Development Unit under this FSP and considered approved under S. 196(1) or (2) of the Act, including those cutblocks referred to in S. 110 of the FPPR.

4.2 DESIGNATION IN EFFECT BEFORE SUBMISSION OF THIS FSP (FPPR S. 14(3))

The FSP map illustrates the designations and content requirements described in FPPR S. 14(3) that were in effect on the Date of Submission.

4.3 AREAS SUBJECT TO CUTTING PERMIT OR ROAD PERMIT (FPPR S. 14(2)(b)(I) & 14(3))

The FSP map illustrates areas within the proposed FDUs that are subject to existing Cutting Permit or Road Permit held by the Licensee and in effect on the Date of Submission. These areas are already under permit and are not the focus of review and comment.

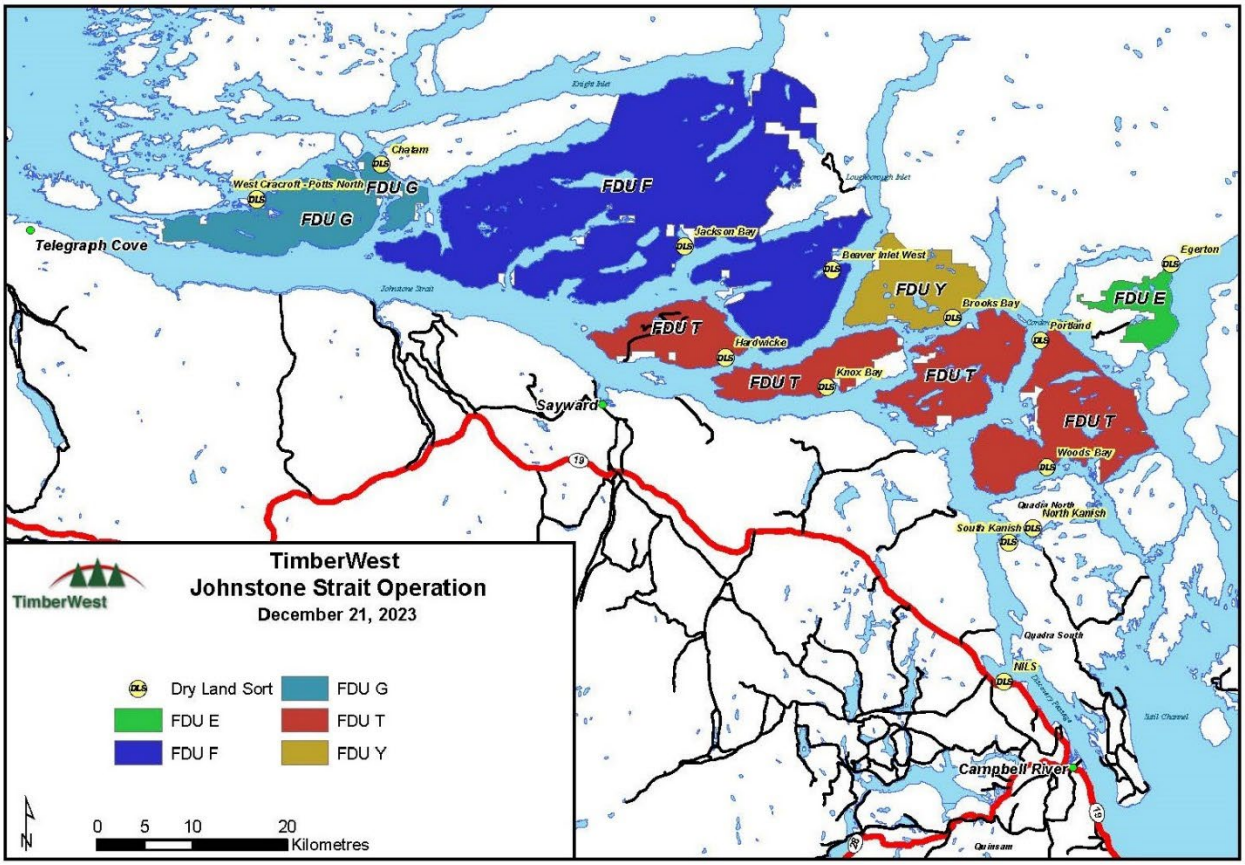

Figure 1. Johnstone Strait FSP Overview and Proposed Forest Development Units

4.4 DECLARED AREAS (FPPR S. 14(4))

The FSP map illustrates areas within the proposed FDUs that have been declared. These areas are not the focus of review and comment.

5. DESIGNATIONS AND OBJECTIVES IN EFFECT BEFORE SUBMISSION OF FSP (FPPR S. 14(2)(B)(II))

- Order Establishing Provincial Non-Spatial Old Growth Objectives
- Campbell River Forest District – Scenic Areas and VQO's (December 14, 2005)
- Kingcome TSA Visual Quality Objective Order (August 31, 2005)
- Scenic Areas with Visual Quality Objectives (TFL 47)
- Species at Risk Notice for Campbell River Forest District (December 30, 2005)
- Species at Risk Notice for North Island Central Coast Forest District (March 2, 2006)
- Order to Identify Recreation Resource Features for the Campbell River Forest District (April 12, 2006)
- Order to Identify Karst Features for the Campbell River Forest District (May 30, 2007)
- Order to Identify Karst Resource Features for the NICC Forest District (March 29, 2007)
- Central Coast Designated Area No. 2 (May 23, 2002)
- Great Bear Rainforest Order (July 27, 2023)
- Existing Cutting Permits and Road Permits

6. OBJECTIVES ESTABLISHED OR CONTINUED (FRPA S. 1 DEFINITIONS)

FRPA S.1 definitions define "objectives set by government" to include objectives established under Section 93.4 of the *Land Act.* The sections which follow detail the objectives contained in the Great Bear Rainforest Order.

6.1 GREAT BEAR RAINFOREST ORDER

The South Central Coast Order (SCCO) came into effect August 2, 2007. The SCCO was subsequently amended, with the amendment coming into effect on March 26, 2009. The SCCO was replaced by the Great Bear Rainforest Order (GBRO), effective January 28, 2016. The GBRO was subsequently amended, with the amendment coming into effect on July 27, 2023. This Higher-Level Plan (HLP) establishes objectives related to ecosystem-based management that pertain to the entire area covered by this FSP.

GBRO GENERAL – DEFINITIONS

Definitions listed below have been used in the results or strategies found under FSP S. 6.1 [Great Bear Rainforest Order]. Unless otherwise expressly indicated, or indicated by context, terms used in FSP S. 6.1 have the definition given them, as of the Submission Date, in the Great Bear Rainforest Order (Order), the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents (guidance documents), as currently available and as they may be replaced or amended from time to time. Additional definitions, not listed below, can be found in the Order and guidance documents.

Active fluvial unit means an active floodplain, where water flows over land in a normal flood event, and includes low and medium benches and the hydrogeomorphic zone of an active fan.

Bear den means a den identified by a qualified professional that is suitable for winter hibernation or maternity.

Blue-listed plant community means a plant community listed in Schedule O that is sufficiently established.

Cultural cedar stand means three or more monumental cedars, contemporary culturally modified trees or historical culturally modified trees where each tree is within 30 metres of another monumental cedar, contemporary culturally modified tree or historical culturally modified tree.

Cutblock means an area within which a tenure holder is authorized to harvest timber, as identified in a cutting permit, timber sale licence or other cutting authority.

Forested swamp means a forested mineral wetland or a forested peatland with standing or gently flowing nutrient-rich water in pools or channels where the water table is usually at or near the surface of the wetland or peatland, but does not include poorly drained areas transitional to uplands where folisolic growing substrate (folic material derived from the litter or trees and lesser vegetation of upland sites) occupies 50% or more of the site or hydromorphic organic matter (organic material accumulated under saturated conditions) and wetland species (hydrophytes) occupy less than 50% of the site area.

Functional riparian forest means forest adjacent to streams and other aquatic features, that provides hydrologic, hydrogeomorphic and ecological hydroriparian functions and has trees of adequate size to resist channel bank erosion, supply functional large wood and contribute to slope stability.

Historical culturally modified tree means a tree that was modified eighty or more years ago by First Nations people as part of their cultural use of the tree.

Important fisheries watershed means a watershed area identified in Schedule E, but not including watersheds composed entirely of S5 or S6 streams flowing directly into the ocean.

Indigenous forest resource means a forest plant resource listed in Schedule J, or other forest plant resource identified by First Nations during First Nation engagement, that is utilized for food, social, medicinal or ceremonial purposes.

Indigenous forest values means Indigenous forest resources, Indigenous heritage features, historical culturally modified trees, contemporary culturally modified trees, monumental cedar and cultural cedar stands, western yew trees, and other forest features that are of importance to First Nations.

Indigenous heritage feature means an artefact, feature, or site of the general types listed in Schedule I, other than a contemporary culturally modified tree or a historical culturally modified tree, that is known, identified during First Nation engagement or found through field inventories and assessments, and is important to the cultural practices, knowledge or heritage of the applicable First Nation.

Indigenous tree use means the present and future use of monumental cedar, other cedar or other tree species to fulfil the food, social, medicinal, spiritual and ceremonial needs of the applicable First Nation, including use of trees for shelter, transportation, tools, fuel, and art.

Monumental cedar means a large old western redcedar tree or a large old yellow cedar tree that has the attributes necessary to fulfil the Indigenous tree use needs of the applicable First Nation primarily for totem poles, canoes, or long beams and poles to build longhouses, community halls or similar community structures.

Tree length means the following:

(a) in old forest stands,
  (i) a distance equal to the measured height of the tallest old trees within a required reserve zone or management zone, as applicable, at time of harvest, or
  (ii) the potential old tree height indicated in Schedule H for the predominant field-identified site series within the reserve zone or management zone, as applicable;
(b) in stands younger than 250 years,
  (i) a distance equal to the measured height of the tallest trees within a required reserve zone or management zone, as applicable, at time of harvest, or
  (ii) the potential mature tree height indicated in Schedule H for the predominant field-identified site series within the reserve zone or management zone, as applicable.

Type 1 aquatic habitat means any of the following:

(a) a reach of a watercourse and, if present, its active fluvial unit, with a continuous channel bed that is greater than 1.5 metres in width, with an average gradient less than or equal to 5% and that is known to be, or has potential to be, inhabited by fish;
(b) a lake greater than 0.25 hectares, or a marsh or fen wetland greater than 0.25 hectares, known to be inhabited by fish or connected within 500 metres by a perennial or seasonal stream to fish habitat described in paragraph (a);
(c) an estuary or marine interface zone connected by a perennial or seasonal stream to fish habitat described in paragraph (a) or (b), or associated with a shellfish bed;
(d) herring spawn areas, kelp beds, eel grass beds, and other highly productive nearshore habitat used by valued marine invertebrates for reproduction and rearing.

Type 2 aquatic habitat means any of the following:

(a) S1 to S3 stream reaches that are not type 1 aquatic habitat;
(b) S4 stream reaches that are known to be, or have potential to be, inhabited by fish and area directly connected to type 1 aquatic habitat or to S1 to S3 streams that are type 2 aquatic habitat;
(c) lakes greater than 0.25 hectares that are not type 1 aquatic habitat;
(d) marsh or fen wetlands greater than 0.25 hectares that are not type 1 aquatic habitat.

Upland stream: any stream that is not Type 1 or Type 2 aquatic habitat.

Upland stream area means the forested portion of a watershed planning unit that does not contain type 1 aquatic habitat or type 2 aquatic habitat.

Qualified Professional means an applied scientist or technologist, acting alone or together with another professional, if

(a) the individual is registered and in good standing in British Columbia with an appropriate professional association constituted under an Act, is acting under that association's code of ethics and is subject to disciplinary action by that association, and
(b) the individual is acting within that individual's area of expertise.

Red-listed plant community means a plant community listed in Schedule N that is sufficiently established.

Watershed planning unit means a watershed or watershed sub-unit that is used as a unit of analysis for watershed assessments and planning forest retention in upland stream areas.

GBRO PART 1 – GREAT BEAR RAINFOREST

6.1.1 GBRO PART 1 DIVISION 2 – FIRST NATIONS

Part 1 Division 2 – First Nations

3. Objective for First Nation information sharing and engagement

(1) For the purpose of implementing and achieving the intent of the objectives in this [land use] order, conduct First Nation engagement with applicable First Nations.

Applicable Area: All FDU's

Strategy:

3. Objective for First Nation information sharing and engagement

<u>Approach to Harvesting and Roads</u>

Refer to S. 6.1.3 for strategies for GBRO Part 1 Division 2 First Nation Objective 3.

6.1.2 GBRO PART 1 DIVISION 3 – BIODIVERSITY

Part 1 Division 3 – Biodiversity

4. Objectives for old forest maintenance and recovery

(1) Maintain landscape level biodiversity as follows:

(a) for each site series group in the order area, maintain a distribution of forest stand ages that will achieve the old forest representation targets listed in Column A in Schedule G by no later than 2264;

(b) for each site series group in the order area, retain an amount of old forest equal to or greater than the order area minimum old forest retention levels listed in Column B in Schedule G;

(c) for the purposes of paragraphs (a) and (b), for each site series group in a landscape unit, retain a minimum of 30% of the total forest area of the site series group as old forest.

(2) Despite subsection (1)(c), alteration or harvesting of old forest in a site series group in a landscape unit may occur where less than 30% of the total forest area of the site series group in the landscape unit is old forest, provided that

(a) within the landscape unit area

(i) the alteration or harvesting is required for road access or other infrastructure, or to address a safety concern, where there is no practicable alternative, or

(ii) the lesser of 20% of the total forest area or the minimum old forest retention level specified in Schedule F is maintained as old forest,

(b) the aggregate area of old forest in the order area harvested under paragraph (a) after January 28, 2016 does not exceed 18,650 hectares, and

(c) the plans to alter or harvest old forest in a site series group in a landscape unit have been developed through a process of First Nation engagement with applicable First Nations.

(3) Where there is not enough old forest available to meet the targets in subsection (1)(b) and (c), or as a result of subsection (2), recruit forest to meet the old forest requirements by no later than 2264.

5. Objectives for landscape reserve designs

(1) For each landscape unit in the order area, a landscape reserve design must be prepared by a qualified professional that addresses the minimum old forest retention levels specified in section 4(1)(c) and (2), and, to the extent practicable, contributes to

(a) the old forest representation targets specified in section 4(1)(a) and (b),

(b) the protection and stewardship of Indigenous forest values,

(c) the protection, connectivity and stewardship of red-listed plant communities, blue-listed plant communities, rare and at-risk ecosystems, habitat important for species at risk,

ungulate winter range, and habitat for regionally important wildlife including, but not limited to, mountain goats, grizzly bears, black bears, northern goshawks, tailed frogs, and marbled murrelets, and

(d) the protected and reserved forest area and the managed forest area specified in section 6(1).

(2) For the purposes of subsection (1)(a), the provisions of section 16 (1) and (2) of Part 3 apply.

(3) No commercial timber harvesting is permitted in a landscape reserve design.

(4) For the purposes of subsection (1),

(a) complete landscape reserve designs prior to declaring areas or applying for a cutting authority, and

(b) to the extent practicable, complete landscape reserve designs in all landscape units by December 31, 2026.

(5) Despite subsection (3), thinning and silvicultural treatments are permitted in landscape reserve designs to expedite recovery to old forest structural characteristics, provided that the proposed treatments are developed through a process of First Nation engagement with applicable First Nations.

(6) A landscape reserve design may be altered or modified to address new information, provided that the alteration or modification

(a) is developed by a qualified professional,

(b) maintains or improves outcomes pursuant to subsection (1), and

(c) is developed through a process of First Nation engagement with applicable First Nations.

6. Objectives for managed forest and protected and reserved forest

(1) Identify and maintain in the order area

(a) a managed forest area of 550,032 hectares, and

(b) a protected and reserved forest area that

(i) continues to grow older over time subject to natural disturbance and non-forest tenure activity, and

(ii) has an area of at least 3,108,876 hectares.

Applicable Area: All FDU's

Strategy:

4. Objectives for old forest maintenance and recovery
5. Objectives for landscape reserve designs
6. Objectives for managed forest and protected and reserved forest

<u>Approach to Harvesting and Roads</u>

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **old forest maintenance and recovery, landscape reserve designs** and **managed forest and protected and reserved forest**. Where required to achieve compliance with the Order area objectives, in Landscape Units and between and among the holders of FSPs, the holder(s) of this FSP will communicate, collaborate and cooperate with other holders of FSPs to the extent practicable.

2. For the Order area, where Landscape Reserve Designs (LRDs) have been endorsed:

   (a) The road construction and/or cutblock harvesting activities of the FSP holder will not occur within the LRD.

   (b) If an FSP holder requires the LRD to be amended to accommodate road construction and/or cutblock harvesting activities, they will do so by following the guidance provided, to the extent practicable, in the *Landscape Reserve Design Framework*[1] and the *Ecosystem Based Management Implementation in the Great Bear Rainforest Landscape Reserve Design Methodology*[2] documents, as currently available and as they may be amended from time to time.

3. For the Order area, where LRDs have not been submitted or endorsed, the holder(s) of the FSP will:

   (a) Participate in designing LRDs that are consistent with Order objectives, and follow the guidance provided, to the extent practicable, in the *Landscape Reserve Design Framework* and the *Ecosystem Based Management Implementation in the Great Bear Rainforest Landscape Reserve Design Methodology* documents, as currently available and as they may be amended from time to time.

   (b) Reach agreement on specifying targets or specifying proportions of the Order area for **old forest maintenance and recovery** and **managed forest** objectives, using the flexibility in GBRO Objective 4(2), and allocate to the Landscape Units and update targets on an agreed period or as required.

   (c) If fair and effective agreement cannot be reached, request the Minister to establish targets under FPPR S. 19.

4. For the Order area, where LRDs have been submitted but not endorsed, the holder(s) of this FSP, after discussion with and receiving no concerns from applicable First Nations, may make application for cutting permits and/or road permits and proceed with development of those permits when approved.

5. The holder(s) of this FSP will follow the guidance, for the purposes of identifying **old forest**, contained within *Land Management Handbook #72 Guidelines to Support the Implementation of the Great Bear Rainforest Order with Respect to Old Forest and Listed Plant Communities*[3], as currently available and as it may be amended from time to time.

GBRO PART 2 – CENTRAL AND NORTH COAST

Part 2 of the GBRO does not apply to any of the FDU's proposed under this FSP.

[1] 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/westcoast-region/great-bear-rainforest/gbr_framework_landscape_reserve_design_great_bear_rainforest.pdf
[2] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/westcoast-region/great-bear-rainforest/great_bear_rainforest_landscape_reserve_design_methodology.pdf
[3] https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/LMH72.htm

GBRO PART 3 – SOUTH AND CENTRAL COAST

6.1.3 GBRO PART 3 DIVISION 2 – FIRST NATIONS

Part 1 Division 2 – First Nations

3. Objective for First Nation information sharing and engagement

(1) For the purpose of implementing and achieving the intent of the objectives in this [land use] order, conduct First Nation engagement with applicable First Nations.

Part 3 Division 2 – First Nations

3. Objective for First Nation information sharing and engagement

(1) For the purpose of implementing and achieving the intent of the objectives in this order, conduct First Nation engagement with applicable First Nations.

4. Objective for identification of Indigenous forest values

(1) Prior to undertaking road construction or timber harvesting, identify, through field reconnaissance or field assessments and First Nation engagement as appropriate, Indigenous forest values that may be altered or adversely impacted by road construction, timber harvesting, or other site development activity.

5. Objective for Indigenous forest resources

(1) Avoid road construction, timber harvesting and other site development activities in areas and sites that contain Indigenous forest resources, to the extent practicable.

(2) Despite subsection (1), areas or sites containing Indigenous forest resources may be harvested or altered, provided that measures to identify and manage, or provide access to, the Indigenous forest resources have been developed through a process of First Nation engagement with applicable First Nations.

6. Objectives for Indigenous heritage features

(1) Protect Type 1 Indigenous heritage features.

(2) Adjacent to Type 1 Indigenous heritage features, maintain a reserve zone with a minimum width of 200 metres and an outer edge designed to minimize risk of windthrow to protect the Type 1 Indigenous heritage feature.

(3) Despite subsections (1) and (2), a Type 1 Indigenous heritage feature and its reserve zone may be modified with the support of, or lack of objection from, the applicable First Nations.

(4) Despite subsections (2) and (3), a reserve zone may be modified if

(a) The modification is required for road access or other infrastructure, or to address a safety concern, and there is no practicable alternative,

(b) alternative measures are implemented to avoid, mitigate or otherwise address impacts on the Type 1 Indigenous heritage feature, and

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(c) the alternative measures have been developed through a process of First Nation engagement with applicable First Nations.

(5) Protect Type 2 Indigenous heritage features.

(6) Adjacent to Type 2 Indigenous heritage features, maintain a reserve zone with a minimum width of 1.5 tree lengths measured from the edge of the feature and an outer edge designed to minimize risk of windthrow to protect the Type 2 Indigenous heritage feature.

(7) Despite subsections (5) and (6), a Type 2 Indigenous heritage feature and its reserve zone may be modified with the support of, or lack of objection from, the applicable First Nations.

(8) Despite subsections (6) and (7), the reserve zone may be modified if

(a) the modification is required for road access or other infrastructure, or to address a safety concern, and there is no practicable alternative,

(b) alternative measures are implemented to avoid, mitigate or otherwise address impacts on the Type 2 Indigenous heritage feature, and

(c) the alternative measures have been developed through a process of First Nation engagement with applicable First Nations.

7. Objectives for historical culturally modified trees

a) Protect historical culturally modified trees.

b) Adjacent to historical culturally modified trees, maintain a management zone of sufficient width and design to protect the historical culturally modified trees from site-specific local hazards and windthrow.

c) Despite subsections (1) and (2), historical culturally modified trees and their management zones may be altered or harvested if

(a) the alteration or harvesting is required for road access or other infrastructure, or to address a safety concern, and there is no practicable alternative, or

(b) protection of all historical culturally modified trees in the cutblock area would make harvesting economically unviable,

provided that the plans to alter or harvest the historical culturally modified trees have been developed through a process of First Nation engagement with applicable First Nations.

8. Objectives for Indigenous tree use

(1) Maintain a volume and quality, specified during First Nation engagement, of western redcedar, yellow cedar and other tree species to support the applicable First Nations' Indigenous tree use.

(2) In cedar stewardship areas, maintain, and recruit as necessary, monumental cedar, western redcedar and yellow cedar, specified during First Nation engagement, to support the applicable First Nations' Indigenous tree use needs.

(3) Within development areas, retain monumental cedar and cultural cedar stands with windfirm buffers, specified during First Nation engagement, to support the applicable First Nations' Indigenous tree use.

(4) Despite subsection (3), a monumental cedar and its windfirm buffer, or a cultural cedar stand, may be altered or harvested if

(a) the alteration or harvesting is required for road access or other infrastructure, or to address a safety concern, and there is no practicable alternative,

(b) it has been determined by the applicable First Nation that the monumental cedar or cultural cedar stand is not suitable or is not required for a cultural cedar use, or

(c) the monumental cedar or cedar from the cultural cedar stand will be provided to the applicable First Nation,

provided that

(d) retention of all monumental cedar and cultural cedar stands in the cutblock area would make harvesting economically unviable, and

(e) the plans to alter or harvest the monumental cedar or cultural cedar stands have been developed through a process of First Nation engagement with applicable First Nations.

(5) Within a cutblock, for the first 15% of the pre-harvest stand retained in stand retention as specified in section 17(1), design stand retention to maintain mature and old western redcedar and yellow cedar representative of the pre-harvest stand.

9. Objectives for retention of western yew

(1) Retain western yew trees.

(2) Despite subsection (1), western yew trees may be altered or harvested if

(a) alteration or harvesting is required to accommodate operational requirements for road and bridge construction and there is no practicable alternative, or

(b) the retention of all western yew trees in a cutblock would make harvesting economically unviable, provided that

(c) measures are implemented to provide for use of the altered or harvested western yew trees by applicable First Nations, and

(d) the plans to alter or harvest the western yew trees have been developed through a process of First Nation engagement with applicable First Nations.

(3) Where practicable, include western yew trees in stand retention.

(4) All areas retained or managed in accordance with subsection (1), (2) or (3) must be documented and the documentation submitted by the licensee as digital spatial data at the end of each calendar year to the applicable First Nations and the Province of British Columbia.

Applicable Area: All FDU's

Strategy:

3. Objective for First Nation information sharing and engagement
4. Objective for identification of Indigenous forest values

5. Objective for Indigenous forest resources
6. Objectives for Indigenous heritage features
7. Objectives for historical culturally modified trees
8. Objectives for Indigenous tree use
9. Objectives for retention of western yew

Definitions

Annually means once per calendar year.

Proposed development area means areas proposed for cutblock harvesting and/or road construction.

New refers to, in reference to proposed development areas, areas not previously forwarded to the applicable First Nation.

Established formal agreement means an agreement, between a First Nation or a group of First Nations and the Holder(s) of this FSP, that specifies the process, manner and timelines under which information sharing will take place and that is updated and revised over time.

Yew tree means a yew tree that is a minimum of 2 metres in height or as defined by the applicable First Nation through engagement as outlined under this FSP.

Approach to Harvesting and Roads

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **First Nation information sharing and engagement, identification of Indigenous forest values, Indigenous forest resources, Indigenous heritage features, historical culturally modified trees, Indigenous tree use** and **retention of western yew**.

2. Prior to the holder(s) of this FSP constructing a road or harvesting a cutblock within the area to which Great Bear Rainforest Order applies, the holder(s) will:

   (a) Annually or more frequently conduct information sharing with applicable First Nations. This information sharing will involve:

      (i) adhering to an established formal agreement, or, where an established formal agreement is not in place, engage with applicable First Nations to develop a formal agreement while in the meantime engaging with the applicable First Nation and providing the applicable First Nation with any requested information, including but not limited to:

      (ii) providing a 1:30,000 or larger scale map in a format agreeable to applicable First Nations and illustrating both new proposed development areas and development areas previously shared;

      (iii) providing, unless not desired, digital shape files for new proposed development areas;

      (iv) requesting updated information on **Indigenous forest resources**, **Indigenous heritage features**, **historically culturally modified trees** and **Indigenous tree use** needs for **monumental cedar**, western redcedar, yellow cedar, yew and other species; and

      (v) requesting a meeting to review information described in (i), (ii), (iii) and (iv) above.

   (b) Subject to updated information received under (a) above, the holder(s) of this FSP will:

(i) inform the applicable First Nation and the Ministry of Forests, in writing and prior to any development, of the changes to the proposed development that resulted from this new information, and

(ii) collaborate with applicable First Nations and, where applicable, other forest licensees, to develop a cedar strategy within the respective traditional territories of the applicable First Nations with the goal to annually make incremental improvements in the understanding of volume, quality and location of **Indigenous tree use** needs,

(c) Where practicable and consistent with road construction or cutblock harvesting, design development to incorporate **Indigenous forest values** into wildlife tree retention areas, riparian management areas, landscape reserve designs and similarly retained areas.

(d) All proposed developments that require alternative practices or strategies to the default practices or strategies of the GBRO will be developed through a process of engagement, including rationales developed by **Qualified Professionals**, with applicable First Nations.

6.1.4 GBRO PART 3 DIVISION 3 – AQUATIC HABITAT

6.1.4.1 OBJECTIVES FOR IMPORTANT FISHERIES WATERSHEDS

10. Objectives for important fisheries watersheds

(1) Within each of the important fisheries watersheds shown in Schedule E, prior to declaring areas or applying for a cutting authority, ensure that

(a) a watershed assessment or similar assessment of watershed sensitivity to forest development disturbance is completed by a qualified professional,

(b) an amount, type and distribution of forest cover sufficient to sustain natural hydrological and fluvial processes within the watershed is maintained,

(c) the effectiveness of the management strategies implemented pursuant to paragraph (b) is monitored, and

(d) the watershed assessment and management strategies have been developed through a process of First Nation engagement with applicable First Nations.

(2) Despite subsection (1), forest stewardship plan holders may apply for a cutting authority in an important fisheries watershed if

(a) a preliminary watershed assessment indicates no adverse impact on fish habitat, stream flow quality and quantity, or other watershed health indicators, and

(b) applicable First Nations support, or do not object to, the application.

Applicable Area: All FDU's

Strategy:

10. Objectives for important fisheries watersheds

<u>Approach to Harvesting and Roads</u>

1. Prior to the holder(s) of this FSP declaring areas or applying for a cutting authority within the area to which the Great Bear Rainforest Order applies, the holder(s) will comply with the Objectives set out in the GBRO for **important fisheries watersheds**.

2. Where there is overlap in an **important fisheries watershed** with other FSP holder(s), then the FSP holder(s) will make best efforts to communicate, collaborate and cooperate with the other holders of FSP's as practicable, to meet Objective 10(1) and 10(2). The FSP holder(s) will complete the steps to meet the objectives for **important fisheries watersheds** and inform the other FSP holder(s) prior to constructing a road or harvesting a cutblock.

3. The holder(s) of this FSP will follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance*[4] and the *EBM Supplemental Technical Guidance*[5] documents, as currently available and as they may be replaced or amended from time to time. In implementing this guidance:

   (a) FSP holder(s) will make best efforts to communicate, collaborate and cooperate with other FSP holder(s) to achieve a consistent approach across the plan area for preliminary watershed assessments of **important fisheries watersheds**;

   (b) FSP holder(s) will ensure that a watershed assessment or similar assessment of watershed sensitivity to forest development disturbance is completed:

      (i) by a **qualified professional**[6];

      (ii) consistent with the **applicable ABCFP and EGBC joint professional practice guidelines**[7]; and

      (iii) with the goal of a low likelihood that adverse effects on aquatic-riparian values will occur, with a low severity of consequence.

4. Despite subsection (1), the holder(s) of this FSP may apply for a cutting authority in an **important fisheries watershed** if:

   (a) a preliminary watershed assessment or similar assessment of watershed sensitivity to forest development disturbance indicates no adverse impact on fish habitat, stream flow quality and quantity, or other watershed health indicators;

   (b) the preliminary watershed assessment status has been included in First Nations engagement related to the proposed cutting authority; and

   (c) the applicable First Nations support, or do not object to, the application.

6.1.4.2 OBJECTIVES FOR TYPE 1 AQUATIC HABITAT

11. Objectives for Type 1 aquatic habitat

[4] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/westcoast-region/great-bear-rainforest/ebm_planning_and_practices_guidance.pdf
[5] 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/westcoast-region/great-bear-rainforest/ebm_supplemental_technical_guidance.pdf
[6] Watershed assessments will be led by a qualified professional who has the skill set described in Appendix C of the ABCFP and EGBC (2020) joint professional practice guidelines for assessing and managing watershed risk (https://www.egbc.ca/getmedia/8742bd3b-14d0-47e2-b64d-9ee81c53a81f/EGBC-ABCFP-Watershed-Assessment-V1-0.pdf.aspx).
[7] Applicable ABCFP and EGBC joint professional practice guidelines are those referred to in the EBM Technical Supplemental Guidance document (may be amended or augmented with added guidelines from time to time).

(1) Protect and maintain type 1 aquatic habitat other than stream crossings by, within or adjacent to cutblocks and roads, maintaining an adjacent reserve zone with a minimum width of 1.5 tree lengths and an outer edge designed to minimize risk of windthrow.

(2) Despite subsection (1), the width of a reserve zone may be decreased at specific locations to address site characteristics and values, provided that

(a) the decrease is no more than 0.5 tree lengths, and

(b) there is no net loss of reserve zone area required by subsection (1) within or adjacent to the cutblock.

(3) Despite subsections (1) and (2), the width of the reserve zone may be decreased by more than 0.5 tree lengths provided that

(a) there is no net loss of reserve zone area required by subsection (1),

(b) assessments have been prepared by a qualified professional that specify measures

(i) to maintain the geomorphic and hydroriparian characteristics of the stream channel,

(ii) to maintain the life cycle needs of fish in affected stream reaches,

(iii) to maintain local terrestrial habitat needs and linkages to other reserves, and

(iv) to minimize loss of trees in the reserve zone from windthrow,

(c) the measures in paragraph (b) are implemented, and

(d) the plans to decrease the width of the reserve zone have been developed through a process of First Nation engagement with applicable First Nations.

(4) Despite subsections (1), (2) and (3), for type 1 aquatic habitat that is not on an active fluvial unit, a forest stewardship plan may provide for riparian reserve zones in accordance with Schedule K, provided that

(a) there has been First Nation engagement with applicable First Nations resulting in the support of, or lack of objection from, the applicable First Nations,

(b) indicators to be tracked have been identified and strategies are in place to evaluate the effectiveness of the recommended riparian strategies, and

(c) the indicators and strategies in paragraph (b) have been developed through a process of First Nation engagement with applicable First Nations.

(5) Despite subsections (1), (2) and (3), for the lower portion of the Klinaklini River and its tributaries identified in Schedule P, and for the lower portion of Viner Creek identified in Schedule P, maintain a reserve zone with a width of 100 metres on each side of the natural boundary, unless there is no practicable alternative for future road access or other infrastructure, or to address a safety concern, except with respect to existing road access and infrastructure.

(6) Where some or all of the forest required under subsection (1) or (2) has been previously altered or harvested, to the extent practicable, recruit or create functional riparian forest in the reserve zone in the shortest time practicable.

Applicable Area: All FDU's

Strategy:

11. Objectives for Type 1 aquatic habitat

Approach to Harvesting and Roads

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **type 1 aquatic habitat**.

2. The holder(s) of this FSP will follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents, as currently available and as they may be replaced or amended from time to time.

3. The FSP holder(s) may elect to utilize provisions under Objective 11(4), by proposing riparian reserve zones on **type 1 aquatic habitat** that is not an active fluvial unit, in accordance with Schedule K, provided that:

   (a) there has been engagement with applicable First Nations resulting in the support of, or lack of objection from, the applicable First Nations,

   (b) indicators to be tracked have been identified and strategies are in place to evaluate the effectiveness of the recommended riparian strategies, and

   (c) the indicators and strategies in paragraph (b) have been developed through a process of First Nation engagement with applicable First Nations.

4. In the instances where Objective 11(4) is utilized, prior to applying for a cutting authority within the area to which the GBRO applies, the **type 1 aquatic habitat** reserve zone widths will be as defined in Schedule K.

6.1.4.3 OBJECTIVES FOR TYPE 2 AQUATIC HABITAT

12. Objectives for Type 2 aquatic habitat

(1) Maintain the natural ecological function of type 2 aquatic habitat except for stream crossings by, within or adjacent to cutblocks and roads, retaining 90% of the forest in an adjacent management zone with a minimum width of 1.5 tree lengths and an outer edge designed to minimize risk of windthrow.

(2) Despite subsection (1), the width of the management zone in any cutblock may be decreased by up to 0.5 tree lengths to address site characteristics and values, provided there is no net loss of management zone area within the cutblock.

(3) Despite subsections (1) and (2), the width of the management zone may be increased or decreased by more than 0.5 tree lengths and alteration or harvesting within the management zone may occur, provided that

   (a) there is no net loss of management zone area required by subsection (1) in the cutblock,

   (b) an assessment has been prepared by a qualified professional that specifies measures

(i) to maintain the geomorphic and hydroriparian characteristics of the stream channel,

(ii) to maintain the life cycle needs of fish in affected stream reaches,

(iii) to maintain local terrestrial habitat needs and linkages to other reserves, and

(iv) to minimize loss of trees in the management zone from windthrow,

(c) the measures required by paragraph (b) are implemented, and

(d) the plans to increase or decrease the width of the management zone by more than 0.5 tree lengths and have alteration or harvesting within the management zone have been developed through a process of First Nation engagement with applicable First Nations.

(4) Despite subsections (1), (2) and (3), for type 2 aquatic habitat that is not on an active fluvial unit, a forest stewardship plan may provide for riparian management zones in accordance with Schedule K, provided that

(a) there has been First Nation engagement with applicable First Nations resulting in the support of, or lack of objection from, the applicable First Nations,

(b) indicators to be tracked have been identified and strategies are in place to evaluate the effectiveness of the recommended riparian strategies, and

(c) the indicators and strategies in paragraph (b) have been developed through a process of First Nation engagement with applicable First Nations.

(5) Where some or all of the forest required in subsection (1) or (4) has been previously altered or harvested, to the extent practicable, recruit or create functional riparian forest in the management zone or riparian management area in the shortest time practicable.

Applicable Area: All FDU's

Strategy:

12. Objectives for Type 2 aquatic habitat

<u>Approach to Harvesting and Roads</u>

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **type 2 aquatic habitat**.

2. The holder(s) of this FSP will follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents, as currently available and as they may be replaced or amended from time to time.

3. The FSP holder(s) may elect to utilize provisions under Objective 12(4), by proposing riparian management zones on **type 2 aquatic habitat** that is not an active fluvial unit, in accordance with Schedule K, provided that:

(a) there has been engagement with applicable First Nations resulting in the support of, or lack of objection from, the applicable First Nations,

(b) indicators to be tracked have been identified and strategies are in place to evaluate the effectiveness of the recommended riparian strategies, and

(c) the indicators and strategies in paragraph (b) have been developed through a process of First Nation engagement with applicable First Nations.

4. In the instances where Objective 12(4) is utilized, prior to applying for a cutting authority within the area to which the GBRO applies, the **type 2 aquatic habitat** management zone widths will be as defined in Schedule K.

6.1.4.4 OBJECTIVES FOR FORESTED SWAMPS

13. Objectives for forested swamps

(1) Maintain the ecological characteristics and function of forested swamps.

(2) Adjacent to forested swamps greater than 0.25 hectares, retain 70% of the functional riparian forest in a management zone with a minimum width of 1.5 tree lengths and an outer edge designed to minimize risk of windthrow.

(3) Despite subsection (2), the width of the management zone adjacent to a forested swamp may be decreased by up to 0.5 tree lengths to address site-specific characteristics and values.

(4) Despite subsections (2) and (3), the width of the management zone may be decreased by more than 0.5 tree lengths and additional harvesting within the management zone may occur, provided that

(a) a forested swamp assessment has been prepared by a qualified professional that specifies measures

(i) to maintain local terrestrial habitat needs and linkages to other reserves, and

(ii) to minimize loss of trees in the management zone from windthrow,

(b) the measures in paragraph (a) are implemented, and

(c) the plans to decrease the width of the management zone and have additional harvesting within the management zone have been developed through a process of First Nation engagement with applicable First Nations.

(5) Where some or all of the forest within the management zone required by subsection (2), (3) or (4) has been previously altered or harvested, to the extent practicable, recruit or create functional riparian forest in the management zone in the shortest time practicable.

Applicable Area: All FDU's

Strategy:

13. Objectives for forested swamps

<u>Approach to Harvesting and Roads</u>

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **forested swamps**.

2. The holder(s) of this FSP will follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents, as currently available and as they may be replaced or amended from time to time.

6.1.4.5 OBJECTIVES FOR UPLAND STREAM AREAS

14. Objectives for upland stream areas

(1) Maintain the hydrologic and hydrogeomorphic processes in watershed planning units within the range of natural variation by maintaining a minimum of 70% of the forest in the upland stream area as functional riparian forest.

(2) For the purposes of subsection (1), to the extent practicable, preferentially retain the functional riparian forest to create windfirm reserves and management zones adjacent to streams in the upland stream area that

(a) are located upstream from type 1 aquatic habitat or type 2 aquatic habitat,

(b) have sensitive hydrogeomorphic attributes,

(c) are stream reaches with known tailed frog habitat, or

(d) have unique microclimate or other rare ecological characteristics.

(3) Despite subsections (1) and (2), an alternative plan to maintain hydrologic and hydrogeomorphic processes in a watershed planning unit within the range of natural variability may be prepared as a result of a watershed assessment conducted by a qualified professional, consistent with professional practice guidelines, provided that

(a) the effectiveness of strategies implemented in accordance with the plan under this subsection is monitored,

(b) the watershed assessment and plan are updated to reflect the results of such monitoring, and

(c) the strategy has been developed through a process of First Nation engagement with applicable First Nations.

Applicable Area: All FDU's

Strategy:

14. Objectives for upland stream areas

<u>Approach to Harvesting and Roads</u>

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **upland stream areas**.

2. For the Order area, the holder(s) of this FSP will:

(a) follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents, as currently available and as they may be replaced or amended from time to time;

(b) communicate, collaborate and coordinate with all licensees operating within the **watershed planning unit**, to the extent practicable, to:

(i) identify **upland streams** within the **watershed planning unit**, focusing on future development;

(ii) reach agreement on maintaining 70% **functional riparian forest** in the entire upland stream portion of **watershed planning unit**, focusing on the next 5 years of development; and

(iii) if fair and effective agreement described in (b)(ii) cannot be reached with all licensees, request the Minister to establish targets under FPPR S. 19.

3. Despite subsections (1) and (2), an alternative plan to maintain hydrologic and hydrogeomorphic processes in a **watershed planning unit** within the range of natural variability may be prepared as a result of a watershed assessment conducted by a **qualified professional**, consistent with professional practice guidelines, provided that:

(a) best efforts are made to communicate and coordinate the alternative plan and strategy with all licensees operating within the **watershed planning unit**, to the extent practicable;

(b) the effectiveness of strategies implemented in accordance with the plan under this subsection is monitored;

(c) the watershed assessment and plan are updated to reflect the results of such monitoring, and

(d) the strategy has been developed through a process of First Nation engagement with applicable First Nations.

6.1.4.6 OBJECTIVES FOR ACTIVE FLUVIAL UNITS

15. Objectives for active fluvial units

(1) Reserve all forest on active fluvial units.

(2) Adjacent to active fluvial units, retain a minimum of 90% of the forest in a management zone with an average width of 1.5 tree lengths.

(3) Despite subsections (1) and (2), forest on an active fluvial unit may be altered or harvested, and less than 90% of the forest in the management zone may be retained, to allow for road access or to address a safety concern, provided that

(a) there is no practicable alternative to access a development area,

(b) an active fluvial unit assessment has been prepared by a qualified professional that

(i) specifies measures to maintain stream flow patterns and flow capacity and geomorphic stability of the active fluvial unit for roads or other infrastructure, or

(ii) where the removal of four or more live trees is proposed for safety reasons, provides an assessment of the potential impact on geomorphic stability,

(c) the measures in paragraph (b) are implemented in a manner that will maintain the flow patterns, flow capacity and geomorphic stability of the active fluvial unit, and

(d) the plans to alter or harvest an active fluvial unit or to retain less than 90% of the forest in the management zone have been developed through a process of First Nation engagement with applicable First Nations.

(4) Where some or all of the forest required to be retained by subsections (1) and (2) has been previously altered or harvested, to the extent practicable, recruit or create functional riparian forest on the active fluvial unit in the shortest time practicable.

Applicable Area: All FDU's

Strategy:

15. Objectives for active fluvial units

Approach to Harvesting and Roads

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **active fluvial units**.

2. The holder(s) of this FSP will follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents, as currently available and as they may be replaced or amended from time to time.

6.1.5 GBRO PART 3 DIVISION 4 – BIODIVERSITY

6.1.5.1 OBJECTIVES FOR OLD FOREST MAINTENANCE AND RECOVERY

16. Objectives for old forest maintenance and recovery

(1) Pursuant to section 4 (1) and (2) of Part 1, for each site series group in the South Central Coast area shown in Schedule C, up to 10% of the area required to meet the old forest representation targets specified in section 4 (1)(a) of Part 1 can be met

(a) in forest in a higher-level site series group in the same biogeoclimatic variant specified in Schedule L, or

(b) in forest in an equal or higher-level site series group in a different biogeoclimatic variant in any of the four landscape units specified in schedule M,

where this results in an improved outcome for ecological integrity and Indigenous forest values.

(2) Pursuant to section 4 (1) and (2) of Part 1, for each site series group in the South Central Coast area shown in Schedule C, up to 10% of the area required to meet the minimum old forest retention level specified in section 4 (1)(c) or (2)(a) of Part 1 can be met

(a) in forest that is not old forest

(i) in the same site series group, or

(ii) in a higher level site series group specified in Schedule L, or

(b) in old forest in a higher level site series group specified in Schedule L

where this results in an improved outcome for ecological integrity and Indigenous forest values.

(3) Pursuant to section 4 (1)(c) and (2)(a) of Part 1, for each site series group in the South Central Coast area where less than 30% of the site series group in a landscape unit is old forest, promote the restoration of landscape level biodiversity by reserving a minimum of 30% of the forest area in the site series group in a landscape reserve design.

(4) Despite subsection (3), the minimum amount of forest area of a site series group retained in a landscape reserve design may be reduced to enable flexibilities in subsections (1)(a) and (b) and (2)(b), where this results in an improved outcome for ecological integrity and Indigenous forest values.

(5) For the purposes of sections 4 and 5 of Part 1, where because of harvest history or landscape characteristics, or where it is not practicable to meet minimum old forest retention levels in a landscape reserve design,

(a) forest that is not old forest may be included in the landscape reserve design, and

(b) temporary old forest reserves may be established outside of the landscape reserve design, with an area sufficient to meet the landscape unit minimum old forest retention levels.

Applicable Area: All FDU's

Strategy:

16. Objectives for old forest maintenance and recovery

Approach to Harvesting and Roads

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **old forest maintenance and recovery**.

6.1.5.2 OBJECTIVES FOR RED-LISTED PLANT COMMUNITIES AND BLUE-LISTED PLANT COMMUNITIES

17. Objectives for red-listed plant communities and blue-listed plant communities

(1) Protect each occurrence of a red-listed plant community during a primary forest activity in accordance with Schedule N.

(2) Despite subsection (1), up to 5% of each occurrence of a red-listed plant community may be disturbed if

(a) there is no practicable alternative for road access or other infrastructure, or to address a safety concern, and

(b) the plans to disturb the red-listed plant community have been developed through a process of First Nation engagement with applicable First Nations.

(3) Despite subsections (1) and (2), more than 5% of a red-listed plant community occurrence smaller than one hectare may be disturbed if it is necessary for critical road access, provided that

(a) the total disturbance of that red-listed plant community in a landscape unit does not exceed 5%, and

(b) the plans to further disturb the red-listed plant community have been developed through a process of First Nation engagement with applicable First Nations.

(4) Reserve a minimum of 70% of each occurrence of a blue-listed plant community during a primary forest activity or reserve a minimum of 70% of the total area of each blue-listed plant community within a landscape unit in accordance with Schedule O.

Applicable Area: All FDU's

Strategy:

17. Objectives for red-listed plant communities and blue-listed plant communities

Approach to Harvesting and Roads

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **red-listed plant communities** and **blue-listed plant communities**.

2. The holder(s) of this FSP will follow the guidance, for the purposes of identifying sufficiently established occurrences of **red-listed plant communities** and **blue-listed plant communities**, contained within *Land Management Handbook #72 Guidelines to Support Implementation of the Great Bear Rainforest Order with Respect to Old Forest and Listed Plant Communities*[8], as currently available and as it may be replaced or amended from time to time.

6.1.5.3 OBJECTIVES FOR STAND RETENTION

18. Objectives for stand retention

(1) Maintain forest structure and diversity at the stand level by

(a) maintaining a minimum of 15% of a cutblock area as stand retention,

(b) distributing stand retention throughout the cutblock,

(c) maintaining more than 15% retention as necessary, considering cutblock size, landscape unit context and immediate landscape context, and

(d) managing windthrow.

(2) To the extent practicable, include the following within stand retention:

(a) Indigenous forest values;

(b) habitat elements important for restoration of old forest;

(c) habitat elements important for wildlife.

Applicable Area: All FDU's

Strategy:

18. Objectives for stand retention

Approach to Harvesting and Roads

[8] https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/LMH72.htm

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **stand retention**.

2. The holder(s) of this FSP will follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents, as currently available and as they may be replaced or amended from time to time.

6.1.6 GBRO PART 3 DIVISION 5 – WILDLIFE

6.1.6.1 OBJECTIVES FOR GRIZZLY BEAR HABITAT

19. Objectives for grizzly bear habitat

(1) Maintain 100% of class 1 grizzly bear habitat

(a) shown in Schedule D, or

(b) identified in the field by a qualified professional.

(2) Maintain a minimum of 50% of class 2 grizzly bear habitat

(a) shown in Schedule D, or

(b) identified in the field by a qualified professional, and

that provides a mix of habitat type, seasonal value, and distribution within a watershed or landscape unit.

(3) Despite subsection (1), class 1 grizzly bear habitat may be altered or harvested, provided that

(a) a qualified professional

(i) completes an assessment that identifies the characteristics of the habitat and linkages, where appropriate, to other grizzly bear habitat, and

(ii) confirms that the alteration or harvesting will result in no net loss of class 1 grizzly habitat and connectivity and no functional loss of habitat connectivity,

(b) measures are implemented that will ensure the alteration or harvesting will not cause a material adverse impact to the suitability of the class 1 grizzly bear habitat, and

(c) the plans to alter or harvest class 1 grizzly bear habitat have been developed through a process of First Nation engagement with applicable First Nations.

(4) Despite subsection (1), class 1 grizzly bear habitat may be altered or harvested for road access or other infrastructure, or to address a safety concern, provided that

(a) there is no practicable alternative for road access or other infrastructure, or the alteration or harvesting is required to address a safety concern,

(b) that the road right-of-way clearing width is the minimum safe width necessary to accommodate the road,

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(c) measures are implemented that, to the extent practicable, will ensure the alteration or harvesting will not cause a material adverse impact to the suitability of the class 1 grizzly bear habitat, and

(d) the plans to alter or harvest class 1 grizzly bear habitat have been developed through a process of First Nation engagement with applicable First Nations.

(5) All identified grizzly bear habitat polygons must be documented and the documentation submitted to the applicable First Nations and the Province of British Columbia at the end of each calendar year.

Applicable Area: All FDU's

Strategy:

19. Objectives for grizzly bear habitat

Approach to Harvesting and Roads

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **grizzly bear habitat**.

2. The holder(s) of this FSP will follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents, as currently available and as they may be replaced or amended from time to time.

6.1.6.2 OBJECTIVES FOR GRIZZLY BEAR DENS AND BLACK BEAR DENS

20. Objectives for grizzly bear dens

(1) Protect grizzly bear dens.

(2) Adjacent to grizzly bear dens, maintain a reserve zone with a minimum width of 50 metres.

(3) Despite subsections (1) and (2), alteration or removal of a grizzly bear den or its reserve zone, or both, may occur, provided that

(a) the alteration or removal is required for road access or to address a safety concern and there is no practicable alternative,

(b) the alteration or removal does not occur during the winter hibernation season, and

(c) the plans to alter or remove a grizzly bear den or reserve zone have been developed through a process of First Nation engagement with applicable First Nations.

(4) Adjacent to any reserve zone required by subsection (2), maintain a management zone with an average width equal to 1.0 tree lengths, measured from the outer edge of the reserve zone, to protect the integrity of the reserve zone.

(5) Within the management zone required by subsection (4), alteration or removal of trees may occur outside of the winter hibernation season to

(a) accommodate operational requirements for road and bridge construction, if there is no practicable alternative,

(b) accommodate road maintenance and deactivation, the removal of danger trees, and brushing and clearing within the right-of-way, for safety purposes, on any existing road under active tenure, or

(c) mitigate the impact of windthrow,

provided that the plans to alter or remove trees have been developed through a process of First Nation engagement with applicable First Nations.

(6) All found grizzly bear dens must be documented and the documentation submitted to the applicable First Nations and the Province of British Columbia at the end of each calendar year.

21. Objectives for black bear dens

(1) Protect black bear dens.

(2) Adjacent to black bear dens, maintain a reserve zone with a minimum width of 30 metres.

(3) Despite subsections (1) and (2), alteration or removal of a black bear den or its reserve zone, or both, may occur, provided that

(a) alteration or removal is required for road access or to address a safety concern and there is no practicable alternative,

(b) the alteration or removal does not occur during the winter hibernation season, and

(c) the plans to alter or remove a black bear den or reserve zone have been developed through a process of First Nation engagement with applicable First Nations.

(4) Adjacent to any reserve zone required by subsection (2), maintain a management zone of sufficient width and design to protect the integrity of the black bear den and the reserve zone.

(5) Within the management zone required by subsection (4), alteration or removal of trees may occur outside of the winter hibernation season to

(a) accommodate operational requirements for road and bridge construction, if there is no practicable alternative,

(b) accommodate road maintenance and deactivation, the removal of danger trees, and brushing and clearing within the right-of-way, for safety purposes, on any existing road under active tenure, or

(c) mitigate the impact of windthrow,

provided that the plans to alter or remove trees have been developed through a process of First Nation engagement with applicable First Nations.

(6) Where practicable, include suitable future and additional black bear denning habitat in management zones and in stand retention.

(7) All found black bear dens must be documented and the documentation submitted to the applicable First Nations and the Province of British Columbia at the end of each calendar year.

Applicable Area: All FDU's

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Strategy:

20. Objectives for grizzly bear dens
21. Objectives for black bear dens

Approach to Harvesting and Roads

1. Within the area to which the Great Bear Rainforest Order applies, the holder(s) of this FSP will comply with the Objectives set out in the GBRO for **grizzly bear dens** and **black bear dens**.

2. The holder(s) of this FSP will follow the guidance provided, to the extent practicable, in the *EBM Planning and Practices Guidance* and the *EBM Supplemental Technical Guidance* documents, as currently available and as they may be replaced or amended from time to time.

7. GRANDPARENTED DESIGNATIONS (FRPA S. 181)

Grandparented designations are those designations, measures and/or objectives established under the Forest Practices Code Act and continued by Section 181 of FRPA as specified in Section 180(a) – (l) of FRPA. The sections which follow pertain only to those objectives described in S180 as they are relevant to the area under consideration in each of the proposed FDUs for this FSP.

In situations where designations have been continued by legislation, as described above, with no objectives in place these designations are dealt with in the background documentation which accompanies but does not form part of this FSP and the reader is referred to the respective section in that document for clarification.

7.1 ORDER ESTABLISHING PROVINCIAL NON-SPATIAL OLD GROWTH OBJECTIVES

Objective:

To contribute to the conservation of biodiversity, licensees must maintain old forest by biogeoclimatic variant within each landscape unit.

Reference: FRPA S. 5(1)(b)(ii); FRPA S. 180 & 181

Applicable Area: Development areas with FDU F, T and Y declared on or prior to March 12, 2008, pursuant to Section 14(4) of the FPPR.

Result:

The Non-Spatial Old Growth Order is considered to no longer apply to the FDUs within this FSP. The objectives of the Non-Spatial Old Growth Order have been replaced by the objectives in the GBRO.

7.2 RESOURCE FEATURES

Objective: Not Applicable.

Refer to Government Action Regulation (GAR) Order to Identify Karst Features for the Campbell River Forest District – effective May 30, 2007 and GAR Order to Identify Karst Resource Features for the North Island – Central Coast Forest District – effective March 29, 2007. Although resource features have been legally established, no formal objectives (as required by FRPA S. 181) were established.

Reference: FPPR S. 70(1); GAR S. 5

Applicable Area: N/A

Result:

No result or strategy is required.

7.3 RECREATION RESOURCES

Objective: Not Applicable.

Refer to Order to Identify Significant Recreation Resource Features for the Campbell River Forest District – effective April 12, 2006. Although recreation resources have been legally established, no formal objectives (as required by FRPA S. 181) were established.

Reference: FRPA S. 180

Applicable Area: N/A

Result:

No result or strategy is required.

7.4 LAKESHORE MANAGEMENT ZONES

Objective: Not Applicable.

No Lakeshore Management Zones continued under FRPA S. 180(h) exist in the plan area. Refer to Great Bear Rainforest Section 6.1.4 [GBRO Part 3 Division 3 – Aquatic Habitat] or to Section 8.5 [Water, Fish Wildlife & Biodiversity within Riparian Areas] for strategies pertaining to riparian area management.

Reference: FRPA S. 180

Applicable Area: N/A

Result:

No result or strategy is required.

7.5 FISHERIES SENSITIVE WATERSHEDS

Objective: Not Applicable.

No fisheries sensitive watersheds continued under FRPA S. 180(f) exist in the plan area. Refer to Great Bear Rainforest Section 6.1.4 [GBRO Part 3 Division 3 – Aquatic Habitat] or to Section 8.5 [Water, Fish Wildlife & Biodiversity within Riparian Areas] for strategies pertaining to riparian area management.

Reference: FRPA S. 180

Applicable Area: N/A

Result:

DRAFT

No result or strategy is required.

8. OBJECTIVES SET BY GOVERNMENT & RESULTS OR STRATEGIES UNDER FRPA S. 149(1)

Objectives Set by Government specify those objectives prescribed in legislation in FRPA S. 149(1). Not all identified resource values have objectives set by government. Licensees are required to prepare results and or strategies to meet these objectives. The subsections which follow address each of the objectives set by government as required by legislation and regulation.

Each objective is addressed in a similar manner, including those which do not apply. Objective specific definitions are provided as required to ensure that the intent and application is understood. In cases where an objective does not apply, the same level of detail is provided such that the content of this FSP is complete and, in the case of an objective that does not apply, the nature of what does not apply is as well understood as those objectives that do apply to the plan area.

8.1 DEFINITIONS UNDER ACTS

Unless otherwise expressly indicated, or indicated by context, terms used in this FSP have the definition given them, as of the Submission Date, in Forest and Range Practices Act (the "Act") and the Forest Act and the regulations under them.

8.2 DEFINITIONS OF TERMS USED IN RESULTS AND STRATEGIES

Date of Submission means the date on which the holder(s) of this FSP submitted the FSP for approval.

Ungulate Winter Range Notice means the Notice as it pertains to the relevant Forest District issued to the holder(s) of this FSP by the Date of Submission pursuant to FPPR S. 7(2):

Campbell River Forest District - December 30, 2004; and
North Island Central Coast Forest District – December 30, 2004.

8.3 SOILS

Objective:

The objective set by government for soils is to conserve the productivity and the hydrologic function of soils.

Reference: FPPR Section 5

Applicable Area: All FDU's

Result:

<u>Approach to Harvesting and Roads</u>

1. The holder(s) of this FSP will comply with Sections 35 & 36 of the Forest Planning and Practices Regulation (FPPR).

8.4 WILDLIFE

Objective:

The objective set by government for wildlife is 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.

8.4.1 UNGULATE WINTER RANGE

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR S. 7(2) & 7(3)

Applicable Area: N/A

Result:

No result or strategy is required. Ungulate Winter Range (UWR) does not intersect the plan area.

8.4.2 SPECIES AT RISK – CAMPBELL RIVER FOREST DISTRICT

The sections which follow describe the strategy that will be used to address Species at Risk in the Campbell River Forest District (DCR) where a Section 7 Notice pertaining to that species has been prepared by government.

Several other species are also listed as “species-at-risk”, many of which have recently had their status changed to “at risk”. At this time, Section 7 Notices have not been prepared for many of these additional species. Consequently, no results and strategies are required at this time.

8.4.2.1 “QUEEN CHARLOTTE” GOSHAWK (ACCIPITER GENTILES LAINGI)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR Section 7(2) & (3)

Applicable Area: All FDU’s, DCR

Result:

An order has been issued establishing wildlife habitat areas for this species. Pursuant to FPPR section 7(3), a result and strategy is not required.

8.4.2.2 RED-LEGGED FROG (RANA AURORA)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR Section 7(2) & (3)

Applicable Area: All FDU's, DCR

Result:

An order has been issued establishing wildlife habitat areas for this species. Pursuant to FPPR section 7(3), a result and strategy is not required.

8.4.2.3 KEEN'S LONG-EARED MYOTIS (MYOTIS KEENII)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR Section 7(2) & (3)

Applicable Area: All FDU's, DCR

Result:

An order has been issued establishing wildlife habitat areas for this species. Pursuant to FPPR section 7(3), a result and strategy is not required.

8.4.2.4 GREAT BLUE HERON (ARDEA HERODIAS FANINI)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR Section 7(2)

Applicable Area: All FDU's, DCR

Strategy:

<u>Approach to Harvesting and Roads</u>

1. Prior to a Ministerial Order being issued exempting the holder(s) of this FSP from preparing a result and strategy pursuant to FPPR S. 7(3), subject to Paragraph 2, within an area in the FDU(s) that is

subject to the Species at Risk Notice. The holder(s) will comply with the objectives set by government for the survival of species at risk as described in the Species at Risk Notice. Specifically, the holder(s) of this FSP will:

(a) Distribute the area specified in the notice in a manner consistent with the notice; and

(b) Identify the area specified in the notice, to the extent that suitable habitat is available, using the Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004) habitat requirements as a delineation guide; and

(c) Defer harvesting in that area until such time as wildlife habitat areas are established in the plan area to address the species or a Ministerial order is issued establishing wildlife habitat areas for the species, exhausting the total mature timber harvesting landbase impact amount for the Campbell River Forest District; and

(d) In habitat that is determined to be suitable Great Blue Heron habitat, refer to the Great Blue Heron Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004) and/or other pertinent information for guidance during the development of a management plan to conserve this habitat as necessary to meet the objective of the species at risk notice.

Adjustments to the Amount of Area Affected

2. The amount of area in paragraph 1 will be reduced if and to the extent that:

(a) After the **Date of Submission**, the Total Mature Timber Harvesting Land Base Impact or the Total Habitat Required is reduced in or as a result of an amendment to, replacement of or cancellation of the Species at Risk Notice;

(b) After the **Date of Submission**, a wildlife habitat area, ungulate winter range, general wildlife measure or a wildlife habitat feature is established or expanded within the mature timber harvesting landbase and addresses in whole or in part the amount, distribution or attributes of habitat specified in the Species at Risk Notice;

3. Whereas a Ministerial Order is issued, pursuant to FPPR S. 7(3), indicating that the Species at Risk Notice no longer has effect, exempting the holder(s) of this FSP from preparing and following a result and strategy, the holder of this FSP will follow the General Wildlife Measures specified in the Order.

8.4.2.5 COASTAL TAILED FROG (ASCAPHUS TRUEI)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR Section 7(2)

Applicable Area: All FDU's, DCR

Strategy:

Approach to Harvesting and Roads

1. Prior to a Ministerial Order being issued exempting the holder(s) of this FSP from preparing a result and strategy pursuant to FPPR S. 7(3), subject to Paragraph 2, within an area in the FDU(s) that is subject to the Species at Risk Notice. The holder(s) will comply with the objectives set by government for the survival of species at risk as described in the Species at Risk Notice. Specifically, the holder(s) of this FSP will:

    (a) Distribute the area specified in the notice in a manner consistent with the notice; and

    (b) Identify the area specified in the notice, to the extent that suitable habitat is available, using the Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004) habitat requirements as a delineation guide; and

    (c) Defer harvesting in that area until such time as wildlife habitat areas are established in the plan area to address the species or a Ministerial Order is issued establishing wildlife habitat areas for the species, exhausting the total mature timber harvesting landbase impact amount for the Campbell River Forest District; and

    (d) In habitat that is determined to be suitable Coastal Tailed Frog habitat, refer to the Coastal Tailed Frog Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004) and/or other pertinent information for guidance during the development of a management plan to conserve this habitat as necessary to meet the objective of the species at risk notice.

<u>Adjustments to the Amount of Area Affected</u>

2. The amount of area in paragraph 1 will be reduced if and to the extent that:

    (a) After the **Date of Submission**, the Total Mature Timber Harvesting Land Base Impact or the Total Habitat Required is reduced in or as a result of an amendment to, replacement of or cancellation of the Species at Risk Notice;

    (b) After the **Date of Submission**, a wildlife habitat area, ungulate winter range, general wildlife measure or a wildlife habitat feature is established or expanded within the mature timber harvesting landbase and addresses in whole or in part the amount, distribution or attributes of habitat specified in the Species at Risk Notice;

3. Whereas a Ministerial Order is issued, pursuant to FPPR S. 7(3), indicating that the Species at Risk Notice no longer has effect, exempting the holder(s) of this FSP from preparing and following a result and strategy, the holder of this FSP will follow the General Wildlife Measures specified in the Order.

8.4.3 SPECIES AT RISK – NORTH ISLAND - CENTRAL COAST FOREST DISTRICT

The sections which follow describe the strategy that will be used to address Species at Risk in the North Island - Central Coast Forest District (DNI) where a Section 7 Notice pertaining to that species has been prepared by government.

Several other species are also listed as “species-at-risk”, many of which have recently had their status changed to “at risk”. At this time, Section 7 Notices have not been prepared for many of these additional species. Consequently, no results and strategies are required at this time.

8.4.3.1 COASTAL TAILED FROG (ASCAPHUS TRUEI)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR Section 7(2)

Applicable Area: FDU G, DNI

Strategy:

Approach to Harvesting and Roads

1. Prior to a Ministerial Order being issued exempting the holder(s) of this FSP from preparing a result and strategy pursuant to FPPR S. 7(3), subject to Paragraph 2, within an area in the FDU(s) that is subject to the Species at Risk Notice. The holder(s) will comply with the objectives set by government for the survival of species at risk as described in the Species at Risk Notice. Specifically, the holder(s) of this FSP will:

   (a) Distribute the area specified in the notice in a manner consistent with the notice;

   (b) Based on proportional distribution of the amount in the notice intended for 9 Wildlife Habitat Areas (WHA's) in the district, the holder(s) of this FSP will:

      (i) Identify up to 172 hectares of suitable habitat with a mature timber harvesting landbase impact of no more than 21 hectares using the Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004) habitat requirements as a delineation guide; and

      (ii) Defer harvesting in that area until such time as wildlife habitat areas are established in the plan area to address the species or a Ministerial Order is issued establishing WHA's for the species, exhausting the total mature timber harvesting landbase impact amount for the North Island - Central Coast Forest District; and

   (c) In habitat that is determined to be suitable Coastal Tailed Frog habitat, refer to the Coastal Tailed Frog Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004) and/or other pertinent information for guidance during the development of a management plan to conserve this habitat as necessary to meet the objective of the species at risk notice.

Adjustments to the Amount of Area Affected

2. The amount of area in paragraph 1 will be reduced if and to the extent that:

   (a) After the **Date of Submission**, the Total Mature Timber Harvesting Land Base Impact or the Total Habitat Required is reduced in or as a result of an amendment to, replacement of or cancellation of the Species at Risk Notice;

   (b) After the **Date of Submission**, a wildlife habitat area, ungulate winter range, general wildlife measure or a wildlife habitat feature is established or expanded within the mature timber harvesting landbase and addresses in whole or in part the amount, distribution or attributes of habitat specified in the Species at Risk Notice;

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3. Whereas a Ministerial Order is issued, pursuant to FPPR S. 7(3), indicating that the Species at Risk Notice no longer has effect, exempting the holder(s) of this FSP from preparing and following a result and strategy, the holder of this FSP will follow the General Wildlife Measures specified in the Order.

8.4.3.2 GREAT BLUE HERON (ARDEA HERODIAS FANINI)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR Section 7(2) & (3)

Applicable Area: FDU G, DNI

Result:

A result or strategy is not required for this species. The amount of area specified in the Species at Risk Notice is based on the anticipated need for three (3) future wildlife habitat areas in the Mid Coast TSA and TFL 39.

8.4.3.3 "QUEEN CHARLOTTE" GOSHAWK (ACCIPITER GENTILES LAINGI)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

Reference: FPPR Section 7(2) & (3)

Applicable Area: FDU G, DNI

Result:

An order has been issued establishing wildlife habitat areas for this species. Pursuant to FPPR section 7(3), a result and strategy is not required. Remaining area in the notice is for the establishment of WHA is the Mid Coast TSA / TFL 39.

8.4.3.4 GRIZZLY BEAR (URSUS ARCTOS)

Objective:

A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the minister responsible for the *Wildlife Act* gives notice to the person of the applicable
(a) species referred to in subsection (1), and
(b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

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Reference: FPPR Section 7(2)

Applicable Area: FDU G, DNI

Result:

The amount specified in the Species at Risk Notice is for the Mid Coast TSA and TFL 39, which is not covered by this FSP. Therefore, no results and strategies have been developed for this species.

8.5 WATER, FISH, WILDLIFE & BIODIVERSITY WITHIN RIPARIAN AREAS

Objective:

The objective set by government for water, fish, wildlife and biodiversity within riparian areas is to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.

Reference: FPPR Section 8, FPPR Section 12(3)

Applicable Area: All FDU's

Strategy:

Definitions

Evaluation means an assessment conducted by a **qualified professional** that examines, on a site-specific basis, the factors relevant to the Objective Set by Government for that objective as described in *FPPR Schedule 1*. An evaluation includes the development of the necessary prescriptions to ensure that the Objective(s) and practice requirements relevant to the Objective are met.

Qualified professional means an applied scientist or technologist, acting alone or together with another professional, if

(a) the individual is registered and in good standing in British Columbia with an appropriate professional association constituted under an Act, is acting under that association's code of ethics and is subject to disciplinary action by that association, and
(b) the individual is acting within that individual's area of expertise.

Approach to Harvesting and Roads

1. The holder(s) of this FSP adopt the following strategy:

    (a) The FSP holder(s) will undertake to comply with practice requirements as specified in FPPR sections 47 to 49, and subject to the restrictions detailed in FPPR sections 50 to 52 and the temperature sensitive stream requirements identified in FPPR section 53, except where strategies developed to comply with the GBRO Objectives 10, 11, 12, 13 and 14 in FSP S. 6.1.4 [GBRO Part 3 Division 3 – Aquatic Habitat] are being applied;

    (b) In respect of FPPR S. 8 and 12(3), to address the retention of trees in a riparian management zone the holder of this FSP will:

        (iv) implement tree retention strategies in the riparian management zone for streams, wetlands and lakes as determined through an **evaluation** performed, prior to harvesting, by a **qualified professional** that considers:

1. all the factors listed in S. 2 of Schedule 1 of the FPPR [factors relating to objective set by government for water, fish, wildlife and biodiversity in riparian areas], as it was at the time of submission of this FSP; and

2. potential site-specific safety and operational issues.

(v) design cutblocks and roads in a manner that is consistent with the retention levels as determined by the **qualified professional** as described in (i).

(vi) plan and conduct road construction and cutblock harvesting consistent with the results and recommendations of the evaluation as described in (i) and the design as described in (ii).

(c) On disturbed contiguous areas of erodible material greater than 0.01 ha and not subject to reforestation activities on approaches to fish stream crossings, grass seed as soon as possible or within one year of disturbance. The areas to be seeded are ditch-lines in the approach to the structure where, due to topographical constraints, flow is directed directly into the fish stream.

8.6 FISH HABITAT IN FISHERIES SENSITIVE WATERSHEDS

Objective:

(1) In this section "fisheries sensitive watershed" means an area identified in Schedule 2 of this regulation

(a) with significant downstream fisheries values continued under section 180(f) of the Act and significant watershed sensitivity continued under section 180(g) of the Act, and

(b) for which there is no fisheries sensitive watershed objective.

(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) Repealed [B.C. Reg. 36/2023, s. 2.].

(4) If satisfied that the objective set out in subsection (2) is not required to provide special management, the minister responsible for the *Wildlife Act* must exempt a person from the requirement to specify a result or strategy in relation to the objective.

(5) If satisfied that the objective set out in subsection (2) is addressed, in whole or in part, by an enactment, the minister responsible for the *Wildlife Act* must exempt a person from the requirement to specify a result or strategy in relation to the objective set out in subsection (2) to the extent that the objective is already addressed.

Reference: FPPR Section 8.1

Applicable Area: N/A

Result:

No fisheries sensitive watersheds have been designated within the area applicable to this FSP. Therefore, Section 8.1 of the Forest Planning and Practices Regulation is not applicable.

8.7 COMMUNITY WATERSHEDS

Objective:

(1) In this section "community watershed" means a community watershed

(a) that is continued under section 180€ of the Act, and

(b) for which a water quality objective has not been

(i) continued under section 181 of the Act, or

(ii) established under Government Actions Regulation.

(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.

(3) Repealed [B.C. Reg. 36/2023, s. 2].

(4) If satisfied that the objective set out in subsection (2) is not required to provide special management, the minister responsible for the *Wildlife Act* must exempt a person from the requirement to specify a result or strategy in relation to the objective.

(5) If satisfied that the objective set out in subsection (2) is addressed, in whole or in part, by an enactment, the minister responsible for the *Wildlife Act* must exempt a person from the requirement to specify a result or strategy in relation to the objective set out in subsection (2) to the extent that the objective is already addressed.

Reference: FPPR Sections 8.2, 12.32, 59-62

Applicable Area: N/A

Result:

No community watersheds have been designated within the area applicable to this FSP. Therefore, no results or strategies are necessary.

8.8 WILDLIFE & BIODIVERSITY – LANDSCAPE LEVEL

Objective:

The objective set by government for wildlife and biodiversity at the landscape level is, 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.

Reference: FPPR Sections 9, 64 & 65

Applicable Area: All FDU's

Result:

Approach to Harvesting and Roads

1. The holder(s) of this FSP will undertake to comply with the practice requirements outlined in sections 64 and 65 of the *Forest Planning and Practices Regulation*.

8.9 WILDLIFE & BIODIVERSITY – STAND LEVEL

Objective:

The objective set by government for wildlife and biodiversity at the stand level is to retain wildlife trees.

Reference: FPPR Sections 9.1, 66 & 67

Applicable Area: All FDU's

Strategy:

Definitions

Evaluation means an assessment conducted by a **qualified professional** that examines, on a site-specific basis, the factors relevant to the Objective Set by Government for that objective as described in *FPPR Schedule 1*. An evaluation includes the development of the necessary prescriptions to ensure that the Objective(s) and practice requirements relevant to the Objective are met.

Qualified professional means an applied scientist or technologist, acting alone or together with another professional, if

(a) the individual is registered and in good standing in British Columbia with an appropriate professional association constituted under an Act, is acting under that association's code of ethics and is subject to disciplinary action by that association, and
(b) the individual is acting within that individual's area of expertise.

Approach to Harvesting and Roads

1. The holder(s) of this FSP will undertake to comply with the practice requirements outlined in sections 66 of the *Forest Planning and Practices Regulation*.

2. Unless as specified in paragraph (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 relocated provided, prior to relocation, 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 relocated, and

   (b) is geologically as close as practicable to the cutblock.

8.10 VISUAL QUALITY

Visual Quality Objectives were identified in an order pursuant to the Government Action Regulation (GAR) section 7 on December 14, 2005 in the Order to Establish Scenic Areas and Visual Quality Objectives for the Campbell River Forest District. Similarly on August 31, 2005 a Visual Quality Objective Order was signed, pursuant to GAR Section 7(2), for the Kingcome Timber Supply Area. On July 29, 2016, under Sections 7 (1) and 7 (2) of GAR, VQOs for the Boat Bay area of West Cracroft Island were amended.

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.

Reference: GAR section 17 & FPPR sections 1.1, 9.2 & FRPA S. 180

Applicable Area: All FDU's

Strategy:

Definitions

A **Significant Public Viewpoint**, as that term is used in the definition of "altered forest landscape" as described in FPPR S. 1, as it was at the time of submission of this FSP, means a viewpoint on water or land that is accessible to the public, provides a viewing opportunity and has relevance to the landscape being assessed. The determination of a **Significant Public Viewpoint** may consider the following:

(a) where a large number of people traditionally congregate which may be a viewpoint in a park, highway pullout, anchorage or city center; or
(b) included in the most current Visual Landscape Inventory; or
(c) determined to be important by a qualified professional, with consideration given to, but not limited to, transportation corridors and frequency and duration of view.

Order means:
- Campbell River Forest District – Scenic Areas and VQO's (December 14, 2005);
- Kingcome TSA Visual Quality Objective Order (August 31, 2005); or
- Scenic Areas with Visual Quality Objectives (TFL 47)

Qualified Professional means an applied scientist or technologist, acting alone or together with another professional, if:

(a) the individual is registered and in good standing in British Columbia with an appropriate professional association constituted under an Act, is acting under that association's code of ethics and is subject to disciplinary action by that association, and
(b) the individual is acting within that individual's area of expertise.

Approach to Harvesting and Roads

1. Prior to the holder(s) of this FSP constructing a road or harvesting a cutblock within an area in the FDU(s) that is in a scenic area with established Visual Quality Objectives (VQO's), the FSP holder(s) will apply the VQO as identified in the **Order**.

2. Activities will be consistent with FPPR S. 1.1 (categories of visually altered forest landscape) as it was on the date of submission to ensure that a forest landscape within a scenic area, that is altered as a result of timber harvesting or road construction, falls within the specified levels of alteration.

3. Paragraphs (1) and (2) do not apply where the holder(s) of this FSP constructs a road or harvests a cutblock that is related to the harvesting of timber that is significantly damaged or destroyed by fire, insects, disease, wind or flooding and where the FSP holder(s):

   (a) completes a visual impact assessment by a **qualified professional**; and

   (b) where opportunities exist, incorporates elements of good visual design into the size, shape and location of the timber harvesting and road building; and

   (c) completes a rationale outlining how paragraph (4)(b) was implemented, the measures that were considered and taken to accommodate the visual resource; and

   (d) is authorized or required by government.

8.11 CULTURAL HERITAGE RESOURCES

Objective:

The objective set by government for cultural heritage resources[9] 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*.

Reference: FPPR section 10

Applicable Area: All FDU's

Strategy:

Approach to Harvesting and Roads

The strategies to address this objective are captured within the strategies for the First Nations' Objectives of the Great Bear Rainforest Order, described in section 6.1.1 and 6.1.3 of this FSP.

8.12 MEASURES

8.12.1 MEASURES FOR PREVENTING THE INTRODUCTION OR SPREAD OF INVASIVE PLANTS

Objective:

[9] "cultural heritage resource" refers only to those resources that are the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and not regulated under the Heritage Conservation Act.

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.

Reference: FPPR section 17, FRPA section 47

Applicable Area: All FDU's

Measures:

Definitions

Invasive Plant Species means those plants defined in the *Invasive Plants Regulation*.

Qualified Professional means an applied scientist or technologist, acting alone or together with another professional, if:

(a) the individual is registered and in good standing in British Columbia with an appropriate professional association constituted under an Act, is acting under that association's code of ethics and is subject to disciplinary action by that association, and
(b) the individual is acting within that individual's area of expertise.

Priority Invasive Plant Species are as defined by the Coastal Invasive Species Committee (Coastal ISC) as a Priority Invasive Plant within the following management categories: Prevent, Eradicate, Contain and Control (https://www.coastalisc.com/priority-invasive-plants/).

Approach to Harvesting and Roads

1. Within an area in the FDU(s), if the holder(s) of this FSP harvests timber or constructs roads, prior to said activities, the holder will:

   (a) biennially educate planning staff and planning contractors on the identification of **priority Invasive Plants Species**, including but not limited to Scotch broom, species of Hogweed and species of Knotweed; and

   (b) instruct planning staff and planning contractors to report annually to the holder(s) of this FSP new incidences of invasive plants encountered during the execution of primary forest activities, or within one month of discovery if high priority species (hogweed, all knotweed); and

   (c) for invasive plant species where occurrence is attributable to the holder(s) of the FSP, where treatment has not occurred within 12 months of discovery, and at that time, the holder of this FSP will report the discovery to the Invasive Alien Plant Program (www.gov.bc.ca/invasive-species) or current provincial reporting platform, and

   (d) direct harvesting and road contractors, prior to leaving known areas infested with invasive plants and moving to areas not infested with invasive plants, to inspect and remove soil and vegetation from machinery to the extent practicable, and

   (e) on a case-by-case basis utilize a **qualified professional** to develop site specific mitigation measures, or eradication measures if practicable, to be implemented by the FSP holder(s).

2. Where **priority Invasive Plant Species** are considered likely to germinate on soil exposed as a result of the holder's primary forest activities and there is the expectation that revegetation with grass

seed will substantially reduce the probability of invasive plant germination, the holder(s) of this FSP will:

(a) in areas not planted with tree seedlings, within 1 year of completing primary forest activities, seed soils where contiguous areas greater than 0.1 hectare is exposed.

(b) give preference to seed:

(i) with high sod forming content (where tree seedlings will not be planted).

(iii) has been certified as Common No. 1 Forage Grade or better by the Canadian Seed Growers' Association.

(iv) That is of native origin, provided that:

1. the seed is readily available;
2. the seed is available at a comparable cost to that of agronomic mixtures; and
3. the seed has comparable effectiveness to agronomic mixtures.

8.12.2 MEASURES TO MITIGATE THE LOSS OF NATURAL RANGE BARRIERS

Objective:

The FSP holder must specify measures to mitigate the effect of removing or rendering ineffective natural range barriers.

Reference: FPPR Section 18, FRPA Section 48

Applicable Area: N/A

Measures:

No range tenure holders are located within the area applicable to this FSP. Therefore, no measures have been developed.

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9. STOCKING STANDARDS

The Holder of a Forest Stewardship Plan is required, on cutblocks harvested under an FSP, to establish a free growing stand in accordance with the FSP. The FSP must specify a regeneration date and stocking standards and free growing height that will apply to the obligation – see Appendix 1 for site specific details. All stocking requirements are applicable across the entire FDU(s).

Site specific circumstances will determine how the stocking standards are applied in conjunction with the site planning requirements of FRPA. The tables in Appendix 1 have been set up to allow for site specific professional discretion to be applied while also providing limitations on the adequacy of species.

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.

The potential effects of climate change have been considered in the development of this FSP and in particular, the development of the stocking standards. Increasing the diversity of species will lead to more resilient plantations. More, but still limited, reliance on Western white pine will provide for increased diversity of species.

FRPA Section 197 Election of Stocking Standards

Stocking standards approved under this FSP may be applied to cutblocks harvested prior to the effective date of this FSP (i.e. blocks harvested under the FPCBCA). The process for applying approved FSP stocking standards to pre-FSP cutblocks will be to make the election using the RESULTS reporting system. FSP standards transferred to pre-FSP cutblocks are required to be consistent with the ecological classification of the pre-FSP cutblock.

Intermediate Cutting

Intermediate cutting (IC) is proposed under this plan for both old growth and second growth stands, with each having their own stocking standard. These prescriptions would provide for an opportunity for future harvesting. Where IC has occurred, stocking standards will be maintained for 12 months following the completion of harvesting. Standards for acceptable leave trees will be as defined in the most recent version of the Single Entry Dispersed Retention Stocking Standard (SEDRSS)[10] discussion paper, Appendices 1 and 2.

Intermediate Cutting - Old Growth

For old growth, intermediate cutting is proposed in stands that are constrained by other resource values, typically terrain stability and visuals. Where possible, IC will be in combination with small patch cuts or larger openings. Helicopter harvesting, either faller select or snap and crack, will typically be used. The application of IC will be limited to no more than 3% of the AAC for all licences measured over a 5-year period. The IC will involve the removal of up to 20% of the merchantable stand volume and no more than 35% of the merchantable volume of any one species. Basal area retained will be > 40 m2/ha. Openings < 0.2 hectares will not be planted.

Intermediate Cutting – Second Growth

For second growth, the intermediate cutting will be in the form of a cross sectional thinning of all species and diameter classes were up to 25% of the merchantable stems will be removed. The harvest system will typically be ground based. IC in second growth would potentially be more broadly applied than in old growth; it is not necessarily limited to constrained areas but will be limited to 2% of the AAC of all licences measured over a 5-year period.

[10] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/silviculture/stocking-standards/reference-guide/sedrss_implementation_guide.pdf

Situations or Circumstances that determine when FPPR S. 44(4) and the Standards Applicable under FPPR S. 16(4) Applies:

For the purpose of Section 44(4), where harvesting of special forest products, intermediate cuts or commercial thinning occurs as defined in FPPR S. 44(3)(h) and S 44(3)(i), the Stocking Standards as submitted to the Ministry of Forests will be maintained for twelve months following the completion of intermediate harvesting on the area that was harvested.

9.1 MINIMUM HORIZONTAL INTER-TREE DISTANCE

Minimum distance will be 2.0 metres, except as noted below:

- 1.0 metres immediately adjacent to roadsides, streams, NP areas, unplantable slash and in areas of difficult plantablilty, e.g. talus, salal. Minimum distance will only be reduced to 1.0 metres for up to 5% of the net area to be reforested.
- 1.5 metres in site series 07, 08, 09, 11, 12, 13 and 14; i.e. all high water table sites and high brush hazard sites where stocking is preferred on raised microsites.
- 1.5 metres on site series 05 and 06 where raised microsites are preferred.

9.2 HEIGHT OF CROP TREES ABOVE COMPETING VEGETATION

% of height of crop trees compared to competing vegetation:

Alder 100-150% (refer to section 9.3.2)
Bracken 125%
Willow 150%
Brush 150%
Other species 150%

Brush includes salmonberry, elderberry, thimbleberry, huckleberry (Vaccinum spp.), fireweed and salal.

For cherry, it is recognized that crop trees will often grow, almost unaffected, through overtopping dense cherry competition. Rather than use height of crop trees relative to height of cherry, the criteria will be the vigor of the leaders of the crop trees – leaders of crop trees influenced by cherry must be greater than 80% of the length of leaders of crop trees not influenced by cherry.

9.3 ALDER

9.3.1 SUITABILITY OF ALDER ON ALL HARVESTED AREAS

1. Where typical conifer stocking standards apply, up to 50 stems/ha of well distributed alder will be retained in order to promote long term stand biodiversity and productivity. Alder will not contribute towards the achievement of stocking standards, but rather will be considered as a ghost tree. For all alder scenarios, acceptable future crop trees will be as defined in the Establishment to Free Growing Guidebook[11] and in the Broadleaf forest health free-growing damage criteria[12].

2. No more than 10%, or 20 hectares, whichever is less, of the area harvested in a calendar year may be stocked with alder as a preferred species. Alternatively, the amount of area that can be stocked with alder as a preferred species may be determined through a District allocation process to meet landscape alder objectives.

[11] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/silviculture/stocking-standards/efgg/efg-van-print.pdf
[12] http://www.for.gov.bc.ca/hfp/silviculture/Broadleaf damage criteria Dec 9.pdf

9.3.2 MIXEDWOOD SCENARIO

Alder has proven to be a significant commercial crop tree for much of the recent harvesting in the plan area. Alder is anticipated to naturally seed into many cutblocks within 2 to 5 years following harvest. In these situations, alder may be considered a preferred crop tree in certain areas given the following criteria:

1. Average density of alder is ≥ 1,000 stems per hectare over ≥ 80% of the area. The remaining 0 to 20% may have a lower average density of alder and/or be stocked with suitable conifers that are expected to be vigorous at 20 years after the commencement of harvesting; the conifers may be considered as preferred crop trees as single trees or in small patches. Where alder and conifer are considered as preferred species in the same plot, the conifer must meet the following % height to alder ratio.

Height of Conifer (metres)	% of the Height of Alder
< 5	150
5 - 7	125
> 7	100

2. Areas are a minimum of 0.5 hectares in size with areas less than 2 hectares having direct access to established roads.

3. Limited to site series 01 (where transitional to 05), 05, 06, 07,08 and 09 of the CWHdm, CWHxm, CWHmm1 and CWHvm1 variants and site series 13 and 14 of the CWHdm and CWHxm variants; and to elevations at or below 400 metres above-sea-level (asl).

4. Harvesting of the area is achievable using ground-based methods.

The reforestation strategy for all harvested areas that may be suitable for alder will be to plant with coniferous species, determine the density of alder ingress within 3 to 5 years of harvest and determine if the area is a candidate for alder as a preferred species (mixedwood management).

9.3.3 EXTENSIVE SCENARIO

Similar ecological and geographic criteria as noted in the mixedwood scenario. However, this scenario incorporates planting of alder rather than reliance on natural regeneration.

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.

9.4 FOREST HEALTH

Within the plan area there are several forest health factors that are relevant to stocking standards.

<u>Balsam Wooly Aphid</u>

The Balsam Woolly Aphid (BWA) has caused mortality of older balsam (*Abies species*) second growth for the past two decades. The range of the mortality in the plan area has been generally confined to East and West Thurlow Islands, Hardwicke Island and the portion of the mainland near Wellbore Channel. The areas of most significant attack are in the vicinity of Wellbore Channel. Balsam on the Thurlow's tends to be lightly distributed throughout the forest. Other portions of the plan area which contain areas of relatively high density of balsam include Heydon Lake, Forward Harbour, Wortley Creek and July Point. These areas at this time are free of a widespread balsam infestation. It is expected that slowly over time the area of significant mortality due to the aphid will increase. Spread of the aphid is easily monitored by annual

summer helicopter reconnaissance. Following harvest, the planting of any area expected to have a moderate to high risk of aphid attack will be limited to less than 35% *Abies species*.

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.

Hemlock, throughout the plan area will be limited in its contribution to the achievement of stocking standards wherever dwarf mistletoe is present in the standing trees within or on the edge of the harvested area.

For the purpose of describing the severity of dwarf mistletoe infection on a tree, the Hawksworth six-class rating system described in Figure 5 of the Dwarf Mistletoe Management Guidebook[13] will be used.

Moderate to severe infection

- Hemlock will not be preferred or acceptable within 10 meters of infected standing trees within or on the edge of the harvested area.
- Hemlock will only be acceptable between 10 and 25 meters of infected standing trees within or on the edge of the harvested area.

Light infection

- Hemlock will only be acceptable within 10 meters of infected standing tree trees within or on the edge of the harvested area.

White Pine Blister Rust

Unless rust resistant stock is planted, Western white pine cannot contribute to the minimum stocking standard (MSS) and is limited to 10% of the target stocking standard (TSS). Planting of rust resistant stock will allow Western white pine to be considered an acceptable species and to contribute up to 25% of the minimum stocking standard of preferred species (MSP) for non-Phellinus root rot sites and up to 100% of the MSP for Phellinus root rot sites.

Where non-resistant Western white pine is required to meet the MSS pruning will be done in one or two stages within the free growing window to remove lower branches to a height of 3 metres.

Spruce Leader Weevil

Unless weevil resistant stock is planted, Sitka spruce cannot contribute to MSS and is limited to 10% of TSS. Planting of Class A or Class B weevil resistant Sitka spruce will allow planted spruce to contribute up to 50% and 33%, respectively, of MSP, MSS and TSS.

Root Diseases

Root disease within the planning area is not normally a concern. Both Phellinus and Armillaria occur, but are rarely detected and generally restricted to small, isolated pockets of 1.0 hectare or less.

Stands will be assessed for the presence of root rot during the preparation of site plans. Where incidence of root rot is low and infection centers are small, no remedial treatments will occur. In moderately to highly infected stands larger than 1.0 hectare the following strategies will be employed, either individually or in combination, to reduce the impact of root rot on the next crop. The objective of these strategies will be to limit future loses to 20% of potential mean annual increment.

[13] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/forest-health/dwarf_mistletoe_management_guidebook.pdf

Phellinus

- Post-harvest stumping on slopes less than 35% on sites where Douglas-fir is the preferred species.
- Planting Western redcedar and/or Western white pine on sites suitable to these species.

Armillaria

- Post-harvest stumping on slopes less than 35% on the most severely infected sites.
- Focusing silviculture efforts to maintain vigorous tree growth, e.g. planting larger stock, time of planting fertilization, timely and repeated brushing as required to maintain vigour.

9.5 PREFERENCE OF WESTERN HEMLOCK

Western hemlock (Hw) will be considered a preferred species in situations where advanced natural regeneration of Hw, resulting from a windthrow event, precludes planting with other species and where Hw is otherwise an acceptable species. This situation can only be applied to a maximum of 5% of the net area to be reforested. Acceptable future crop trees will be as defined in the Establishment to Free Growing Guidebook[14], Silviculture Surveys Procedures Manual (April 1, 2023)[15] and Free-Growing Damage Criteria for Even-Aged Coniferous Trees[16].

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[14] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/silviculture/stocking-standards/efgg/efg-van-print.pdf
[15] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/silviculture/silviculture-surveys/2023-silv_survey_procedures_manual-_final.pdf
[16] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/silviculture/silviculture-surveys/free_growing_damage_criteria.pdf

APPENDIX 1 – STOCKING STANDARDS

Biogeoclimatic Classification		Species		Well-Spaced Stocking			Regen Delay (Max yrs)	Minimum Height	
				Target	MSS	MSP		Species	Ht (m)
Zone/SZ/SSID	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)					
CWHdm									
	01	Fd Cw Hw	Pw[16]	900	500	400	3	Fd, Hw	3.00
								Pw	2.50
								Cw	1.50
	02*	Pl Fd		400	200	200	3	Fd	2.00
								Pl	1.25
	03	Fd Hw[22]	Cw Pw[16]	800	400	400	3	Fd, Hw, Pw	2.00
								Cw	1.00
	04	Fd	Cw Hw[2] Pw[16]	900	500	400	3	Fd, Hw	3.00
								Pw	2.50
								Cw	1.50
	05	Cw Fd	Pw[16] Bg[18]	900	500	400	3	Fd, Hw	4.00
			Hw[2,20]					Bg,	3.50
								Pw	2.50
								Cw	2.00
	06	Cw Hw	Fd[1]	900	500	400	6	Fd, Hw	3.00
								Cw	1.50
	07	Cw Fd	Bg[18] Hw[2]	900	500	400	3	Fd, Hw	4.00
								Bg	3.50
								Cw	2.00
	08	Bg[18] Cw		900	500	400	3	Bg	3.50
								Cw	2.00
	09	Cw[1]	Bg[1,18]	900	500	400	3	Bg	3.50
								Cw	2.00
	11	Pl[1] Cw[1]		400	200	200	3	Pl	1.25
								Cw	1.00
	12	Cw[1] Hw[1,2]	Pw[16] Ss[17]	800	400	400	3	Ss	3.00
								Pw	2.50
								Hw	2.00
								Cw	1.00
	13	Bg[18] Cw Fd[1]		900	500	400	3	Fd	4.00
								Bg	3.50
								Cw	2.00
	14	Bg[1,18] Cw[1]		900	500	400	3	Bg	3.50
								Cw	2.00
	15	Cw[1]		800	400	400	3	Cw	1.00
	All IC OG**	Fd Cw Hw			>40 m2 basal area				
	All IC 2G**	Fd Cw Hw		400	300	300			

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Biogeoclimatic Classification		Species		Well-Spaced Stocking			Regen Delay (Max yrs)	Minimum Height	
				Target	MSS	MSP		Species	Ht (m)
Zone/SZ/SSID	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)					
	01,05,06,07, 08,09,13,14 Patch mixedwood	Dr Fd[21] Hw[21]Cw[21]		1500	1000	1000	3	Dr, Fd, Cw, Hw	4.00
	01,05,06,07 08,09,13,14 Extensive	Dr		1500	1000	1000	3	Dr	4.00
CWHmm1									
	01	Fd Cw Hw[7]	Pw[16]	900	500	400	6	Fd	3.00
								Hw, Pw	2.00
								Cw	1.50
	02	Pl Fd	Cw	800	400	400	6	Fd	2.00
								Pl	1.25
								Cw	1.00
	03	Fd Cw	Pw[16] Hw	800	400	400	3	Fd	2.00
								Hw, Pw	1.75
								Cw	1.00
	04	Fd Cw	Hw Pw[16]	900	500	400	3	Fd, Pw	2.00
								Hw	1.75
								Cw	1.00
	05	Fd Cw Hw[19]	Pw[16]	900	500	400	3	Fd	3.00
								Pw	2.50
								Hw	2.00
								Cw	1.50
	06	Cw Hw	Fd[1,4] Ba[4,7,18]	900	500	400	6	Fd	3.00
								Hw	2.00
								Cw	1.50
								Ba	0.75
	07	Cw Fd	Ba[18] Hw[2,19]	900	500	400	3	Fd	4.00
								Hw	2.50
								Cw	2.00
								Ba	1.00
	08	Ba[18] Cw Ss[17]		900	500	400	3	Ss	4.00
								Cw	2.00
								Ba	1.00
	09	Cw[1]	Ba[1,18]	900	500	400	3	Cw	2.00
								Ba	1.00
	11*	Pl[1]	Cw[1]	400	200	200	3	Pl	1.25
								Cw	1.00
	12	Cw[1] Hw[1,2]	Ss[1,17]	800	400	400	3	Ss, Hw	2.00
								Cw	1.00

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Biogeoclimatic Classification		Species		Well-Spaced Stocking			Regen Delay (Max yrs)	Minimum Height	
				Target	MSS	MSP		Species	Ht (m)
Zone/SZ/SSID	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)					
	All IC OG**	Fd Cw Hw			>40 m2 basal area				
	All IC 2G**	Fd Cw Hw		400	300	300			
	01,05,06,07, 08,09,13,14 Patch mixedwood	Dr Fd[21] Hw[21]Cw[21]		1500	1000	1000	3	Dr, Fd, Cw, Hw	4.00
	01,05,06,07 08,09,13,14 Extensive	Dr		1500	1000	1000	3	Dr	4.00
CWHmm2									
	01	Hm[8] Hw Cw	Ba[18]	900	500	400	6	Fd	2.25
		Fd[6] Yc						Hw	1.25
								Cw, Hm, Yc	1.00
								Ba	0.75
	02	Pl Fd	Cw	800	400	400	6	Fd	2.50
								Pl	1.50
								Cw	0.75
	03	Fd Hw	Se[12] Hm[8] Yc	800	400	400	3	Fd	1.50
			Cw					Hw	1.00
								Cw, Hm, Yc	0.75
								Se	0.50
	04	Fd	Se[12] Pw[16] Yc	900	500	400	3	Pw	2.50
			Cw					Fd	1.50
								Cw, Yc	0.75
								Se	0.50
	05	Ba[18] Cw Fd[6] Yc	Hw Bp[12] Pw[16]	900	500	400	3	Pw	2.50
								Fd	2.25
								Hw	1.25
								Bp, Cw, Yc	1.00
								Ba	0.75
	06	Hw Cw Yc	Ba[18] Hm[8] Fd[9]	900	500	400	6	Fd	2.25
								Hm, Hw	1.25
								Cw, Yc	1.00
								Ba	0.75
	07	Ba[18] Cw[1] Hw	Hm[8] Yc[1]	800	400	400	3	Hw	1.00
								Ba, Cw, Hm, Yc	0.75
	08	Ba[18] Cw Yc	Hw[2] Fd[6]	900	500	400	3	Fd	3.00
								Hw	1.75
								Cw, Yc	1.25
								Ba	1.00
	09	Pl[1]	Yc[1]	400	200	200	3	Pl	1.25

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Biogeoclimatic Classification		Species		Well-Spaced Stocking			Regen Delay (Max yrs)	Minimum Height	
				Target	MSS	MSP			
Zone/SZ/SSID	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)				Species	Ht (m)
								Yc	0.75
	10	Cw[1]	Pw[16] Yc[1]	800	400	400	3	Pw	2.50
								Cw, Yc	0.75
CWHvm1									
	01	Cw Hw Fd[6]	Pw[16] Ss[17]	900	500	400	6	Fd, Hw, Ss	3.00
		Yc[15] Ba[14,18]						Ba, Pw	1.75
								Cw, Yc	1.50
	02	Pl Cw Fd[6]	Hw	400	200	200	3	Fd, Hw	2.00
								Pl	1.25
								Cw	1.00
	03	Cw Hw Fd[6]	Pl Pw[16]	800	400	400	6	Fd, Hw	2.00
								Pl, Pw	1.25
								Cw	1.00
	04	Cw Hw Fd[6]	Ba[7,18] Yc[8]	900	500	400	3	Fd, Hw	3.00
								Ba	1.75
								Cw, Yc	1.50
	05	Ba[18] Cw Hw	Ss[17]	900	500	400	3	Fd, Hw, Ss	3.00
		Fd[1,6] Yc[15]						Ba	1.75
								Cw, Yc	1.50
	06	Ba[14,18] Cw Hw	Fd[11] Ss[17]	900	500	400	6	Hw, Ss, Fd	3.00
		Yc[15]						Ba	1.75
								Cw, Yc	1.50
	07	Ba[18] Cw Fd[1,6]	Ss[17]	900	500	400	3	Fd, Hw, Ss	4.00
		Hw[2] Yc[15]						Ba	2.25
								Cw, Yc	2.00
	08	Ba[18] Cw Hw[2]	Ss[17]	900	500	400	3	Hw, Ss	4.00
								Ba	2.25
								Cw	2.00
	09	Ba[18] Cw Hw	Ss[17]	900	500	400	3	Hw, Ss	4.00
								Ba	2.25
								Cw	2.00
	10	Cw[1]	Ba[1,18] Ss[1,17]	900	500	400	3	Ss	4.00
								Ba	2.25
								Cw	2.00
	12	Cw[1] Hw[1] Yc[1]	Pl[1]	800	400	400	3	Fd, Hw	2.00
								Pl	1.25
								Cw, Yc	1.00
	13*	Pl[1]	Cw[1]	400	200	200	3	Pl	1.25
								Cw	1.00
	14	Cw[1] Hw[1] Ss[1,17]	Pl[1]	800	400	400	3	Hw, Ss	3.00
								Pl	2.00

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Biogeoclimatic Classification		Species		Well-Spaced Stocking			Regen Delay (Max yrs)	Minimum Height	
				Target	MSS	MSP		Species	Ht (m)
Zone/SZ/SSID	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)					
								Cw	1.50
	All IC OG**	Fd Cw Hw Yc Ba			>40 m2 basal area				
	All IC 2G**	Fd Cw Hw Ba		400	300	300			
	01,05,06,07, 08,09,13,14 Patch mixedwood	Dr Fd[21] Hw[21]Cw[21]		1500	1000	1000	3	Dr, Fd, Cw, Hw	4.00
	01,05,06,07 08,09,13,14 Extensive	Dr		1500	1000	1000	3	Dr	4.00
CWHvm2									
	01	Fd[1,6,12] Hw Cw	Ss[4,17]	900	500	400	6	Ss	3.00
		Yc Ba[18] Hm[15]						Hw	2.50
								Fd	2.25
								Ba	1.75
								Cw, Yc	1.50
								Hm	1.00
	02	Pl Cw Fd[6] Yc	Hw Hm[8]	400	200	200	3	Hw	1.75
								Fd	1.50
								Pl	1.25
								Cw, Yc	1.00
								Hm	0.75
	03	Cw Hw Fd[6] Yc	Pw[11,16]	800	400	400	6	Pw	2.50
								Hw	1.75
								Fd	1.50
								Cw, Yc	1.00
	04	Cw Hw Fd[6] Yc	Ba[18] Pw[11,16]	900	500	400	6	Pw	2.50
								Hw	1.75
								Ba, Fd	1.50
								Cw, Yc	1.00
								Hm	0.75
	05	Cw Hw Yc	Fd[1,5,6,12] Ss[10,17]	900	500	400	3	Ss	3.00
		Ba[18]	Hm[8]					Hw	2.50
								Fd	2.25
								Ba	1.75
								Cw, Yc	1.50
								Hm	1.00
	06	Cw Hw Yc Hm[15]	Ss[9,4,17]	900	500	400	6	Ss	3.00
		Ba[18]						Hw	2.50
								Ba	1.75
								Cw, Yc	1.50

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Biogeoclimatic Classification		Species		Well-Spaced Stocking			Regen Delay (Max yrs)	Minimum Height	
				Target	MSS	MSP			
Zone/SZ/SSID	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)				Species	Ht (m)
								Hm	1.00
	07	Cw Hw[2] Yc	Ss[10,17] Hm[8]	900	500	400	3	Ss	4.00
		Ba[18]						Hw	3.50
								Ba	2.25
								Cw, Yc	2.00
								Hm	1.00
	08	Cw[9] Hw[2] Yc	Ss[17] Hm[8]	900	500	400	3	Ss	4.00
		Ba[18]						Hw	3.50
								Ba	2.25
								Cw, Yc	2.00
								Hm	1.00
	09	Cw[1] Hw[1] Yc[1]	Ba[18] Hm[8]	800	400	400	3	Hw	1.75
								Ba	1.50
								Cw, Yc	1.00
								Hm	0.75
	10	Pl[1] Yc[1]	Hm	400	200	200	3	Pl	1.25
								Yc	1.00
								Hm	0.75
	11	Cw[1] Yc[1]	Hw[1]	800	400	400	3	Hw	1.75
								Cw, Yc	1.00
	All IC OG**	Fd Cw Hw Yc Ba			>40 m2 basal area				
CWHxm									
	01	Fd Cw[19] Hw[13,20]	Pw[16]	900	500	400	3	Fd, Hw	3.00
								Pw	2.50
								Cw	1.50
	02*	Pl Fd		400	200	200	3	Fd	2.00
								Pl	1.25
	03	Fd Pl[3]	Cw Pw[16]Hw[13]	800	400	400	3	Fd, Pw	2.00
								Hw, Pl	2.00
								Cw	1.00
	04	Fd Cw	Pw[16] Hw[13]	900	500	400	3	Fd	3.00
								Pw	2.50
								Hw	2.00
								Cw	1.50
	05	Cw Fd	Bg[18] Pw[16]	900	500	400	3	Fd	4.00
		Hw[15,20]						Bg	3.50
								Hw	3.00
								Pw	2.50
								Cw	2.00
	06	Cw Hw Fd[1]		900	500	400	6	Fd	3.00
								Hw	2.00

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Biogeoclimatic Classification		Species		Well-Spaced Stocking			Regen Delay (Max yrs)	Minimum Height	
				Target	MSS	MSP			
Zone/SZ/SSID	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)				Species	Ht (m)
								Cw	1.50
	07	Cw Fd Bg[18]	Hw[2]	900	500	400	3	Fd	4.00
								Bg	3.50
								Hw	3.00
								Cw	2.00
	08	Cw Ss[17]	Bg[18]	900	500	400	3	Ss	4.00
								Bg	3.50
								Cw	2.00
	09	Cw[1]	Bg[1, 18]	900	500	400	3	Bg	3.50
								Cw	2.00
	11*	Pl[1]	Cw[1]	400	200	200	3	Pl	1.25
								Cw	1.00
	12	Hw[1,2] Cw[1]	Pw[16] Ss[17]	800	400	400	3	Pw	2.50
								Hw	2.00
								Ss	1.50
								Cw	1.00
	13	Cw Bg[18] Fd[1]		900	500	400	3	Fd	4.00
								Bg	3.50
								Cw	2.00
	14	Bg[1,18] Cw[1]		900	500	400	3	Bg	3.50
								Cw	2.00
	15	Cw[1]		800	400	400	3	Cw	2.00
	All IC OG**	Fd Cw Hw			>40 m2 basal area				
	All IC 2G**	Fd Cw Hw		400	300	300			
	01,05,06,07, 08,09,13,14 Patch mixedwood	Dr Fd[21] Hw[21] Cw[21]		1500	1000	1000	3	Dr, Fd, Cw, Hw	4.00
	01,05,06,07 08,09,13,14 Extensive	Dr		1500	1000	1000	3	Dr	4.00
MHmm1									
	01	Ba[18] Hm Yc	Se[12] Hw[9]	900	500	400	7	Hm, Hw, Yc	1.00
								Se	1.00
								Ba	0.60
	02	Hm Yc	Ba[18] Se[12]	800	400	400	4	Hm, Yc	0.75
								Se	0.75
								Ba	0.60
	03	Ba[18] Hm Yc	Hw[9]	900	500	400	4	Hm, Hw, Yc	1.00
								Ba	0.60
	04	Ba[18] Hm Yc	Hw[9]	900	500	400	7	Hm, Hw, Yc	1.00
								Ba	0.60

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Biogeoclimatic Classification		Species		Well-Spaced Stocking			Regen Delay (Max yrs)	Minimum Height	
				Target	MSS	MSP		Species	Ht (m)
Zone/SZ/SSID	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)					
	05	Ba[18] Yc	Hm Hw[9]	900	500	400	4	Hm, Hw, Yc	1.00
								Ba	0.60
	06	Hm[1] Yc[1]	Ba[1,18]	800	400	400	7	Hm, Yc	0.75
								Ba	0.60
	07	Ba[1,18] Yc[1]	Hm[1]	900	500	400	4	Hm, Yc	0.75
								Ba	0.60
	08*	Hm[1] Yc[1]		400	200	200	4	Hm, Yc	0.75
	09	Yc[1]	Hm[1]	800	400	400	4	Hm, Yc	0.75

*Marginally suited for timber production
** All site series, intermediate cut (IC), old growth / second growth, standard applicable to layer 1 trees.

Footnotes:

1 elevated microsites are preferred
2 suitable on thick forest floors
3 restricted to nutrient very poor sites
4 restricted to nutrient medium sites
5 restricted to steep slopes
6 restricted to southerly aspects, or to locations transitional to CWHdm
7 restricted to northerly aspects
8 restricted to upper elevations of the biogeoclimatic unit or where occurring as a major species in the pre-harvest natural stand
9 restricted to lower elevations of the biogeoclimatic unit or where occurring as a major species in the pre-harvest natural stand
10 restricted to the northern portion of the biogeoclimatic unit or where occurring as a major species in the pre-harvest natural stand
11 restricted to the southern portion of the biogeoclimatic unit or where occurring as a major species in the pre-harvest natural stand
12 restricted to trial use
13 suitable as a major species in the wetter portion of the biogeoclimatic unit
14 suitable as a minor species in salal dominated sites
15 restricted to sites where the species occurs as a major species in the pre-harvest natural stand
16 risk of white pine blister rust, unless rust resistant stock is planted, cannot contribute to MSS and limited to 10% of TSS; resistant stock can contribute to MSS and up to 25% of MSP and 100% of MSP for Phellinus root rot sites
17 risk of weevil damage, unless weevil resistant stock is planted, cannot contribute to MSS and limited to 10% of TSS; class A and class B weevil resistant stock can contribute up to 50% and 33%, respectively, of MSP, MSS and TSS.
18 limited to 35% of TSS in recognized areas of balsam woolly adelgid
19 limited to 35% of MSP
20 preferred within 30 meters of north facing edges shaded by standing timber.
21 Fd, Cw and Hw limited to 20% of the mixedwood standard and will meet the free growing criteria established for conifer including the height to alder ratio noted in 9.3.2 above.
22 Hw is preferred on northerly aspects or in situations where advanced natural regeneration of Hw precludes planting with other species and is acceptable in all other situations.

CWHmm1 and CWHxm, site series 12: Hw is considered to be preferred given this site series have a very limited occurrence in the plan area and small areas have been harvested historically.

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