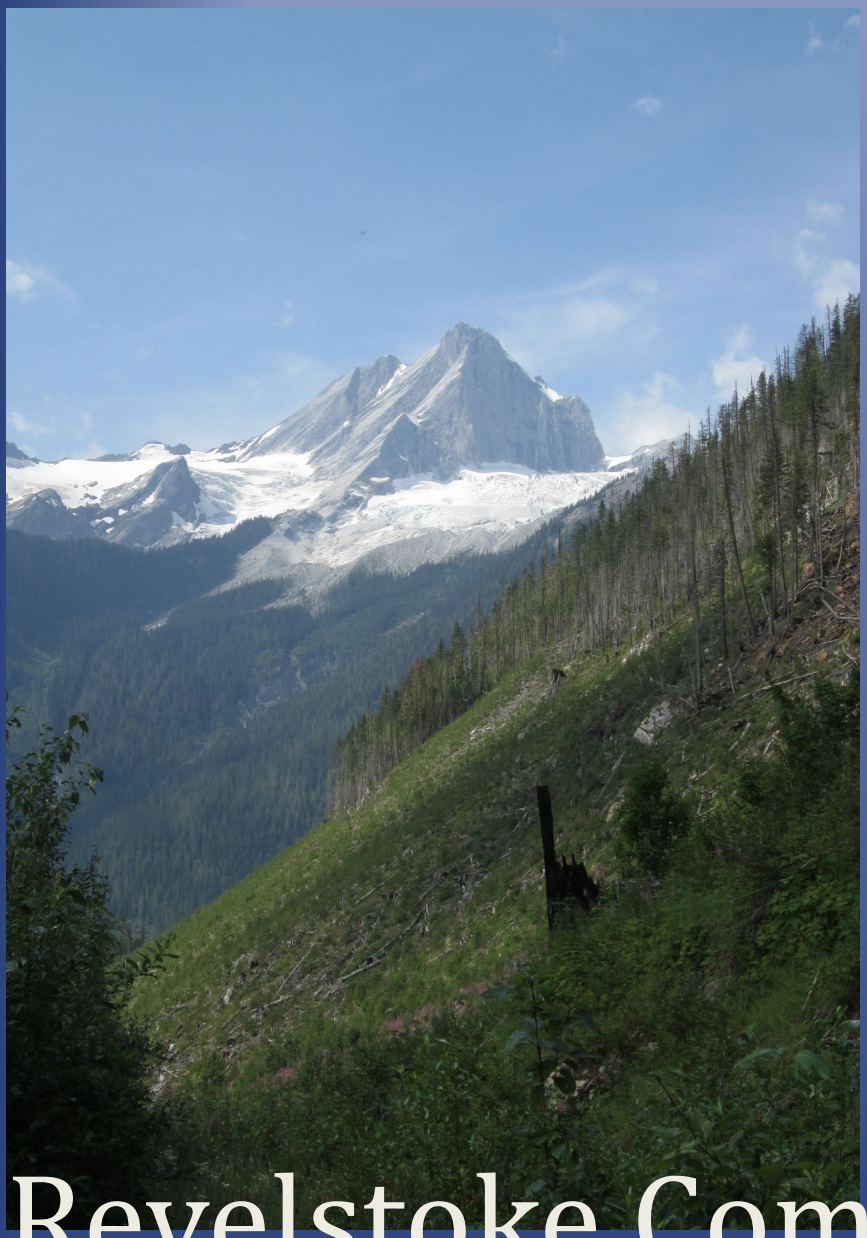


Revelstoke Community Forest Corporation

Forest Stewardship Plan Documents 2022-2027

Revelstoke
Community
Forest
Corporation

REVELSTOKE COMMUNITY FOREST CORPORATION TREE FARM LICENCE 56

FOREST STEWARDSHIP PLAN 2022 - 2027

March, 2022

Prepared by:

REGISTERED PROFESSIONAL FORESTER PROVINCE OF KEVIN J. BOLLEFER BRITISH COLUMBIA

I certify that this work fulfills accepted standards and that I did personally supervise the work

Date: MARCH 7, 2022

Kevin Bollefer, RPF, RPBio
Operations Forester
Revelstoke Community Forest Corporation

Authorized by:

REGISTERED PROFESSIONAL FORESTER PROVINCE OF MICHAEL COPPERTHWAITE BRITISH COLUMBIA NO. 3520

I certify that this Forest Stewardship Plan is authorized on behalf of Revelstoke Community Forest Corporation

Date: March 7, 2022

Mike Copperthwaite, RPF
General Manager
Revelstoke Community Forest Corporation

CONTENTS

APPENDICES

FIGURES

TABLES

1.0 INTRODUCTION

This Forest Stewardship Plan has been prepared for Revelstoke Community Forest Corporation's Tree Farm License 56. Revelstoke Community Forest Corporation (RCFC) operates Tree Farm Licence 56 (TFL 56) in the Downie and Goldstream Valleys north of Revelstoke. TFL 56 has an annual allowable cut of 90,000 m3, and a total landbase of 119,353 hectares. An overview map is provided in Figure 1.

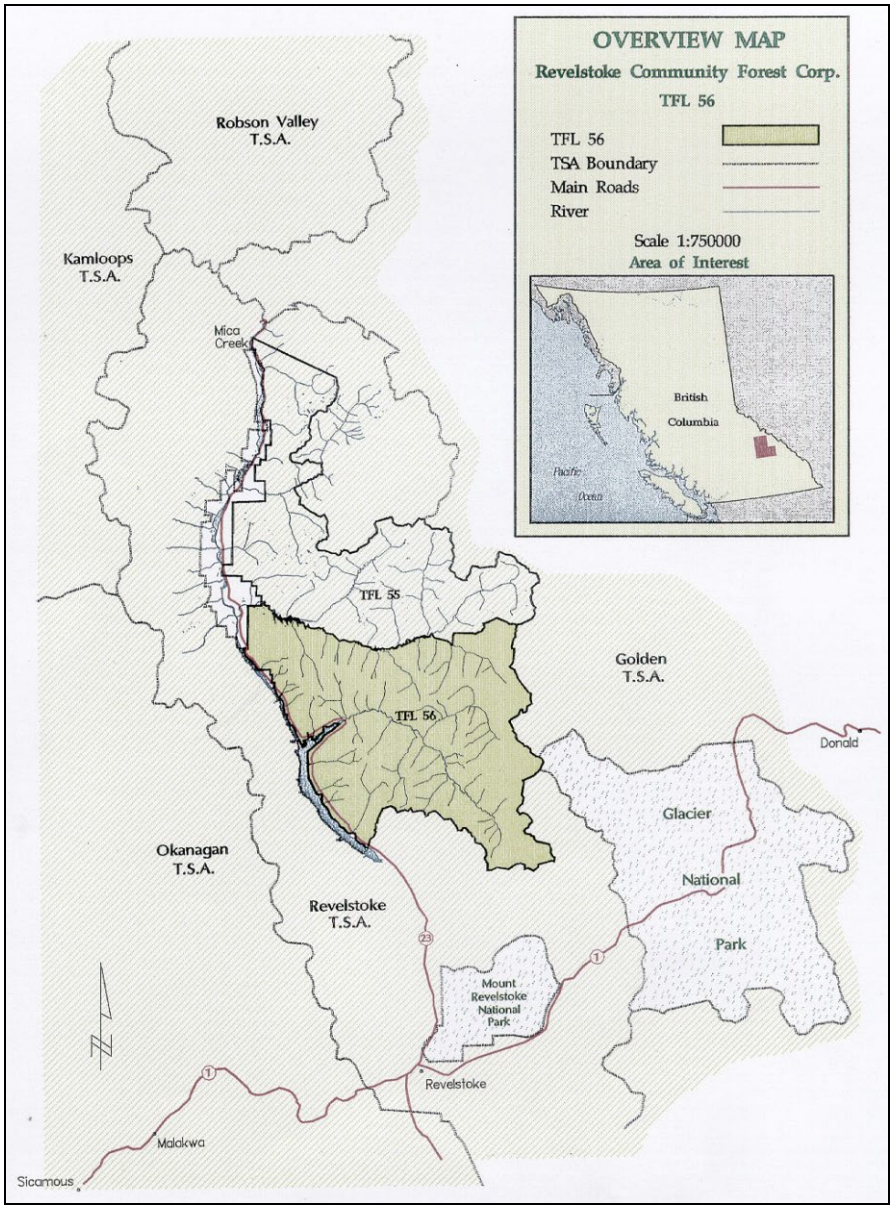


Figure 1: Location of TFL 56

1.1 Term

The term of this plan will be 5 years from the date of approval. The FSP may be extended at the end of this five-year term by as much as five additional years with the approval of the District Manager of the Selkirk Natural Resource District.

1.2 Forest Development Units

Forest Development Units (FDU's) indicate areas that will contain forest development activities, and that will have a common set of objectives, results, and strategies. The boundaries of the FDU's are indicated on the FSP map (Appendix 5). There are two FDU's included in this plan, and they together cover the entire TFL area. The FDU's do not extend beyond the TFL boundaries. No private land or "Provincial Park Reserves" are included in these FDU's.

Table 1. Forest Development Units

FDU	Area (ha)
1) Downie	81,055
2) Goldstream	38,298
Total	119,353

1.3 Protection for Cutblocks and Roads

Section 19(2)(c) of the *Forest and Range Practices Act* (FRPA) allows an area that meets the criteria set out in Section 14(4) of the *Forest Planning and Practices Regulation* (FPPR) to be protected from mandatory amendments to the Plan set out in Section 8 of FRPA. Upon approval of the Plan, these areas will be "declared".

These declared areas will:

- be located in an approved FDU
- have all activities and evaluations that are necessary in relation to inclusion of cut blocks and roads in the area have been completed.

RCFC will work with and accommodate affected First Nations where new information regarding key values of cultural and ecological significance are confirmed in declared areas. RCFC will follow the process outlined in Section 3.8 for blocks that are past the three-year information sharing limit.

"Declared" areas are listed in Appendix 4.

1.4 Interpretation

Terms used in this FSP have meanings consistent with their use in applicable legislation.

2.0 OTHER PLANS

The *Revelstoke Higher Level Plan Order* (RHLPO) and the Ungulate Winter Range #U-3-005 (B.C. Reg. 582/2004) (GAR) have been implemented. RCFC will continue to comply with all aspects of the *Revelstoke Higher Level Plan Order* and *Ungulate Winter Range #U-3-005* (Appendix 2).

3.0 OBJECTIVES, STRATEGIES, AND RESULTS

Objectives provide government's direction to Licensees for achieving acceptable forest management outcomes.

Results are measurable targets that indicate how the objectives will be achieved.

Strategies are verifiable procedures that indicate how the objectives will be achieved.

3.1 Soils

Table 2. Objectives Set by Government for Soils

Table 2	**Objective Set by Government for** **Soils**
Regulation:	FPPR Section 5
Objective:	Without unduly reducing the supply of timber from British Columbia's forests, to conserve the productivity and the hydrologic function of soils.
Results and Strategies:	Soil disturbance limits: For the purposes of section 12.2(1) of the FPPR, RCFC adopts as a result and strategy section 35 (1) to (3) and (5) to (7) and section 35(4) of the FPPR will read as follows: An agreement holder may cause soil disturbance that exceeds the limits specified in subsection (3) if the holder: a) is removing infected stumps, or salvaging windthrow and the additional disturbance is the minimum necessary, or b) is constructing a temporary access structure and both the following apply: (i) the limit set out in subsection (3) (a) or (b), as applicable, is not exceeded by more than 5% of the area covered by the standards unit, excluding the area covered by a roadside work area; (ii) before the regeneration date, a sufficient amount of the area within the standards unit is rehabilitated such that the agreement holder is in compliance with the limits set out in subsection (3). c) Is prescribing additional soil disturbance for mechanical site preparation to assist with achieving reforestation objectives provided the following conditions are met: (i) Sensitive soils are not involved; (ii) Natural or artificial regeneration is prescribed; (iii) The additional soil disturbance is the minimum necessary; (iv) A qualified professional (QP) conducts an assessment which states the amount of additional soil disturbance that can occur without unduly compromising soil productivity or hydrological function and the agreement holder incorporates these recommendations into the applicable site plan.
	Limits for permanent access structures: RCFC will undertake to comply with section 36 of the FPPR.
Objective, strategies, and results apply to these Forest Development Units:	☒ Downie ☒ Goldstream

3.2 Timber

Table 3. Objectives Set by Government for Timber

Table 3	**Objective Set by Government for:** **Timber**
Regulation:	FPPR Section 6
Objective:	To maintain or enhance an economically valuable supply of commercial timber from British Columbia's forests; to ensure that delivered costs, generally, after taking into account the effect on them of the relevant provisions of the regulation and of the Act, are competitive in relation to equivalent costs in relation to regulated primary forest activities in other jurisdictions, and; to ensure that the provisions of this regulation and of the Act that pertain to primary forest activities do not unduly constrain the ability of a holder of an agreement under the Forest Act to exercise the holder's rights under the agreement.
Results and Strategies:	The Licencee is exempt from preparing results or strategies for the objective set by government for timber under Section 12(8) of the FPPR.
Objective, strategies, and results apply to these Forest Development Units:	☐ Downie ☐ Goldstream

3.3 Wildlife

3.3.1 Species at Risk

During the planning stages of development, RCFC will refer to the following sources for finding information related to species and ecosystems at risk:

- Species and ecosystems at risk layer in GeoBC data warehouse
- Critical habitat for federally listed species
- Wildlife habitat areas
- The Species at Risk explorer tool website
- BC conservation data center website & species range mapping
- Other websites (e.g. Efauna, Eflora, Wildlife Species Inventory database, Breeding Bird Atlas of BC, etc.)
- Culturally significant species as provided by First Nations (eg. Ktunaxa's Culturally Significant Wildlife Species).

RCFC field staff and layout crews will be trained in the identification of SAR species every two years or less. New RCFC field staff will be trained within one year of the start of employment and will be documented in the RCFC training records. Any observations of species at risk will be reported to the BC Conservation Data Centre Data Submissions website within 30 days of discovery.

For Species at Risk that are identified above and by forest workers in the field, RCFC will:

1. have a QRP assess if there are indeed SARA species or culturally significant species present; and,

2. Identify recommendations or best management practices that are to be undertaken from recommendations on the CDC website and/or the most updated BMP's found; and,

3. Include the area into WTRA's, RMAs, or remove the area entirely from proposed development area if consistent with the information in steps 1 & 2, and

4. Document the actions taken in the site plan of the development.

Table 4. Objectives Set by Government for Species at Risk: Coeur d'Alene Salamander

Table 4	**Objective Set By Government for:**	**Wildlife; Coeur d'Alene Salamander**
Regulation:	FPPR Section 7. FPPR section 7(2) Notice (dated December 30, 2004)	
Objective:	Without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas for the survival of the species at risk.	
Results and Strategies:	Strategy: The FPPR section 7(2) Notice (Appendix 5) indicates the amount, distribution and attributes of Coeur d'Alene Salamander habitat required for the former Columbia Forest District (CFD) TSA. The following results and strategies apply until such time that the target amount of suitable habitat (60 hectares not exceeding an impact to the mature timber harvesting landbase of 36 hectares) has been identified within the CFD. RCFC will follow the process above in Section 3.1.1. Result: RCFC has identified one area within TFL 56 that has the potential to be a draft Coeur d'Alene Salamander WHA (2.1 ha). RCFC will not conduct primary forest activities within this identified area. RCFC will also notify MOE of any Coeur d'Alene Salamander located outside of this area within 30 days of discovery. If a salamander location is discovered, RCFC will not construct road within 100 meters of the site until a conservation plan has been written by a Qualified Professional (QP). The conservation plan will include site level recommendations for the conservation of the salamander habitat.	
Objective, strategies, and results apply to these Forest Development Units:		☒ Downie ☒ Goldstream

3.3.2 Mountain Caribou

Table 5. Objectives Set by Government for Wildlife: Caribou

Table 5	**Objective Set By Government for:**	**Wildlife; Caribou**
Regulation: Order:	FPPR, Section 7(1) Ungulate Winter Range U-3-005 GAR Order (Appendix 2).	
Objective:	Without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas for: (a) The survival of species at risk, (b) The survival of regionally important wildlife, and (c) The winter survival of specified ungulate species.	
Results and Strategies:	Strategy: RCFC will comply with Ungulate Winter Range #U-3-005 Result: Sufficient area has been reserved within the UWR U-3-005 to protect habitat that is necessary to meet the habitat requirements for mountain caribou.	
Objective, strategies, and results apply to these Forest Development Units:		☒ Downie ☒ Goldstream

3.4 Water, Fish, Wildlife and Biodiversity within Riparian Areas

Table 6. Objectives Set by Government for Water, Fish, Wildlife and Biodiversity within Riparian Areas

Table 6	**Objective Set by Government for:** **Water, Fish, Wildlife and Biodiversity within Riparian Areas**
Regulation:	FPPR Section 8 and 12(3)
Objective:	Without unduly reducing the supply of timber from British Columbia's forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.
Results and Strategies:	1. Stream[1], wetland, and lake riparian classes: RCFC will undertake to comply with sections 47,48 and 49 of the FPPR
	2. Restrictions in a riparian management area, riparian reserve zone, or riparian management zone: RCFC will undertake to comply with sections 50, 51, 52(2) of the FPPR.
	3. Temperature sensitive streams: There are no temperature sensitive streams on the TFL but RCFC will undertake to comply with FPPR section 53 if this designation is created.
	4. Fisheries sensitive watersheds: There are no fisheries sensitive watersheds on the TFL
	5. Stream crossing, fish passage and protection of fish habitat: RCFC will undertake to comply with FPPR sections 55, 56 and 57.
	6. Use of livestock in riparian areas: Livestock is not used on the TFL (Section 58).
	7. Protecting water quality: RCFC will comply with FPPR section 59.
	8. Licensed water works: RCFC will comply with FPPR section 60.
	9. Restrictions in a riparian management zone: If RCFC falls trees in a cutblock within a riparian management zone of a riparian class described below, RCFC will retain the following levels of standing trees. Riparian class and retention level will be determined by a QP. Factors, as determined by the QP, that will be considered in the management for retention are listed below. These factors will be documented in the site plan or harvest plan: • Cultural values • Safety issues • Wind throw risk, based on tree, stand, soil and topographic characteristics, prevailing winds and options available to reduce risk • Stream channel integrity, stream bank stability and erosion potential • Fish and wildlife habitat • Licensed consumptive water use and intake location and water quality • Presence of standing live or dead trees with wildlife habitat value • Retention of understory vegetation and non-merchantable trees • Shade requirements for streams • Vegetation management and post-harvest silviculture treatments • Coarse woody debris requirements • Hydrological and terrain stability concerns and/or recommendations from related assessments • Visual quality • Timber objectives and operational constraints.

[1] The Columbia Forest District "local area agreement" for fish stream identification dated June 1, 2000 can be used to classify smaller streams as to whether they are fish or non-fish bearing.

<table>
<tr><td>Results and Strategies:</td><td>
<table>
<tr><th>Riparian Class</th><th>Basal area to be retained within Riparian Management Zone (%)[2]</th></tr>
<tr><td>S1-A or S1-B stream</td><td>≥ 20</td></tr>
<tr><td>S2 stream</td><td>≥ 20</td></tr>
<tr><td>S3 stream</td><td>≥ 20</td></tr>
<tr><td>S4 stream</td><td>≥ 10</td></tr>
<tr><td>S5 stream</td><td>≥ 10</td></tr>
<tr><td>S6 stream</td><td>≥0</td></tr>
<tr><td>All classes of wetlands and lakes</td><td>≥ 10</td></tr>
</table>
</td></tr>
<tr><td></td><td>10. Streamside protection where a riparian feature does not have a RRZ: To the extent practicable, RCFC will retain understory trees, shrubs and herbaceous vegetation adjacent to S4, S5 and S6 streams; and directionally fall timber to be harvested away from these streams. RCFC will maintain a 5-meter machine-free zone (MFZ) along both sides of the stream except at designated stream crossings.</td></tr>
<tr><td></td><td>11. Woody debris removal: RCFC will:
Where deemed by an assessment by a QP to be an impediment to stream flow and function, remove significant accumulations of slash and debris inadvertently deposited in the stream within the first year after harvest.
Where a skid bridge is constructed over a stream the debris will be removed post-harvest and natural drainage re-established within one year of harvest. The only times skid bridges may be left is on non-fish bearing stream where the removal would create more negative effects to the stream as deemed by a professional and leaving the debris will not result in the redirection of the stream.</td></tr>
<tr><td></td><td>12. Sediment control in riparian areas: RCFC will implement best management practices (bmp's) for erosion and sediment control on roads around riparian areas. All new roads will address erosion and sediment control bmp's in the road site plan. Old roads will be monitored and priority of de-activation will be based on sediment delivery hazard into fish bearing streams and water intake locations. Refer to the Fish-stream Crossing Guidebook (Sept 2012) Section 5.6 for Erosion and Sediment Control Measures to consider for bmp's.</td></tr>
<tr><td colspan="2">Objective, strategies, and results apply to these Forest Development Units: ☒ Downie ☒ Goldstream</td></tr>
</table>

3.5 Community Watersheds

Table 7. Objectives Set by Government for Water in Community Watersheds

Table 7	**Objective Set by Government for Water in Community Watersheds**
Regulation:	FPPR Section 8.2
Objective:	Without unduly reducing the supply of timber from British Columbia's forests, to prevent the cumulative hydrological effects of primary forest activities on an active, licensed waterworks in a community watershed from resulting in (a) a material adverse impact on the quantity of water or the timing of the flow of 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 an enactment or the license pertaining to the waterworks.
Results and Strategies:	Not applicable as there are no community watersheds within the TFL.
Objective, strategies, and results apply to these Forest Development Units:	☐ Downie ☐ Goldstream

[2] To be met on a block by block basis.

3.6 Visual Quality

Table 8. Objectives Set by Government for Visual Quality Objectives.

Table 8	**Objective Set by Government for** **Visual Quality**
Regulation:	FPPR Section 9.2
Objective:	To conserve the quality of views of scenic areas to the level indicated by the visual quality objectives shown on the maps attached to the Government Actions Regulation order entitled "*Establishment of Scenic Areas and Visual Quality Objectives with the Columbia Forest District*" dated January 31, 2007.
Results and Strategies:	Not applicable as there are no legal visual quality objectives within TFL 56.
Objective, strategies, and results apply to these Forest Development Units:	☐ Downie ☐ Goldstream

3.7 Wildlife and Biodiversity at a Landscape and Stand Level

Table 9. Objectives Set by Government for Wildlife and Biodiversity on a Landscape and Stand Level.

Table 9	**Objective Set by Government for:** **Wildlife and Biodiversity - Landscape Level and Stand Level**
Regulation:	FPPR Section 9, 9.1, 12.5(1), 12.5(2) & Kootenay Boundary Wildlife Habitat Features Order
Objective:	Without unduly reducing the supply of timber from British Columbia's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape; and to retain wildlife trees
Definition:	Total block area of a cutblock means the gross area.
Results and Strategies:	1. Maximum cutblock size: RCFC will comply with FPPR section 64. When Section 64(2)(ii) applies, RCFC will provide a patch size analysis for the natural disturbance type (NDT) within the LU following the FPC Biodiversity Guidebook direction. A description of what is being left to meet the structural characteristics that would result from a natural disturbance will be included in the Site Plan.
	2. Harvesting adjacent to another cutblock: RCFC will comply with FPPR section 65.
	3. Wildlife tree retention: RCFC will identify at least and retain 7% of the total block area of each **cutting permit** as wildlife tree retention areas while prioritizing wildlife trees of high value. Together with R/S #4 these results replace Section 66 of the FPPR.
	4. Distribution of wildlife tree retention: RCFC will identify and retain at least 3.5% of the total block area of each **cutblock** having a Net Area to be Reforested greater than 5.0 ha in size, as wildlife tree retention areas while prioritizing wildlife trees of high value. Together with R/S #3, these results replace Section 66 of the FPPR. WTRA characteristics and considerations will be documented in the site plan.
	5. Restriction on harvesting from a wildlife tree retention area (WTRA): WTRA/WTP's or portions of WTRA/WTP's may be harvested in the following condition: i. Felling or modifying a tree that is a safety hazard, if there is no other practicable option for addressing the safety hazard; ii. Creating guyline tiebacks, skyline anchors, skyline corridors, or tail trees; iii. Felling or modifying a tree for establishing or maintaining an interpretive forest site, recreation site, recreation facility or recreation trail; iv. To provide road access where no other practicable option for the road location exists, or v. Where timber is damaged as a result of wind, fire or forest health factors where, in the opinion of the qualified registered professional and documented in a supporting rational, the conditions of the WTRA is rendered ineffective. Ineffective is defined as damaged to a degree that the WTRA no longer has the attributes consistent with the condition and intent of the original WTRA.
	6. Replacing wildlife tree retention areas: Where the RCFC has harvested timber within a WTRA and the harvest area is greater than 0.01 ha, under the provisions described in R/S 5 above, RCFC will replace the harvested area with one or more WTRAs that provide an equivalent area, composed of similar or better habitat attributes as identified by a qualified registered professional and documented in a supporting rational.
	7. Kootenay Boundary Wildlife Habitat Features Order: RCFC will comply with the Kootenay Boundary Wildlife Habitat Features Order dated May 29, 2018. RCFC will follow the guidance set out in the Wildlife Habitat Features Field Guide (Kootenay Boundary Region).
Objective, strategies, and results apply to these Forest Development Units:	☒ Downie ☒ Goldstream

3.8 Cultural Heritage Resources

Table 10. Objective Set by Government for Cultural Heritage Resources.

Table 10	**Objective Set by Government for: Cultural Heritage Resources**
Regulation:	FPPR Section 10
Objective:	Conserve, or, if necessary, protect cultural heritage resources that are: (a) The focus of a traditional use by an indigenous people that is of continuing importance to that people, and (b) Not regulated under the Heritage Conservation Act
Definitions:	**Potentially affected First Nations**; are those identified in the Consultative Areas Database (or other superseding government source) as having an interest in the area of a proposed harvesting or road construction activity. **Cultural heritage resource (CHR)**; means an object (this includes fish, wildlife and plant resources that are important for fishing, hunting, gathering, for medicinal, ceremonial or traditional use purposes), a site or the location of a traditional societal practice that is of historical, cultural or archaeological significance to British Columbia, a community or an indigenous people, that is the focus of a traditional use by an indigenous people that is of continuing importance to that people, and that is not regulated under the Heritage Conservation Act. **Affected cultural heritage resource**; means a cultural heritage resource that is the focus of an ongoing traditional use and is geographically associated with the proposed cutblock or road right-of –way. **Cultural heritage resource evaluation**; means an office and /or field based process involving an authorized member of a potentially affected First Nation or a qualified professional who has shared information with RCFC regarding the presence, relative value and abundance of a cultural heritage resource, in order to assess the existence and significance of an affected cultural heritage resource, and to provide site information or recommendations for the development of strategies to mitigate the potential direct impact of harvesting or road construction on the cultural heritage resource.
Results and Strategies:	1. **Opportunity to provide information:** For each cutblock and road right-of-way, RCFC will, before applying for a Cutting Permit or a Road Permit, provide a minimum of 30-day review period for each potentially affected First Nations group to supply information about affected cultural heritage resources. RCFC will provide an information package that will consist of digital maps and a block information table of the proposed development activities.
	2. **Confidentiality of information:** RCFC will give written assurance to a First Nation invited to supply information about cultural heritage resources that any information it provides will be held in confidence.
	3. Rationale: Where potentially affected First Nations groups supply information about an affected cultural heritage resource that is the focus of an ongoing traditional use, RCFC will work with affected First Nations to develop strategies to mitigate the impacts of the proposed forest harvesting or road construction on the affected CHR based on: a) The relative value or importance of the cultural heritage resource to the traditional use by an indigenous people, b) The relative abundance or scarcity of the CHR, c) The historical extent of the traditional use of the affected CHR, d) The impact on government granted timber harvesting rights of conserving or protecting the CHR, and, e) Options for mitigating the impact that a forest practice might have on the cultural heritage resource. RCFC will communicate with those First Nation groups that have supplied the information about the affected cultural heritage resource the extent to which it will conserve or, if necessary, protect the affected cultural heritage resource before the cutting permit submission.
	4. Requirement to stop work: If a previously unidentified cultural heritage resource feature is encountered during harvesting, road construction or site preparation, RCFC will cease operations to the extent necessary to protect the feature until a cultural heritage resource evaluation can be carried out or the site is otherwise protected.
Objective, strategies, and results apply to these Forest Development Units:	☒ Downie ☒ Goldstream

3.9 Old Forest

Table 11. Revelstoke Higher Level Plan Order: Old Forest

Table 11	**Revelstoke Higher Level Plan Order: Old Forest**
Legal Reference:	RHLPO – Revelstoke Higher Level Plan Order Amendment 02; Objectives 1 & 2. Special Tree Protection Regulation.
Objective:	To contribute to the conservation of biodiversity, maintain 'old' seral forests to the levels indicated in the Revelstoke Higher Level Plan order and the Special Tree Protection Regulation.
Results and Strategies:	**1. Conservation of old forests:** RCFC will comply with section 1 and 2 of the Revelstoke Higher Level Plan Order Amendment 02 dated June 30, 2011. The Old Growth Management Areas (OGMA) data layer to be used will be stored in the British Columbia Geographic Warehouse. This layer plus the additional areas indicated on this FSP map meet the full 240-year requirement in Low and Intermediate Biodiversity Emphasis on TFL 56. (See Map in Appendix 4). a) Restriction on harvesting from a Old Growth Management area (OGMA): OGMA's or portions of OGMA's may be harvested in the following condition: i. Felling or modifying a tree that is a safety hazard, if there is no other practicable option for addressing the safety hazard; ii. Creating guyline tiebacks, skyline anchors, skyline corridors, or tail trees; iii. Felling or modifying a tree for establishing or maintaining an interpretive forest site, recreation site, recreation facility or recreation trail; iv. To provide road access where no other practicable option for the road location exists, or v. Where timber is damaged as a result of wind, fire or forest health factors where, in the opinion of the qualified registered professional and documented in a supporting rational, the conditions of the OGMA is rendered ineffective. Ineffective is defined as damaged to a degree that the OGMA no longer has the attributes consistent with the condition and intent of the original OGMA. Where the harvest area is mappable (greater than 0.25 ha), a QP will spatially identify a replacement area of at least the same size that provides equal or greater biological value. This will be assessed as per the Guidance for Subscript K of the KHLPO_2021 (See Appendix 3). Other factors the professional will identify and consider are: • Maintaining or improving interior forest conditions, old forest attributes and landscape level connectivity. • A good representation of old forest identified within the relevant biogeoclimatic zone subzone of the Landscape Unit. • Priority for establishing replacement areas will focus on Ancient Forests (>400 years old), rare ecosystems or older stands first. b) Changes to boundaries or location of the OGMA's will be updated and tracked within the licence holder's database. Annually, the data sets will be submitted to the ministry to update the BC Geographic Warehouse upon their request.
	2. Collaborative planning: Prior to applying for a cutting permit or road permit, RCFC will share information with BCTS as required to ensure that the development does not cause Landscape Unit 19 targets not to be met.
	3. Special Tree Protection Regulation: RCFC will comply with the Special Tree Protection Regulation dated September 11. 2020.
Objective, strategies, and results apply to these Forest Development Units:	☒ Downie ☒ Goldstream

3.10 Grizzly Bear Management

Table 12. Revelstoke Higher Level Plan Order: Grizzly bear Management

Table 12	**Revelstoke Higher Level Plan Order: Grizzly Bear Management**
Legal Reference:	RHLPO – Resource Management Objective 4.
Objective:	To retain forest cover adjacent to high value habitat components of avalanche chutes according to the requirements of the RHLPO in order to contribute to maintaining the viability of existing Grizzly Bear populations.
Results and Strategies:	**Retention of Grizzly Bear habitat:** RCFC will manage for Grizzly Bear habitat according to the results and strategies set out in Objective 4 of the Revelstoke Higher Level Plan Order effective March 25, 2005.
Objective, strategies, and results apply to these Forest Development Units:	☒ Downie ☒ Goldstream

3.11 Recreation

Table 13. Objectives Set by Government for Recreation Sites, Recreation Trails and Interpretive Forest Sites

Table 13	**Objective Set by Government for Recreation Resource Objectives**
Legal Reference:	Forest and Range Practices Act, Sections 56, 180 and 181
Objective:	To manage forest recreation sites, recreation trails and interpretive forest sites in accordance with the expectations of government.
Results and Strategies:	**Section 16 authorizations:** RCFC will obtain authorization under Section 16 of *the Forest Recreation Regulation* wherever required prior to commencing harvesting on a recreation site, recreation trail or interpretive forest site.
Objective, strategies, and results apply to these Forest Development Units:	☒ Downie ☒ Goldstream

4.0 Other Measures

"Other" measures listed below apply to all Forest Development Units in this Forest Stewardship Plan.

4.1 Invasive Plants

Section 17 of the Forest Planning and Practices Regulation requires a forest stewardship plan to specify measure to prevent a licensee's forest practices from introducing or spreading species of plants that are listed under the Invasive Plants Regulation.

Invasive plants means species that are listed on the Invasive Plants Regulation.

4.1.1 Annual occurrence download:

Prior to site plan development, RCFC will download the invasive plant occurrences from the Invasive Alien Plant Program (IAPP) Map Display website. Sites that are identified in the field during planning and harvesting activities will also initiate measures to be implemented and be included in this strategy.

4.1.2 Best Practices:

Where harvesting and/or road construction takes place the following best management practices will be used:

a. Where practicable, avoid infested areas or work non-infested areas first and infested areas last.
b. Where practicable, work infested areas during the winter
c. Minimize soil disturbance
d. Heavy equipment operators used in harvesting and road construction will visually inspect their equipment and any plant remnants and soil will, to the extent practicable, be manually cleaned prior to accessing and leaving the site.
e. Each contractor supplying harvesting and road building equipment will be advised prior to the start of work of the known invasive plants and given relevant plant identification information to facilitate invasive plant recognition and reporting. Columbia Shuswap Invasive Species Society (CSISS), Revelstoke IPM priority ranking 1 (Regional EDDR), 2 (Eradcation and Annual Control) and 3 (Containment) species (Appendix 7) will be labelled on SP maps and invasive plants will be discussed and documented in the prework.

4.1.3 Grass Seeding:

RCFC will grass seed sites within 100 meters of known invasive plant locations during the first spring or first fall after road construction or on harvest areas that do not have stocking standards. RCFC will ensure successful (>50% coverage) grass seed establishment (via road maintenance inspections by a QP) within two years of completing timber harvesting or road construction on an area. The grass seed will meet or exceed Canada Common #1 Specifications as defined by the

Canada Seeds Act. The seed analysis certificate will be inspected and seed lots that contain seeds of listed invasive plants will be reject.

Grass seeding will occur if both of the following conditions apply:

a. The area was disturbed through RCFC's forest practices (>100m2) and has not been reforested; and
b. Grass will likely grow on the disturbed area and will materially reduce the likelihood of invasive plant germination; areas such as steep road cuts where seed will not adhere and/or compact till soils, will not be seeded.

4.1.4 Invasive Plant Recognition and Reporting

RCFC field staff and contractors will be trained in the identification of invasive species annually.

Any new occurrences of invasive plants that are categorized by the Columbia Shuswap Invasive Species Society (CSISS) Revelstoke IPM as priority ranking 1 (Regional EDDR), 2 (Eradcation and Annual Control) and 3 (Containment) that are discovered on TFL 56 will be reported to Report-A-Weed in the IAPP database within 30 days of discovery (Appendix 7).

4.2 Range Barriers

Section 18 of the Forest Planning and Practices Regulation requires a forest stewardship plan to specify measures to mitigate the effects of removing or rendering ineffective natural range barriers.

There is no licensed range use within, or adjacent to, TFL 56.

4.3 Karst Features

Mapping: During initial layout phases, RCFC will refer to the "potential" Karst layers in the BC government warehouse to determine locations of possible Karst features.

Training: RCFC field staff and layout crews will be familiar with the Karst Management Handbook for British Columbia (May 2003).

BMP's: RCFC will follow Best Management Practices found in the Karst Management Handbook for British Columbia (May 2003).

4.4 Cumulative Effects of Multiple FSP's

BC Timber Sales (BCTS) Okanagan-Columbia currently have an FSP within TFL 56. Landscape Unit R19 is shared with BCTS but there are two agreed upon mapped areas that BCTS operates (Nightmare and Daydream creeks). RCFC will communicate its intentions to BCTS to address and resolve LU issues within LU R19 for shared Wildlife and Biodiversity – Landscape Level and RHLPO - Old Forests on a yearly basis or as operational plans develop.

If the Holders of the FSP's within shared LU's are unable to reach an agreement for sharing responsibilities to obtain results and strategies consistent with the objectives set by Government, a request for resolution will be made to the Minister under Section 9 of FRPA.

4.5 Public and Stakeholder Input

RCFC will post a Forest Operations Map on our website for public and stakeholder information and will show planned cutblocks and associated roads. This map will be updated as new information becomes available within 30-days prior to a cutting permit or road permit application. Comments will be considered in the development process.

5.0 Stocking Standards

RCFC has adopted the stocking standards created by the local office of the Ministry of Forests, Lands and Natural Resource Operations (Version 3.0). These standards were developed by the Ministry of Forests in consultation with local forest practitioners and are included in Appendix 1. The following criteria apply:

1) FPPR Section 16(1) – DCO Stocking Standards Version 3.0 and FPPR Section 44 (Free Growing Stands Generally) apply to both the Downie and Goldstream Forest Development Units (FDU's).
2) FPPR Section 16(3) – Section 44(1) applies to all areas with a free growing obligation in the Downie and Goldstream FDU's.
3) FPPR Section 16(4) – DCO Stocking Standards Version 3.0 for intermediate cutting will be applied to areas referred to in FPPR section 44(4) for both the Downie and Goldstream FDU's.

6.0 REVISIONS

All revisions to the FSP are listed in Appendix 4.

7.0 MAPS

A 1:50,000 FSP map is included in Appendix 5.

Appendix 1: Stocking Standards

DCO FSP Stocking Standards
Version 3.0

A person required to prepare a Forest Stewardship Plan (FSP) must include stocking standards as per Section 16 or the Forest Planning and Practices Regulation (FPPR).
The DCO Stocking Standards have been developed to ensure that the objectives set by government for timber [FPPR 6 (a)] are met. That is: the standards are designed to maintain or enhance an economically valuable supply of commercial timber from British Columbia's forests. The remaining values of government as outlined in the FPPR should be achievable without compromising timber production.

These standards should be applied to an area based on the Silviculture System chosen for the site and the biogeoclimatic ecological classification zone (BEC Zone) that the area falls in.

Definitions:

Silviculture Systems
Silviculture systems terminology and definitions are as per the Silviculture Systems Guidebook April 1995 and the Silviculture Systems Handbook for British Columbia – October 2001.

The definition of an even-aged stand and an uneven aged stand is currently contained in the FPPR:

"Even-aged stand means a stand of trees consisting of only one or two age classes"

"Uneven-aged stand means a stand of trees consisting of three or more age classes"

Even aged Silviculture Systems are:
Clear Cut, Patch Cut, Seed Tree, and Shelterwood

Even aged Silviculture Systems have regeneration objectives. The intent is to remove enough of the existing stand so that an adequate density of regeneration may be achieved either naturally or artificially over a relatively short period of time. A new stand (crop) is created and managed for a future date (rotation). Table A contains stocking standards developed for areas managed with even aged Silviculture Systems. The stocking standard, regeneration date, free growing date and free growing height apply to the new crop of trees. In the stocking standard, density is a measure of trees per hectare.

Reserves may form a component of any even aged Silviculture System, but they do not contribute to crop tree stocking.

A Clear Cut with Dispersed Retention cannot have more than 8M^2 BA in the MS dk, IDF dm2, ICH mw1, ICH mk1 and ESSF dk BEC Zones and still be classified as a Clear Cut. A Clear Cut with Dispersed Retention cannot have more than 12m^2 BA in all other BEC Zones and still be classified as a Clear Cut.

Dispersed retention is defined in the October1, 2008 RESULTS INFORMATION SUBMISSION SPECIFICATIONS as: “trees that are retained individually or in unmapped groups (e.g., small clusters<0.25ha) but are enclosed within the boundaries of the mapped polygon.

Uneven-aged Silviculture Systems are:
Single Tree Selection, Group Selection and occasionally Irregular Shelterwood

Uneven aged Silviculture Systems depend on the recruitment of trees into successive age classes over time (>3 age classes), including a regeneration layer. The stand is managed using regular, sustained harvesting entries in perpetuity by managing towards a balanced uneven-aged structure. The crop is made up of trees from several age classes of the existing stand, plus either artificial or natural regeneration. Table B stocking standards are developed for areas with Single Tree Selection systems in the IDF BEC Zone. The standards are layered, and the stocking level applicable to each layer is shown in Table B. The density is a measure of trees per hectare.
The groups within a Group Selection system should be large enough that they can be tracked within the stand and managed using even aged stocking standards and measured with classic stocking and free growing surveys. Groups are openings with a width of less than two times the height of adjacent mature trees.
Reserves may form a component of any Uneven-aged Silviculture System, but they do not contribute to crop tree stocking.

Intermediate Cut
Partial Cutting and Intermediate Cutting are not Silviculture Systems; they refer to harvesting methods and are generic to a stand entry that forms part of a Silviculture System. These cuts generally occur in even aged stands and imply even aged management objectives. However, they may be part of a plan to create an uneven aged stand which will eventually be managed using a selection system. An Intermediate Cut entry has no regeneration objectives; the crop is the existing stand as modified by the harvest entry. Table C contains standards for Intermediate Cuts with no Regeneration Obligation. There is no regeneration date, free growing date or free growing height. The stocking density is measured in terms of Basal Area per hectare. To qualify as an IC, a minimum of 40% of the stands original BA must be retained or the minimum BA required by BEC zone whichever is greater. Minimum BA requirements by BEC Zone are: 18m^2 BA of **merchantable** crop trees in the MS dk, IDF dm2, ICH mk1, ICH mw1 and ESSF dk BEC Zones and greater than 24m2 of **merchantable** crop trees in all other BEC Zones.

Beetle Proofing
To reduce the susceptibility of a stand to mountain pine beetle the merchantable BA of the stand may be reduced to 15m2 in the following circumstances:

The stand is dominated by Pli – i.e. the Pli is >75% of the volume of the Layer 1 trees.
The stand is 80-120 yrs old and has reasonable vigour
The average stand diameter is >20cm dbh
The stand density is between 750 and 1500 total stems/ha
The stand is thinned from below
The height diameter ratio will not apply to these stands

Height to Diameter Ratio (HDR)
The HDR is calculated by taking the total height of the tree in meters and dividing it by the 1.3 m diameter (dbh) of the tree in centimetres. For example a 16 m tall tree that is 20.0 cm dbh has a HDR of 16/20 = 0.8

Additional DCO Standards

This text portion of these standards constitutes approved variations to the Stocking Standards in the Tables that may be entered directly into RESULTS.

Note: in the FPPR the regeneration date, free growing date and free growing height are 'separate' from the stocking standard. The stocking standard will include: The BEC Zone, the preferred and acceptable crop tree species; the stocking densities (target, minimum preferred and minimum preferred and acceptable) as either stems/ha or Basal Area (BA)/ha; the minimum inter-tree distance for well spaced crop trees; maximum density requirements, post spacing densities minimums and maximums; and height of trees relative to competing vegetation.

Regeneration Period
The period to calculate the Regeneration Date is 4 years for Artificial Regeneration and 7 years for Natural Regeneration

Free Growing Period
The period to calculate the Free Growing Date is 20 years.

Free Growing Height
Minimum free growing heights are shown in Table A.

Maximum Density (all areas)
As per the Regional Executive Director's letter dated February 8, 2006
Re: Revised Maximum Density Number for Lodgepole Pine in the Southern Interior Forest Region
Max (countable sph) Pli = 25,000

Max (countable sph) all other species = 10,000
Post Spacing (sph) Min=1000, Max =4000

Minimum Inter-tree Distances (MITD)
Trees must be greater than or equal to the approved minimum inter-tree distance apart in order to be well spaced.

Minimum inter-tree distance (m)	Location/Condition
1.00	Planting on mechanically mounded sites
1.30	Planting on sites with elevated microsites (natural hummocks and mounds), problem vegetation areas (woody brush; Douglas maple; willow; alder), very rocky sites and planting on hygric or wetter sites,
1.50	Fill plants, areas with a significant number of advance regen, and areas with significant accumulations of untreatable slash.
1.7	Planting in the ICHwk1, ICHvk1, ICHmw1, ICHmw2, ICHmw3, ESSFvc, ESSFwc1, ESSFwc2 and ESSFwc4.
2.00	All other areas

Height of Trees Relative to Competing Vegetation
In addition to being the required minimum height, tree height must be greater than the following % relative to competing vegetation within a one metre radius of the trunk:

% Ht above competing veg	BEC Zone
125%	ESSF IDF MS
150%	all other areas

Note: Free growing status will be evaluated using the MOF procedures in place at the time of assessment. Current procedures are defined in Appendix 9 of the Establishment to Free Growing Guidebook: Nelson Region, May 2000. Use Appendix 9 as revised October 2007

Adjustments to Stocking Standards
Changes to target/minimum stocking levels will be considered as separate amendments to the forest stewardship plan on a site specific basis (one off). The amendment will be submitted using the MOF procedures in place at the time of the amendment submission. The current method for submitting a one off stocking standard is through the FSP Tracking System.

Free Growing Damage Criteria

For even aged Silviculture Systems, damage to FG trees will be evaluated using the MOF procedure in place at the time of assessment. Current procedures are as per the April 2008 Free Growing Damage Criteria. These criteria are contained within Appendix 10 of the Stocking and Free Growing Survey Procedures Manual, April 2009.

For uneven aged Silviculture Systems damage to FG trees will be evaluated using the MOF procedure in place at the time of assessment. Current procedures are as per the May 16th 2008 Multi-Layer Free Growing Damage Criteria.

Further leave tree criteria for mature trees are listed in Tables A, B and C.

Minimum Leave Tree Characteristic for Advance Regeneration:

Advance regeneration must meet the requirements of Appendix 10 of the Establishment to Free Growing Guidebook: Nelson Region, May 2000 to be acceptable. In addition to Appendix 10:

When employing an Even aged Silviculture System with even-aged stocking standards (Table A) – to be an acceptable crop tree - advance regen are:

- Trees that existed in the under-story in the pre-harvest stand and were not removed during harvest
- No more than 40 years old at the time of harvest at dbh in all BEC Zones except the ESSF to be acceptable.

Dispersed retention of trees that were in the over-story in the pre-harvest stand are not considered to be advance regen.

Wildlife Trees

Dispersed wildlife trees in a block that contribute to Wildlife Tree Retention Areas required by the FSP to meet biodiversity requirements do not count towards crop tree stocking.

Dispersed Veteran Deciduous Wildlife Trees will not count as impeding to crop trees when conducting a Free Growing Survey where the BA of the total dispersed retention in the blocks is less than 8M2 in the MS dk, IDF dm2, ICH mk1, ICH mw1 and ESSF dk BEC Zones and less than 12 m2 BA in all other BEC Zones.

Dispersed Strata

On standards units where dispersed, non-mappable complexes of differing site series are noted, the preferred and acceptable species for the applicable site series (as per table A) shall apply. The target and minimum stocking standards shall be based on the dominant site series.

ESSF/ICH Transition Sites

Where it is not practical to separate a transitional site into standards units applicable to two BEC Zones the Stocking Standards from either BEC Zone may be used or a combination of both.

Whitebark Pine
Whitebark pine (Pa) is a blue listed species. Pa will be considered a preferred species wherever it is found naturally. Minimum leave tree characteristics for advance regeneration do not apply to Pa.

Addition of new Biogeoclimatic zones in Golden
Until new stocking standards have been developed use the Table A, B and C stocking standards for the new BEC zones.
ICHdk5 – Use IDF dm2 standards
ICH mk4 – Use ICH mk1 standards
MS dk2 – Use the MS dk standard
ESSF dk2 – Use the ESSF dk standards or the ESSF wm (as per BEC Version 5) whichever is the best fit.

Relationship of Stocking Standards to Silviculture System

Even aged Silviculture systems
When denudation is reported into RESULTS, any area reported as an even aged Silviculture System must have Table A stocking standards. The exception is a Shelterwood prepatory cut which may have Intermediate Cut – No Regeneration Obligation Standards.

Classic stocking and free growing surveys should be used to measure even aged regenerated stands against the stocking standard. Where there is dispersed retention an even aged layered survey may be used.

Uneven aged Silviculture Systems
When denudation is reported into RESULTS, any area reported as an uneven aged Silviculture System in the IDF must have Table B stocking standards. Multi story survey methodology should be used to measure the stand against the standard. The basal area may be collected for layer 1 trees. For all other BEC Zones, Table B densities may be modified to fit existing stand conditions if the densities are developed using stand/stock tables and the BDq methodology outlined in the Silviculture Systems Handbook for British Columbia 2001.
The exception may be group selection where the groups are mappable and managed as small even aged areas with Table A standards. If any harvesting occurs outside the groups but within the block (i.e. skid roads between groups) the area must have an Intermediate Cut Standard from Table C.

Intermediate Cuts

When denudation is reported into RESULTS, any area reported as an Intermediate Cut must have Table C stocking standards.
The post harvest survey must measure the basal area of the crop trees for compliance with the standard. The stand description should not be layered – it should resemble the pre-harvest inventory label with an accurate portrayal of what the stand looks like post harvest.

When reporting the Forest Cover Inventory for an Intermediate Entry, report the **Total** BA retained in the Inventory label and the **Crop Tree** BA in the Silviculture Label

DCO FSP Stocking Standards
Version 3.0
FSP Even-Aged Stocking Standards**
Table A

BGC		ID#	Regeneration and Free Growing Stocking Standards					Min FG Height	
Classification			Species		Stocking				
			Conifer		Well-spaced/ha				
Zone/SZ	Series	ID#	Preferred p	Acceptable a	Target	**MIN**pa	**MIN** p	Species	Htm
ESSF dk	01,03,04	1033743	Pl Sx (Fd Lw)[14]	Bl	1200	700	600	Pl, Lw Fd Others	1.6 1.0 0.8
	02	1033744	(Fd Lw)[9,14] Pl	Sx	1000	500	400	Pl, Lw Fd Others	1.2 0.8 0.6
	05,06	1033745	(Bl Sx)[32] Pl		1200	700	600	Pl Others	1.6 0.8
ESSFvc	01, 04	1033746	Sx Bl Hm[71,34]		1200	700	600	All	0.8
	02, 03, 05	1033747	Sx Bl Hm[71,34]		1000	500	400	All	0.8
ESSFwc1	01, 03, 04	1033748	Bl Sx Pl[23,34]	(CwHw)[9,32] Hm	1200	700	600	Pl Others	1.6 0.8
	02	1033749	Pl[34] Sx Bl	Cw[55] Hm Hw	1000	500	400	Pl Others	1.2 0.6
ESSFwc2	01, 04, 05,	1033750	Bl Sx	Pl[23,34] Hm	1200	700	600	Pl Others	1.6 0.8
	02	1033751	Pl Sx[10,13]	Bl[10] Hm	1000	500	400	Pl Others	1.2 0.6
	03	1033752	Sx Bl Pl[23,34]	Hm	1000	500	400	Pli Others	1.2 0.6
	06 07	1033753	(Sx Bl)[32] Pl[23,34]	Hm	1200	700	600	Pli Others	1.6 0.8
	08	1033754	(Bl Sx)[1,32] Pl[23,34]	Hm	1000	500	400	Pl Others	1.2 0.6
	09*	1033755	Pl[1] Sx[1,32]	Bl[1,32] Hm	400	200	200	Pl Others	1.2 0.6
	1,2 etc – see “Footnotes” Brackets indicate the footnote applies to all species within the brackets e.g. (Fd Lw)[9,14] *Avoid Logging **Additional information or requirements may be found in the text portion of these standards and/or in the FSP Stocking Standard Section								

DCO FSP Stocking Standards
Version 3.0
FSP Even-Aged Stocking Standards**
Table A

BGC		ID#	Regeneration and Free Growing Stocking Standards					Min FG Height	
Classification			Species		Stocking				
			Conifer		Well-spaced/ha				
Zone/SZ	Series	ID#	Preferred p	Acceptable a	Target	**MIN**p a	**MIN** p	Species	Ht m
ESSF wc4	01 04 05	1033756	Bl Sx Pl[23,34]	Hm	1200	700	600	Pl Others	1.6 0.8
	02 03	1033757	Sx Bl[54] Pl[23,34] [54] 02 only	Hm	1000	500	400	Pli Others	1.2 0.6
	06	1033758	(Sx Bl)[1,32]	Hm	1200	700	600	All	0.8
	07	1033759	(Sx Bl)[1] Pl[23,1,34]	Hm	1000	500	400	Pli Others	1.2 0.6
ESSF wm	01	1033760	Bl Sx (FdLw)[14]	Pl[34]	1200	700	600	Lw,Pl Others	2.0 1.0
	02	1033761	Sx Pl[34]	Bl Hw[14]	1200	700	600	Pl Others	2.0 1.0
	03	1033762	(Fd Lw)[9,32]Sx	Bl Pl[34] Pw[9,31,32,57] Hw	1200	700	600	Lw Pl Pw Fd, Others	2.0 1.4 1.0
	04	1033763	Bl Sx	Pl[34]Hw[14]	1200	700	600	Pl Others	2.0 1.0
ESSF mm1	01, 04, 05, 06	1033764	Bl Sx	Pl	1200	700	600	Pl Others	1.6 0.8
	02, 03	1033765	(Bl Sx)[28] Pl		1000	500	400	Pl Others	1.2 0.6
	07*	1033766	(Bl Sx)[1,32]	Pl[1]	400	200	200	Pl Others	1.2 0.6
	1,2 etc – see “Footnotes” Brackets indicate the footnote applies to all species within the brackets e.g. (Fd Lw)[9,14] *Avoid Logging **Additional information or requirements may be found in the text portion of these standards and/or in the FSP Stocking Standard Section								

DCO FSP Stocking Standards
Version 3.0
FSP Even-Aged Stocking Standards**
Table A

BGC		ID#	Regeneration and Free Growing Stocking Standards					Min FG Height	
Classification			Species		Stocking				
			Conifer		Well-spaced/ha				
Zone/SZ	Series	ID#	Preferred p	Acceptable a	Target	**MIN**pa	**MIN** p	Species	Htm
ICH mk1	01	1033767	(Fd Lw)$^{9, 14, 32}$ Pl Sx^{10,13}	Bl^{10,13} Cw^{10,13,32}	1200	700	600	Pl Lw Fd Others	2.0 1.4 1.0
	02	1033768	Fd Pl	(Sx Bl)^{10,13} Py^{9,14}	600	400	400	Pl Fd Others	1.4 1.0 0.8
	03	1033769	Fd Lw Pl Sx^{10,13}	(Cw Bl)^{10,13}	1000	500	400	Pl Lw Fd Others	1.4 1.0 0.8
	04	1033770	(Fd Lw)^{32} Pl Sx$^{10, 13}$	Bl$^{10, 13}$ Cw$^{10. 13, 32}$	1200	700	600	Pl Lw Fd Others	2.0 1.4 1.0
	05, 06	1033771	Pl Sx Fd$^{9, 14, 32}$	Bl Lw^{9,14,32} Cw^{32}	1200	700	600	Pl Lw Fd Others	2.0 1.4 1.0
	07	1033772	Pl^{1} Sx^{1} Fd$^{1, 32}$	Bl^{1}Cw^{32} Lw^{1,32}	1000	500	400	Pl Lw Fd Others	1.4 1.0 0.8
ICH mw1	01	1033773	Fd Pl Cw Sx Lw^{23} Hw^{71}	Bl Pw^{31,57}	1200	700	600	Pl Lw Pw Fd, Others	2.0 1.4 1.0
	02, 04	1033774	Fd Pl Lw^{23}	(Cw Sx)^{28} (Bl Hw)^{28} Pw^{31,57}	1200	700	600	Pl Lw Pw Fd, Others	2.0 1.4 1.0
	03	1033775	Fd Pl Hw^{71} Sx$^{10, 13, 28}$ Lw^{23} Cw^{28}	Bl^{28} Pw$^{31, 57}$	1200	700	600	Pl Lw Pw Fd Others	2.0 1.4 1.0
	05	1033776	Cw^{32} Fd$^{1, 32,}$ Hw^{32} Sx Lw^{9,14,23}	Bl Pl Pw$^{1, 32, 57}$	1200	700	600	Pl Lw Pw Fd, Others	2.0 1.4 1.0
	06	1033777	Cw Fd$^{9, 14}$ Bl Hw Sx Lw$^{9, 14,23}$	Pl Pw$^{31, 57}$	1200	700	600	Pl Lw Pw Fd Others	2.0 2.0 1.4 1.0
	07	1033778	(Cw Hw)^{32} Sx Fd^{1,14,32}	Bl Pl	1000	500	400	Pl Fd Others	1.4 1.0 0.8
	1,2 etc – see “Footnotes” Brackets indicate the footnote applies to all species within the brackets e.g. (Fd Lw)^{9,14} *Avoid Logging **Additional information or requirements may be found in the text portion of these standards and/or in the FSP Stocking Standard Section								

DCO FSP Stocking Standards
Version 3.0
FSP Even-Aged Stocking Standards**
Table A

BGC		ID#	Regeneration and Free Growing Stocking Standards					Min FG Height	
Classification			Species		Stocking				
			Conifer		Well-spaced/ha				
Zone/SZ	Series	ID#	Preferred p	Acceptable a	Target	**MIN**pa	**MIN** p	Species	Ht m
ICH mw2	01, 04	1033779	Fd Lw Pl^{71} Sx^{10,13}Cw Hw	Pw^{31,57} Bl^{10,13} Py^{9,14,23}	1200	700	600	Pl Lw Pw Fd Others	2.0 1.4 1.0
	03	1033780	Fd Lw Pl Cw	Pw$^{31, 57}$ (SxBl)$^{10, 13}$ Hw Py$^{9, 14 23}$	1200	700	600	Pl Lw Pw Fd, Others	2.0 1.4 1.0
	05	1033781	Cw Sx Pl^{71}Hw (Fd Lw)^{9,14,}	Bl Pw^{31,57} Py^{14,23}	1200	700	600	Pl Lw Pw Fd, Others	2.0 1.4 1.0
	06	1033782	Cw^{32} Sx Pl^{71} Hw^{32}(Fd Lw)^{1,32}	Bl Pw^{31,57} Py^{14,23}	1200	700	600	Pl Lw Pw Fd, Others	2.0 1.4 1.0
	07 08	1033783	(Cw Hw)$^{1, 32}$ Sx^{1} Fd^{23}	(Bl Pl)^{1} Pw$^{1, 31, 57}$	1000	500	400	Pl Pw Others	1.4 0.8
ICH mw3	01 04 05	1033784	Fd Pl^{71} Lw^{23} (Cw Sx Hw)$^{10, 13}$	Pw$^{31, 57}$Bl	1200	700	600	Pl Lw Pw Fd Others	2.0 1.4 1.0
	02	1033785	Fd Pl Lw^{23}	Py^{9,14,23} Pw^{31,57}	1000	500	400	Pl Lw Pw Fd Py	1.4 1.0 0.8
	03	1033786	Fd^{32} Pl Lw^{23,32}Hw^{23} Cw^{10,13}	Pw^{31,57} (Sx Bl)^{10,13}	1000	500	400	Pl Lw Pw Fd Others	1.4 1.0 0.8
	06	1033787	Fd^{14} Pl^{71} Lw^{23} Cw Sx Hw	Pw^{31,57} Bl	1200	700	600	Pl Lw Pw Fd Others	2.0 1.4 1.0
	07	1033788	(Cw Hw)^{32}Sx Fd^{1,32} Pl^{71}	Bl Pw^{31,57} Lw^{1,23,32}	1200	700	600	Pl Lw Pw Fd Others	2.0 1.4 1.0
	08	1033789	(Cw Hw)^{1,32} (Sx Pl)^{1}	Bl^{1} Pw^{57}	1000	500	400	Pl Pw Others	1.4 0.8
	1,2 etc – see “Footnotes” Brackets indicate the footnote applies to all species within the brackets e.g. (Fd Lw)^{9,14} *Avoid Logging ** Additional information or requirements may be found in the text portion of these standards and/or in the FSP								

DCO FSP Stocking Standards
Version 3.0
FSP Even-Aged Stocking Standards**
Table A

BGC		ID#	Regeneration and Free Growing Stocking Standards					Min FG Height	
Classification			Species		Stocking				
			Conifer		Well-spaced/ha				
Zone/SZ	Series	ID#	Preferred p	Acceptable a	Target	**MIN**pa	**MIN** p	Species	Ht m
ICH vk1	01 04	1033790	(Cw Hw)^{32} Sx Bl^{23} Fd^{1,9,14,32,34,71} Lw$^{9, 14, 23}$	Pw^{31,57} Yc^{23}	1200	700	600	Pw Lw Fd Others	2.0 1.4 1.0
	03	1033791	Fd^{9,} Cw Sx Hw Bl^{23} Lw^{9,14,23}	Pw^{31,57}	1200	700	600	Lw Pw Fd Others	2.0 1.4 1.0
	05 06	1033792	(Cw Hw)^{1,32} Sx^{1}	Bl^{1} Pw^{1,31,57} Yc^{23}	1000	500	400	Pw Others	1.4 0.8
ICH wk1	01 04	1033793	Cw Hw Sx^{10,13} Fd^{9,14,} Bl^{23} Lw^{9,14,23,32}	Pw^{31,57} (Yc Pl)^{23}	1200	700	600	Pl Lw Pw Fd Others	2.0 1.4 1.0
	03	1033794	Fd Pl	Bl Cw Hw Pw^{57} Sx	1000	500	400	Pl Pw Fd Others	1.4 1.0 0.8
	05	1033795	(Cw Hw)^{32} Sx Bl^{23} Fd^{1,9,14,32} Lw^{1,14,23,32}	Pw^{31,57} (Yc Pl)^{23}	1200	700	600	Pl Lw Pw Fd Others	2.0 1.4 1.0
	06 07 08	1033796	(Cw Hw)^{1,32} Sx^{1} Bl^{1,23}	Pw^{1,31,57} Pl^{1,23,34}	1000	500	400	Pl Pw Others	1.4 0.8
	1,2 etc – see “Footnotes” Brackets indicate the footnote applies to all species within the brackets e.g. (Fd Lw)^{9,14} *Avoid Logging ** Additional information or requirements may be found in the text portion of these standards and/or in the FSP								

DCO FSP Stocking Standards
Version 3.0
FSP Even-Aged Stocking Standards**
Table A

BGC		ID#	Regeneration and Free Growing Stocking Standards					Min FG Height	
Classification			Species		Stocking				
			Conifer		Well-spaced/ha				
Zone/SZ	Series	ID#	Preferred p	Acceptable a	Target	**MIN**pa	**MIN** p	Species	Ht m
IDF dm2	01	1033797	(Fd Lw)[32] Py	Pl[10,13]	1000	500	400	Pl Lw Fd Py	1.0 0.8 0.6
	03	1033798	Fd[27] Py Lw[10,13]		600	400	400	Lw Fd Py	1.0 0.8 0.6
	04	1033799	(Fd Lw)[32] Pl Sx		1200	700	600	Pl Lw Fd Others	1.4 1.0 0.8
	05 07	1033800	Pl Sx (Fd Lw)[1,32]		1000	500	400	Pl Lw Fd Others	1.0 0.8 0.6
MS dk	01 05	1033801	(Fd Lw)[32] Pl Sx	Bl	1200	700	600	Pl Lw Others	1.4 0.8
	03	1033802	Fd Lw Pl	Bl Sx	1000	500	400	Pl Lw Others	1.0 0.6
	04	1033803	Fd Lw Pl	Bl Sx	1200	700	600	Pl Lw Others	1.4 0.8
	06	1033804	Sx (Fd Lw)[1,32]	Pl[1] Bl	1200	700	600	Pl Lw Others	1.4 0.8

1,2 etc – see “Footnotes” Brackets indicate the footnote applies to all species within the brackets e.g. (Fd Lw)[9,14]
*Avoid Logging
** Additional information or requirements may be found in the text portion of these standards and/or in the FSP

FSP Stocking Standards Definitions and Footnotes for Table A B and C Stocking Standards

Conifer Tree Species	#	Footnotes
"Ba" means amabalis fir	1	Elevated microsites are preferred
"Bg" means grand fir	2	Suitable on thick forest floors
"Bl" means subalpine fir	3	Recommended for coarse-textured soils
"Bp" means noble fir	4	Recommended for medium-textured soils
"Cw" means western red cedar	6	Recommended on nutrient-very-poor sites
"Fd" means Douglas-fir	7	Recommended on nutrient-medium sites
"Hm" means mountain hemlock	8	Recommended on steep slopes
"Hw" means western hemlock	9	Recommended on southerly aspects (SSE to WSW)
"Lt" means tamarack	10	Recommended on northerly aspects (NW to ENE)
"Lw" means western larch	11	Recommended to crest slope positions
"Pa" means whitebark pine	12	Suitable on cold air drainage sties
"Pl" means lodgepole pine	13	Recommended in upper elevations of BGC Unit
"Pw" means white pine	14	Recommended on lower elevations of BGC Unit (species not recommended within 200m vertical of max elevation)
"Py" means ponderosa pine	15	Recommended in northern portion of BGC unit in region
"Sb" means black spruce	16	Recommended in southern portion of BGC unit in region
"Se" means Engelmann spruce	17	Recommended in western portion of BGC unit in region
"Ss" means Sitka spruce	18	Recommended in eastern portion of BGC unit in region
"Sw" means white spruce		19-22 Coastal only
"Sx" means hybrid spruce or interior spruce	23	Restricted to max 20% of well spaced P&A
"Sxs" means hybrid Sitka spruce	24	Suitable (as a major species) in wetter portion of BGC Unit
"Sxw" means hybrid white spruce	25	Suitable on sites lacking salal
"Yc" means yellow cedar	26	Suitable minor species on salal-dominated sites
Broadleaf Tree Species	27	Partial canopy cover required for successful establishment
"Acb" means balsam poplar	28	Limited by moisture deficit
"Act" means black cottonwood	29	Risk of heavy browsing by moose
"At" means trembling aspen	30	Risk of porcupine damage
"Dr" means red alder	31	Risk of white pine blister rust
"Ep" means common paper birch	32	Limited by growing –season frost
"Mb" means bigleaf maple	34	Risk of snow damage
"Qg" means garry oak	35	Risk of weevil damage
"Ra" means arbutus	36	Suitable major species on salal-dominated sites
Definitions	37	Risk of heart rots
"**MIN**" or "**Min**" means minimum	39	Avoid exposed and windy sites
"**P**" means Preferred	40	Risk of redheart
"**A**" means Acceptable	41	Limited by poorly drained soils
"**Biogeoclimatic unit**" or "**BGC classification**" means the zone, subzone, variant and site series described in the most recent field guide published by the MOF for the Identification and interpretation of ecosystems as applicable to a harvest area. Abbreviated BEC Zone in most of the DCO standards.	42	Restricted to fresh soil moisture regimes
		43-46 – Coastal only

FSP Stocking Standards Definitions and Footnotes for Table A B and C Stocking Standards

Definitions	#	Footnote
	47	Risk of balsam woolly adelgid
	48	Risk of heavy browsing by deer
	49	Applies only to rust resistant, planted stock
Footnotes # 5, 33, and 38 retired	50	Restricted to sites where the species occurs as a major species in a pre-harvest, natural stand
Any reference to well spaced stems in the footnotes also applies to free growing stems	51	Restricted to areas with proven Pl performance
	52	Restricted to sheltered microsites with deep soil
	53	minor component
	54	Risk of unsuccessful release of advance regeneration
	55	Acceptable in sx-sm portion of site series

#	Localized Footnotes
57	**Columbia** forest district – Pw rust-resistant stock may be preferred to a max 50% of preferred and acceptable well-spaced stems. Natural provenance Pw – acceptable to a maximum of 50% per plot and 10% well spaced P&A. Minimum pruning height of 1.0 m applies to natural Pw if required to meet MSS P&A
69	Species is restricted to upper elevations when used in the southern portion of the BGC Unit
70	Restricted to a maximum of 20% of preferred and acceptable well-spaced stems on northerly aspects
71	Restricted to a maximum of 50% of preferred and acceptable well-spaced stems
	Broadleaf Management Constraints
a	Productive, reliable, and feasible regeneration option
b	Limited in productivity, reliability and/or feasibility
	Additional information or requirements may be found in the text portion of these standards and/or in the FSP

DCO FSP Stocking Standards
Version 3.0
Table B Stocking Standards

Uneven Aged Stocking Standards – Single –tree selection for the IDF BEC Zone only				
Target from Table A Standards*	Layer**	Stocking		
Stems/ha (Standards ID#)		Target pa***	MIN pa	MIN p***
		Well Spaced /ha		
1200	1	600	300	250
	2	800	400	300
IDF dm2 04 (1033933)	3	1000	500	400
	4	1200	700	600
1000	1	400	200	200
	2	600	300	250
IDF dm2 01 (1033931)	3	800	400	300
IDF dm2 05 07 (1033934)	4	1000	500	400
900	1	400	200	200
	2	500	300	250
No IDF with 900 target	3	700	400	300
In DCO	4	900	500	400
800	1	300	150	150
	2	400	200	200
No IDF with 800 target	3	600	300	300
In DCO	4	800	400	400
600	1	300	150	150
	2	400	200	200
IDF dm2 03 (1033932)	3	500	300	300
	4	600	400	400
400	1	200	100	100
No IDF with 400 target	2	300	125	125
In DCO	3	300	150	150
	4	400	200	200

***Regeneration delay can be met immediately following harvest if the residual stand has no significant damage or pest problems and meets minimum stocking standards. If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest.

****Stand Layer Definition**

Layer 1	Mature	Trees > 12.5cm dbh
Layer 2	Pole	Trees 7.5cm to 12.4 cm dbh
Layer 3	Sapling	Trees >= 1.3 m ht to 7.4 cm dbh
Layer 4	Regeneration	Trees < 1.3 m ht

*****pa and *****p Preferred and acceptable species and Target are as specified in Table A by Biogeoclimatic Ecosystem Classification (BEC) site series.

Table B Stocking Standard Definitions

For all BEC Zones except IDF:

Table B densities may be modified to fit existing stand conditions if the densities are developed using stand/stock tables and the BDq methodology outlined in the Silviculture Systems Handbook for British Columbia 2001. Target pa, min pa and min p must be achieved in each layer and measured with “non-nested” survey methodology.

Minimum Leave Tree Characteristics

Trees Age Class 6 and Younger:
Layer 1 trees must meet limits defined in the Tree Wounding and Decay guidebook (Feb 97)-Long Term Retention Objective to be acceptable.
Crop trees of all species must have a height to diameter ratio (HDR) of 1.0 or less to be acceptable - except Pli which must have a HDR of 1.2 or less to be acceptable.
All trees must meet criteria defined in Appendix 10, Establishment to Free Growing Guidebook: Nelson Region - May 2000.

Trees Age Class 7 and Older
Layer 1 trees must meet the limits defined in the Cruising Manual (effective June 1, 2008) for tree classes 1, 2, 5, and 8.
Crop trees of all species must have a height to diameter ratio of 1.0 (HDR) or less to be acceptable - except Pli which must have a HDR of 1.2 or less to be acceptable.
All trees must meet criteria defined in Appendix 10, Establishment to Free Growing Guidebook: Nelson Region - May 2000.

Trees Age Class 1
Note: Damage to FG trees will be evaluated using the MOF procedure in place at the time of assessment. Current procedures are as per the Multi-layer Free Growing Damage Criteria May 16, 2008

Additional information or requirements may be found in the text portion of these standards and/or in the FSP

Table C Stocking Standards

Intermediate Cut - No Regeneration Obligation – Standards		
Minimum Crop Tree Basal Area Retained (M2/ha)	Standards ID	Additional Criteria (all areas)
50	1033935	To meet the minimum BA standard - retained crop tree basal area must be comprised of merchantable trees (Pli 12.5 cm DBH, other species 17.5 cm DBH) that meet or exceed the minimum leave tree characteristics outlined below. To qualify as an IC a minimum of 40% of the stands original BA must be retained or the minimum BA by BEC zone whichever is greater.
45	1033936	
40	1033937	
35	1033938	
30	1033939	
26	1033940	
24 min for all other BEC Zones	1033941	"NoRegen" Obligation Window is early 1 year and late 4 years
18 min for the MS dk, IDF dm2, ICH mk1, ICH mw1, ESSF dk BEC Zones only	1033942	
15 min for Beetle Proofing. HDR does not apply	1033943	When reporting the Forest Cover Inventory for an Intermediate Entry report the Total BA retained in the Inventory label and the Crop Tree BA in the Silviculture Label

Preferred and acceptable species to be retained are as specified in Table A by biogeoclimatic ecosystem classification (BEC) site series.

Table C Stocking Standard Definitions

Minimum leave tree characteristics:

Stands Age Class 6 and Younger:
Crop trees must meet limits defined in the Tree Wounding and Decay guidebook (Feb 97)-Long Term Retention Objective to be acceptable.
Crop trees of all species must have a height to diameter ratio (HDR) of 1.0 or less to be acceptable - except Pli which must have a HDR of 1.2 or less.
All trees must meet criteria defined in Appendix 10, Establishment to Free Growing Guidebook: Nelson Region - May 2000.

Stands Age Class 7 and Older
Crop trees must meet the limits defined in the Cruising Manual (effective June 1, 2008) for tree classes 1, 2, 5, and 8.
Crop trees of all species must have a height to diameter ratio of 1.0 (HDR) or less to be acceptable - except Pli which must have a HDR of 1.2 or less.

Table C Stocking Standard Definitions

Stands Age Class 7 and Older cont'd

All trees must meet criteria defined in Appendix 10, Establishment to Free Growing Guidebook: Nelson Region - May 2000.

Minimum Strata Size for Reforestation Obligations:

Any contiguous strata greater than one hectare, that as a result of harvesting have a basal area less than 18 m2 per ha for the MS dk, IDF dm2, ICH mk1, ICH mw1and ESSF dk BEC Zones, and 24 m2 for all other BEC Zones shall be reforested as specified in Table A by BEC site series.

Additional information or requirements may be found in the text portion of these standards and/or in the FSP

Table D RCFC Stocking Standard - Commercial Thin

Where a stand is harvested consistent with the Forest Planning and Practices Regulation (FPPR) section 44 (4) it shall be deemed a commercial thinning for a timber quality and quantity objective where it occurs in an even-aged stand of 25-65 years of age, site index of at least 18m, removing no more than 40% of the stand's initial basal area, utilizing access trails no more than 5m wide measured bole to bole, thinning from below or cutting based on quality and species between the access trails to encourage a growth response in the high value residual stems.

The commercial thinning standard unit complies with the conditions specified below for a minimum period of 12 months following the completion of harvesting:

- Greater than 20 m2 per hectare average basal area is retained in trees with a diameter at breast height of ≥ 12.5 cm, and
- No area > 2 ha or 10% of the Standards Units (SU) area, whichever is less, has a retained basal area less than 20 m2 per hectare, and
- Trees contributing to the retained basal area must be the species identified as preferred, acceptable, or ecologically suitable in the even-aged stocking standards for the BEC site series in this FSP, and
- Trees contributing to the retained basal area comply with the attributes defined in the Silviculture Surveys Procedures Manual "Free growing damage criteria for single entry dispersed retention stocking standard (SEDRESS) managed stands in Interior Deviation from Potential (DFP) and Layered Surveys".

The compliance assessment will be conducted using the Commercial Thinning Survey Procedures in the Silviculture Surveys Procedures Manual.

Where harvesting is deemed to be a commercial thinning based on the condition a minimum of 12 months following the completion of harvesting, the standard unit is exempt from the requirements to produce a free growing stand, consistent with FPPR section 44(3)(h).

If during the 12 months period following the completion of harvesting the conditions specified above are not maintained, the commercial thinning standards unit may be further stratified and the site plan amended to delineate where the licensee shall hold a free growing obligation on the harvested area and the appropriate stocking standard in the intermediate cutting or even-aged stocking standards in this FSP, including target and minimum density, shall be applied.

Appendix 2: *Revelstoke Higher Level Plan Order & Ungulate Winter Range #U-3-005*

HIGHER LEVEL PLAN ORDER

AND

SUBSEQUENT AMENDMENTS

Contents

PREAMBLE

The preamble is meant to provide context and does not form part of the order.

The Revelstoke and Area Land Use Planning Final Recommendations (October 1999) developed by the Revelstoke Minister's Advisory Committee were endorsed by government in April 2001. This document provided comprehensive guidance for the management of resource values that exist within the area. Key recommendations were selected from the report for establishment as a higher level plan order under Part 2 of the *Forest Practices Code of British Columbia Act*. Other provisions were not included in the higher level plan order because:

- they are satisfactorily addressed by the *Forest Practices Code of British Columbia Act* and the *Forest and Range Practices Act*;
- they will be addressed through provisions and procedures of other legislation;
- they do not relate to strategic and operational plans under the *Forest Practices Code of British Columbia Act* and the *Forest and Range Practices Act* and;
- the potential social and economic impacts of some provisions have not been analyzed.

Implementation of this Order should be guided by the contents of implementation policies and data preparation reports developed to support this Order. Future policy and information documents can be found on the following website- http://srmwww.gov.bc.ca/kor/hlp/rev.htm.

Government has established a goal of maintaining full access outside of protected areas for subsurface resource exploration and development. Consequently, the objectives established by this higher level plan order are not intended to have an impact on the permitting of subsurface resource exploration and development.

REVELSTOKE HIGHER LEVEL PLAN ORDER

ORDER ESTABLISHING RESOURCE MANAGEMENT ZONES AND RESOURCE MANAGEMENT ZONE OBJECTIVES WITHIN THE AREA COVERED BY THE REVELSTOKE AND AREA LAND USE PLAN AS A HIGHER LEVEL PLAN PURSUANT TO SECTIONS 3(1) AND 3(2) OF THE *FOREST PRACTICES CODE OF BRITISH COLUMBIA ACT* (THE ACT)

PART 1

Establishment of Resource Management Zones

Pursuant to Section 3(1) of the Act, the following zone as presented on Map 1.0 (attached) is established as a Resource Management Zone (RMZ):

A Revelstoke Resource Management Zone;

PART 2

Resource Management Zone Objectives

The Revelstoke Higher Level Plan Order establishes Resource Management Objectives. Pursuant to Section 3(2) of the Act, objectives 1 to 4 in Part 2 of this order are established as Resource Management Zone objectives for the RMZ established above.

1) Biodiversity Emphasis:

a) For the sole purpose of implementing objective 2 (old and mature forest), biodiversity emphasis is assigned within landscape units as outlined on Map 1.1.

2) Old and Mature Forest:

a) To contribute to the conservation of biodiversity, maintain mature and old and old seral forests to the levels indicated in tables 2.1, 2.2, 2.3 and as specified in subsection b) below. Requirement levels are to be met at the biogeoclimatic subzone variant level using the variants mapped on map 2.1.

Table 2.1 Seral Distribution for Natural Disturbance Type (NDT) 1
(percentage of forest[1] area within the biogeoclimatic unit of each landscape unit by area above and below the operability line)

Biogeoclimatic Units and Seral Stage	Seral Requirements by Biodiversity Emphasis (%)		
	Low	Intermediate	High
Interior Cedar Hemlock (ICH) Mature and Old	>17	>34	>51
ICH Old	>13	>13	>19
Engelmann Spruce-Subalpine Fir (ESSF) Mature and Old	>19	>36	>54
ESSF Old	>19	>19	>28

[1]This includes all Crown Land including protected areas, National Parks, Provincial Parks, any woodlot tenures that are granted following the implementation of this order, and private land in Tree Farm Licences. This does not include non-productive forest as defined in the Landscape Unit Planning Guide (March 1999).

Table 2.2 Seral Distribution for NDT 2
(percentage of forest[1] area within the biogeoclimatic unit of each landscape unit by area above and below the operability line)

Biogeoclimatic Units and Seral Stage	Seral Requirements by Biodiversity Emphasis (%)		
	Low	Intermediate	High
Interior Cedar Hemlock (ICH) Mature and Old	>15	>31	>46
ICH Old	>9	>9	>13
Engelmann Spruce-Subalpine Fir (ESSF) Mature and Old	>14	>28	>42
ESSF Old	>9	>9	>13

Table 2.3 Seral Distribution for NDT 3
(percentage of forest[1] area within the biogeoclimatic unit of each landscape unit by area above and below the operability line)

Biogeoclimatic Units and Seral Stage	Seral Requirements by Biodiversity Emphasis (%)		
	Low	Intermediate	High
Interior Cedar Hemlock (ICH) Mature and Old	>14	>23	>34
Interior Cedar Hemlock (ICH) Old	>14	>14	>21

b) In Tree Farm License 55 and 56, there are no mature and old seral requirements for low biodiversity emphasis areas and old seral requirements are reduced to 1/3 of the old seral requirements in low emphasis areas. Full old seral requirements must be achieved within 240 years.

c) Seral requirements must be met independently above and below the operability line for each variant within a landscape unit (map 2.1).

d) Seral requirements for c) above can be adjusted provided:

   i) the seral requirements are achieved for the combined area above and below the operability line within a biogeoclimatic unit and within a landscape unit and old growth conservation values are maintained or enhanced considering the stand age, presence of old growth attributes, successional status, human impact, dispersion/connectivity of the stand, and the rarity of the stand or;

   ii) the regional director Ministry of Sustainable Resource Management (MSRM) is satisfied that such adjustments to seral targets will benefit caribou habitat.

e) Mature and old and old seral forests are defined as shown in Table 2.4.

Table 2.4 Mature and Old and Old Seral Forest Age Definitions

NDT	Biogeoclimatic Unit	Mature and Old Seral Age (years)	Old Seral Age (years)
1	ICH	>100	>250
1	ESSF	>120	>250
2	ICH	>100	>250
2	ESSF	>120	>250
3	ICH	>100	>140

f) Where a registered professional forester or registered professional biologist determines that a forest stand has sufficient biological value to be classified as mature and old or old seral forest considering the stand age, presence of old growth attributes, size of the stand (ha), the amount of human impact, dispersion/connectivity of the stand and rarity of the stand, then that stand may be used in meeting the targets as opposed to solely using age provided:

   i) The area identified is mapped and the map(s) are available for review by government and to other licensees with adjacent operating areas and;

   ii) the areas are tracked and are incorporated in seral analysis reports;

g) Where minimum seral requirements can not be achieved due to deficits in suitably aged stands, deficits must be recruited from the oldest available stands within the applicable unit. An alternate recruitment area to replace a stand recruited above may be used provided:

   i) the area identified is equal or larger in size;

   ii) the area has equal or superior value for future old growth conservation, considering stand age, elements of old growth attributes, size of the stand (ha), the amount of human impact, dispersion/connectivity of the stand and rarity of the stand and;

iii) the area identified is mapped and the map(s) are available for review by government and available to other licensees with adjacent operating areas and;

iv) the areas are tracked and incorporated in seral analysis reports.

h) Where mature and old or old seral forest is damaged or destroyed by natural events (fire, insect infestation, blowdown, etc.) in a seral deficit area, that forest stand can be salvaged provided the stand is no longer suitable to contribute to old growth conservation considering old growth attributes.

i) Old seral requirements contained in Objective 2 of this order will cease to have effect upon the establishment of spatial objectives identifying Old Growth Management Areas (OGMA's) by the Minister or his designate, provided the area of OGMA's established is consistent with the old seral requirements noted above.

3) Caribou:

a) Contribute to maintenance and viability of the existing Mountain Caribou subpopulations by retaining seasonal habitats according to the Caribou habitat requirements shown in Table 3.1, within the Caribou habitat areas shown on Map 3.1, and subject to the following conditions in b) through f).

Table 3.1 Caribou Habitat Requirements

Location	**BEC Zone**	**Minimum forest retention area**		**Forest age class**
Above Caribou Line	ESSF Parkland	100%		All age classes
	ESSF	≥70%		≥8
	ICH	≥70%		≥8
Below Caribou line	ESSF	**Option 1**	≥30%	≥8
			≥10%	9
			Plus 20% Partial cut (with minimum 65% basal area maintained)	≥8
		Option 2	≥40%	≥8
			≥10%	9
	ICH	≥40%		≥8
		≥10%		9

b) Maintain mature and old and old seral forests to the levels indicated in tables 2.1 and 2.2 in those areas identified as intermediate biodiversity management on map 3.1. Mature and old and old are defined as shown in Table 2.4.

c) For all zones in the Caribou Habitat Requirements table and areas identified as intermediate biodiversity management on map 3.1, forest cover requirements are determined by applying percentages to the Crown forested landbase within mapped caribou habitat of each landscape unit. For this objective, Crown forested land base excludes Provincial Parks, Protected Areas, Ecological Reserves and Federal Parks. The resultant forest cover area requirements are applied to slopes less than 80 percent.

d) Immature caribou habitat identified on Map 3.1 does not currently contribute to meeting forest retention targets. A spatially explicit recruitment strategy must be in place prior to any harvesting in this area and once the recruitment strategy is in place, the immature area will contribute to caribou forest retention targets.

e) The "Caribou Line" referred to in Table 3.1 is defined as the Operability Line in effect during 1994 and as shown on Map 3.1.

f) Where there are deficits in minimum forest retention area percentages, deficits must be recruited from the oldest available stands within the mapped caribou habitat of each landscape unit. The Regional Director Ministry of Sustainable Resource Management (MSRM) may approve an alternate caribou habitat recruitment strategy provided:

   i) the strategy has been developed by a professional biologist;

   ii) the strategy contains a professional opinion from the registered biologist indicating that the strategy will benefit caribou habitat in the future;

   iii) the strategy is spatially explicit;

   iv) the strategy is not in conflict with any existing caribou recovery plan for the specific herd;

   v) and the Regional Director MSRM is satisfied that the strategy will benefit caribou habitat.

4) Grizzly Bear Management:

a) Contribute to the viability of existing Grizzly Bear populations by retaining a minimum 50 metre width of forest cover adjacent to high value habitat on one side of the avalanche chute, where timber harvesting is proposed parallel to the high value habitat and one of the following conditions apply:

   i) both sides of the avalanche chute are proposed for harvest;

   ii) only one side of the avalanche chute is forested;

   iii) the average forest cover height within 50 metres on either side of the avalanche chute is less than 10 metres; or

   iv) the width of the forested area is less than 50 metres on either side of the avalanche chute.

b) Mature and old and old seral forests are to be used in meeting (a) above, if in implementing Objective 2, mature and old and old seral forests must be maintained in the timber harvesting land base. In the absence of such opportunities, forest cover with a minimum height of 10 metres is to be maintained.

c) High value habitat within an avalanche chute is defined as an area that is:

   i) A herb or low shrub vegetation communities as defined in the BC Land Cover Classification Scheme;

   ii) Situated on slopes < 70%;

   iii) Situated on warmer aspects northeast through to northwest (45 degrees through to 315 degrees) and;

   iv) Situated in an avalanche chute that is 20 metres wide or greater between forested edges, excluding forest stands situated within the avalanche chute.

PART 3

Monitoring and review

The implementation of the higher level plan order will be monitored on an ongoing basis to assess the social, economic and environmental impacts of the order. Government may initiate a review of the plan to deal with specific issues or where the plan is felt to be outdated. Government may also initiate a full review of this order where a forest licensee or local government can show that this order, variances to this order or other circumstances outside the plan such as a Caribou recovery plan have a material adverse impact on timber supply or the delivered cost of wood.

PART 4

Filing the Order

This order will be filed with Regional Director, Southern Interior Region, Ministry of Sustainable Resource Management on March 25, 2005.

PART 5

Effective Date

This order comes into effect immediately. Despite subsection 16 (2) of the *Forest and Range Practices Act*, all forest stewardship plans submitted after the effective date must be consistent with this order.

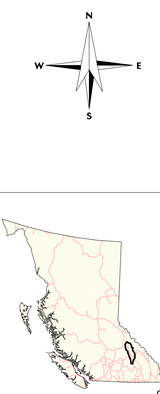
_____ _____

The Honourable George Abbott **Date**
Minister of Sustainable Resource Management

Revelstoke Higher Level Plan
Map 3.1 Caribou Habitat Areas

LEGEND

- Caribou Habitat - Managed to Table 3.1
- Caribou Habitat - Managed as Intermediate Biodiversity
- Immature Caribou Habitat
- Monashee Caribou Herd Caribou Habitat - Managed to Table 3.1
- Below Operability Line
- Parks
- Airfield/Airstrip
- Airport
- Ferry Route
- Railway Yard
- Dock/Pier/Wharf
- Road/Track (Gravel, Single lane)
- Road (Gravel)
- Road (Paved) - 1 or 2 lanes
- Road (Paved) - 3 or 4 lanes
- Road (Paved) - more than 4 lanes
- Causeway (Railway)
- General manmade feature
- Embankment/Fill (Roadway)
- Trail
- Rail Line
- Cable
- Line (Transmission)
- Pipeline
- Canal/Ditch
- Falls
- Flume
- Rapids/Falls
- River/Stream
- River/Stream - Indefinite or Intermittent
- River/Stream - Dry
- Marsh/Swamp
- Icefield
- Contour - Index
- Contour - Intermediate
- Water body
- River/Stream - Dry
- Icefield
- Dyke/Levee
- Sand Bar



9

Index map of British Columbia

BRITISH COLUMBIA **Ministry of Sustainable Resource Management**

Albers Projection
North American Datum - NAD83

SCALE 1:250 000

0km 10km

0mi 10mi

Contours generated from Digital Elevation Model.
Elevations in metres above Mean Sea Level.

Plot File Name: /fs/u04/ofs/arcproj/plots/rhlp/rv_carl_050330.rtl
AML file: /fs/u04/ofs/arcproj/hlp/rhlp/wkap_2003/rv_carl.aml
Production Date: 03/30/06
Created by: ddiotte - Kootenay Contact Centre, Nelson

Revelstoke

Preamble

The preamble provides background and context but does not form part of the legal order.

This order is for the purposes of faciltating the Mountain Caribou Recovery Implementation Plan announced on October 16, 2007.

Habitat management direction for mountain caribou is being consolidated under a few legal tools. To facilitate that goal, this order cancels caribou habitat management objectives in the Revelstoke order March 2005, and eliminates duplication or conflicts in management direction.

MINISTRY OF AGRICULTURE AND LANDS

MINISTERIAL ORDER

ORDER - REVESTOKE - 01
REVELSTOKE HIGHER LEVEL PLAN ORDER
CANCELLING THE CARIBOU OBJECTIVE IN THE REVELSTOKE HIGHER LEVEL PLAN ORDER

Relationship with *Forest and Range Practices Act* Objectives

1. Pursuant to section 93.4 of the *Land Act* this order amends the Revelstoke Higher Level Plan Order (Revelstoke HLP) made by the Minister of Sustainable Resource Management on March 25, 2005.

The Revelstoke HLP order is amended as follows

2. Objective 3, Table 3.1 and Map 3.1 of the Revelstoke HLP order are cancelled.

Transition

3. This order takes effective when notice of this order is posted in the Gazette.

Steve Carr, Chief Executive Officer
Ministry of Agriculture and Lands

Jan 8/09
Date

Revelstoke Higher Level Plan Order
Amendment 02

Preamble

The preamble is meant to provide context and does not form part of the order.

Part 3 of the 2005 Revelstoke Higher Level Plan Order states that the order will be monitored on an ongoing basis to assess the social, economic and environmental impacts of the order.

The implementation in 2009 of legal orders under the Mountain Caribou Recovery Strategy impacts the issues dealt with this order by (a) protecting additional areas which are suitable for biodiversity conservation and (b) increasing constraints on timber supply.

A review of the biodiversity objectives of the order has been completed by government and this amendment has been initiated to provide the appropriate social, economic and environmental balance for the Revelstoke Higher Level Plan Order area. The intent of this amendment is to balance timber supply impacts while maintaining protection of biodiversity.

MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS

MINISTERIAL ORDER

ORDER – REVELSTOKE – 02
REVELSTOKE HIGHER LEVEL PLAN ORDER
AMENDMENT TO OBJECTIVES 1 (BIODIVERSITY EMPHASIS) AND 2 (OLD AND MATURE FOREST)

Part 1 - Interpretation

Relationship to Forest and Range Practices Objectives

Pursuant to Section 93.4 of the *Land Act* this order amends the Revelstoke Higher Level Plan Order (Revelstoke HLP) made by the Minister of Sustainable Resource Management on March 25, 2005.

Part 2 – Definitions

The Revelstoke HLP is amended to include the following definitions:

In this order:

1. 'Crown forested land base' means the forested land that contributes to forest objectives such as landscape-level biodiversity, wildlife habitat and visual quality including forested areas that are within protected areas, National parks, Provincial Parks, any woodlot licence tenures that are granted following the approval of the March 25, 2005 Revelstoke HLP, and private lands within Tree Farm Licenses, but not including non-productive forest areas with tree species.

2. 'Non-productive forest' means areas not covered with productive forest including rock, swamp, alpine forest areas, areas occupied by non-commercial tree or brush species and all low-volume deciduous forest types.

Part 3 - Amendments

1) Biodiversity Emphasis: of the Revelstoke HLP is repealed and replaced with the following:

1) Biodiversity Emphasis:

For the sole purpose of implementing objective 2 (Old Forest), biodiversity emphasis is assigned within landscape units as outlined on Map 1.1.1 dated June 30, 2011 as attached.

2) Old and Mature Forest, of the Revelstoke HLP is repealed and replaced with the following:

2) Old Forest:

a) To contribute to the conservation of biodiversity, maintain old seral forests to the levels indicated in Tables 2.1 and 2.2.

Table 2.1 Old Seral Distribution for Natural Disturbance Type 1

Biogeoclimatic Units	Seral Requirement by Biodiversity Emphasis (%)		
	Low	Intermediate	High
Interior Cedar Hemlock (ICH)	>13	>13	>19
Engelmann Spruce-Subalpine Fir (ESSF)	>19	>19	>28

Table 2.2 Old Seral Distribution for Natural Disturbance Type 2

Biogeoclimatic Units	Seral Requirement by Biodiversity Emphasis (%)		
	Low	Intermediate	High
Interior Cedar Hemlock (ICH)	>9	>9	>13

b) Excepting Landscape Unit R3 on Map 1.1.1, old seral requirements are reduced down to 1/3 of the seral requirements identified in Tables 2.1 and 2.2, within areas identified as low biodiversity emphasis on Map 1.1.1 dated June 30, 2011 as attached.

c) Full old seral requirements must be achieved within 240 years.

d) Requirement levels, as expressed in Tables 2.1 and 2.2, are to be met at the biogeoclimatic subzone variant level using the variants mapped on Map 2.1.1 dated June 30, 2011 as attached.

e) Seral requirements in Tables 2.1 and 2.2 are expressed as a percentage of the Crown forested land base. Old seral forests are defined as shown in Table 2.3.

Table 2.3 Old Seral Forest Age Definitions

Natural Disturbance Type (NDT)	Biogeoclimatic Unit	Old Seral Age (years)
1	ICH	>250
1	ESSF	>250
2	ICH	>250

f) Where a registered professional forester or registered professional biologist determines that a forest stand has sufficient biological value to be classified as old seral forest considering the stand age, presence of old growth attributes, size of the stand (ha), the amount of human impact, dispersion/connectivity of the stand and rarity of the stand, then that stand may be used in meeting the seral target as opposed to solely using age provided a rationale is documented and the area is mapped.

g) Where minimum seral requirements cannot be achieved due to deficits in suitably aged forest stands, deficits must be recruited from the oldest available forest stands within the applicable unit or through an alternate recruitment strategy developed by a registered professional forester or registered professional biologist that identifies a forest stand area that would be equal or superior in terms of old growth potential considering forest stand age, elements of old growth attributes, size of the stand (ha), the amount of human impact, dispersion/connectivity of the stand, rarity of the stand.

h) Where a recruitment strategy is developed under paragraph g), the rationale for choosing the forest stand area must be documented and mapped.

i) Where old seral forest is damaged or destroyed by natural events (fire, insect infestation, blow down, etc.) in a seral deficit area, that forest stand can be salvaged provided the stand no longer contains suitable old growth attributes to be considered old seral forest.

Part 4 - Implementation

Maps 1.1 and 2.1 are repealed.

Effective Date

This order takes effect when notice of this order is posted in the B.C. Gazette.

Regional Executive Director
Kootenay Boundary Region
Ministry of Forests, Lands and Natural Resource Operations

2011/12/16
Date

Revelstoke Higher Level Plan
Map 1.1.1 Biodiversity Emphasis Options
June 30, 2011

Biodiversity Emphasis Options

- High
- Intermediate
- Low

- Landscape Unit
- Provincial Park/Protected Area
- National Park
- Road; Gravel
- Road; Paved
- Bridge
- Rail Line
- Transmission Line
- Icefield/Ice Mass
- River/Stream
- Lake/River
- Marsh/Swamp
- Island

R1 R2 R3 R4 R5 R6 R7 R8 R10 R11 R12 R14 R15 R16 R17 R18 R19 R20

TSA Boundary
Revelstoke TSA

N
W E
S

Scale: 1:250,000
Date: June 30, 2011
Projection/Datum: BC Albers/NAD 83
Data Source: LRDW

0 5 10 20 30
Kilometers

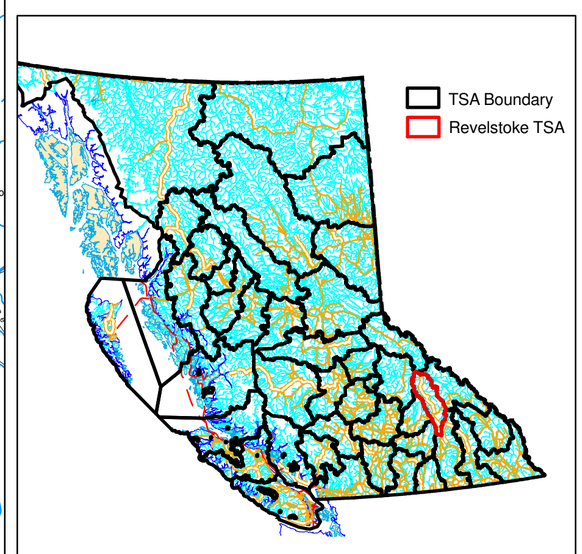
Revelstoke Higher Level Plan
Map 2.1.1 Biogeoclimatic Zones
June 30, 2011

BEC Label

- ESSFvc
- ESSFvcp
- ESSFwc 1
- ESSFwc 2
- ESSFwc 4
- ESSFwcp
- ESSFwcw
- ICH mw 2
- ICH mw 3
- ICH vk 1
- ICH wk 1
- IMA un

- Landscape Unit
- Provincial Park/Protected Area
- National Park
- Road; Gravel
- Road; Paved
- Bridge
- Rail Line
- Transmission Line
- Icefield/Ice Mass
- River/Stream
- Lake/River
- Marsh/Swamp
- Island

R1 R2 R3 R4 R5 R6 R7 R8 R10 R11 R12 R14 R15 R16 R17 R18 R19 R20



N
W E
S

Scale: 1:250,000
Date: June 30, 2011
Projection/Datum: BC Albers/NAD 83
Data Source: LRDW

0 5 10 20 30
Kilometers

BRITISH COLUMBIA
The Best Place on Earth

ORDER – Ungulate Winter Range
 # U-3-005
Mountain Caribou – Revelstoke Shuswap Planning Unit

This order is made under the authority of sections 9(2) and 12(1) of the *Government Actions Regulation* (B.C. Reg. 582/2004) (GAR).

1. The Deputy Minister of Environment, being satisfied that
   i. the following areas contain habitat that is necessary to meet the winter habitat requirements for mountain caribou (*Rangifer tarandus caribou*), and
   ii. the habitat requires special management that is not otherwise provided for under GAR or another enactment.

   orders that
   a) this order cancels and replaces the order that became effective on February 12, 2009, entitled "ORDER – Ungulate Winter Range #U-3-005",
   b) the areas shown in the map set out in the attached Schedule A (U-3-005) and contained in the ungulate winter range (UWR) spatial layer stored in the Land and Resource Data Warehouse (*tuwr_bc)* are established as ungulate winter range U-3-005 for mountain caribou. The centre point of the line on the attached Schedule A is what establishes the UWR boundary, and
   c) if there is a discrepancy between the areas shown in the map set out in the attached Schedule A and the UWR spatial layer stored in the Land and Resource Data Warehouse (*tuwr_bc*), the areas as detailed in the UWR spatial layer will take precedent.

2. The Deputy Minister of Environment, being satisfied that
   i. the general wildlife measures (GWMs) described below are necessary to protect and conserve the habitat of mountain caribou, and
   ii. GAR or another enactment does not otherwise provide for that protection or conservation.

   orders that
   a) the GWMs outlined in Schedule 1 are established for UWR U-3-005.

Schedule 1– General Wildlife Measures applicable to UWR U-3-005

Definitions:

Words and expressions not defined in this order have the meaning given to them in the *Forest and Range Practices Act* (FRPA) and the regulations made under it unless context indicates otherwise.

helicopter landing means a location where individuals disembark the helicopter, most often at the top of a ski run.

helicopter pickup means a locations where individuals embark the helicopter, most often at the bottom of a ski run.

incursion means new timber harvesting or road construction that crosses an UWR boundary and occurs within an UWR unit.

mineral exploration activity means an activity involving the cutting of trees or construction and or maintenance of roads and trails related to the exploration and development of a mineral or placer tenure under the *Mineral Tenures Act* and which requires a Notice of Work permit under the *Mines Act.*

mineral cell means a Mineral Titles Online claim acquisition unit and is 16 to 21ha, depending on latitude.

ski run development means cutting non-merchantable timber (<15cm diameter at stump height for PL, < 20cm diameter at stump height for all other species), and removing hazardous stems through primarily hand falling techniques. This includes glading in mature forests, cutting in old burns, spacing in avalanche chutes and alder cutting. This is not considered logging, as no cut trees are extracted from the area.

snow trail means winter snow trails for cat-ski travel. They are developed using snow and may have trees cut or removed for access. Snow trails rarely have side-cuts into mineral soils.

treatment area means the specific geographic area identified in tenure management plans for adventure tourism tenure holders as an individual run and referred to as the "identified ski terrain" or "ski-pod". Treatment areas can be defined spatially as having a running length and width.

UWR unit means a portion of UWR U-3-005 that is discrete from any other portion. i.e. not contiguous with another portion.

General Wildlife Measures:

1. Timber harvesting and road construction must not occur within UWR U 3-005 (the UWR) except as provided in GWMs 2, 3, 4, 5, and 6.

2. GWM 1 does not apply to a portion of the UWR (the portion) if
   a) timber harvesting and road construction in the portion would facilitate access to timber harvesting opportunities outside of the UWR;
   b) there is no other practicable option to access those timber harvesting opportunities outside of the UWR;
   c) timber harvesting and road construction activities within the portion are conducted to the minimum extent necessary to access those timber harvesting opportunities outside of the UWR; **and**
   d) once access through the portion to the area outside of the UWR is no longer required to meet harvesting needs and silviculture obligations, roads within the portion are promptly deactivated as per sections 82(1)(a), (b), and (c) of the *Forest Planning and Practices Regulation* (FPPR).

3. GWM 1 does not apply to the area of an incursion if
   a) the incursion is to provide for a logical harvesting boundary or a logical road location that utilizes a physical feature or administrative boundary;
   b) the area of incursion does not exceed 5 hectares;
   c) the area of an individual harvest unit within the UWR unit is less than the area of the same harvest unit outside of the UWR unit;
   d) the total cumulative area of incursions for multiple harvest units and clearing width for roads does not exceed 20 hectares or 5% of the total area of the UWR unit, whichever is greater; **and**
   e) if the area of incursion exceeds two hectares, prior to timber harvesting or road construction occurring in the area of incursion

      i. an alternative area of equivalent or better quality caribou habitat is identified outside of the UWR, but within the same TSA or TFL as the incursion, **and**
      ii. the mapped location of the alternative area is provided to the office of the Regional Manager of the Ministry of Environment (MoE), and the District Manager of the Ministry of Forests and Range (MoFR).

4. Timber harvesting may occur within the UWR to the extent necessary to create guyline tiebacks for timber harvesting.

Mineral Exploration Activities

5. GWM 1 does not apply for the purposes of mineral exploration activities if:
   a) exploration activities occur outside of the peak calving period of May 15th – June 15th;
   b) exploration activities use existing clearings, trails and roads unless it is not practicable to do so;

c) new trails and roads are not built in areas closed to snowmobile use under the *Wildlife Act* using *Motor Vehicle Prohibition Regulation*, Schedule 7, Section 7.1;
d) any necessary tree harvesting avoids mature stands (≥ 80 years old) and avoids the removal of lichen-bearing trees, unless it is not practicable to do so;
e) an individual forest opening (defined as the total tree harvested area created for the purposes of mineral exploration and mining activity) is not greater than 1ha, not including forest openings for the purposes of building trails and roads;
f) the total of individual forest openings (defined as the total tree harvested area created for the purposes of mineral exploration and mining activity), including those created for the purposes of building trails and roads does not exceed:
    i. 10 percent of the mineral cell, OR
    ii. 10 percent of any defined aggregate of mineral cells up to a maximum of 25 mineral cells;
g) new trails and roads do not have a running width greater than 6m except for the purposes of safety or culvert placement; and
h) actions are taken on newly constructed or reconstructed trails and roads to restrict access. This will be site-specific and could include, but is not limited to:
    i. Use of signage and gates on active trails and open roads where practicable;
    ii. Use of signage and safe (defined as large and clearly visible), impassable barricades across seasonal or permanently deactivated road surface widths.

Guided Adventure Tourism Activities

6. GWM 1 does not apply for the purposes of guided adventure tourism activities if:
    a) For the purposes of ski run development, construction and maintenance:
        i. ski run development does not occur within the calving period of May 15th to June15th;
        ii. use of existing forestry openings or natural openings is maximized in order to minimize cutting in treatment areas;
        iii. individual tree spacing within treatment areas is 5-8m, with retention of forest 'clumps' (10-20 trees or 1-2 tree lengths in size) spaced at <100m intervals throughout the treatment area;
        iv. >90% of conifer stems >20cm DBH in treatment areas are retained from cutting. The full range of tree species, ages and sizes must be represented following treatment, similar to pre-treatment forest stand species composition and size-class distribution;
        v. individual ski run development/treatment areas are separated from adjacent treatment areas by an area at least 3-4 times the treatment area;
        vi. forest stands with trees bearing lichen on slopes <40% are avoided when selecting treatment areas, unless there is no other practicable option;
        vii. any harvesting avoids mature stands (>80 yrs old) and avoids removal of trees bearing lichen, unless there is no other practicable option; and
        viii. areas of forest stands requiring removal of large veteran legacies or a significant number of standing dead snags to make the work site safe shall be avoided, unless there is no other practicable option.

b) For the purposes of helicopter landings and pickup site development, construction and maintenance::
   i. helicopter landing and pickup site development does not occur within the calving period of May 15th to June15th;
   ii. use of existing forestry openings or natural openings is maximized in order to minimize cutting when selecting helicopter landings and pickup sites;
   iii. where harvesting is required the amount of cutting will not result in the total opening size to exceed 1 ha; and
   iv. any harvesting avoids mature stands (>80 yrs old) and avoids removal of trees bearing lichen, unless there is no other practicable option.

c) For the purposes of snow trail development, construction and maintenance:
   i. snow trail development does not occur within the calving period of May 15th to June15th;
   ii. snow trail development does not occur in areas closed to snowmobile use under the Wildlife Act using Motor Vehicle Prohibition Regulations Schedule 7, Section 7.1;
   iii. existing forestry openings or natural openings are used to minimize cutting when developing snow trails;
   iv. the volume of timber to be removed does not exceed 50m³ of per 3 km of individual trail when developing a snow trail. An individual snow trail is defined as a contiguous snow trail route used by a snow-cat machines for the purpose of transporting skiers to skiable terrain;
   v. any harvesting avoids mature stands (>80 yrs old) and avoids removal of trees bearing lichen, unless there is no other practicable option; and
   vi. actions are taken on snow trails to restrict summer access. This will be site-specific and could include, but not limited to the use of large, impassable boulders, root balls, and felled trees.

Signed this 9 day of Dec., 2009
Doug Konkin, Deputy Minister
Ministry of Environment

Appendix 1:

The following information is provided by MoE as background information and support to the order establishing UWR U-3-005. This appendix is not part of the order.

1. **Activities to which the order does not apply:** Section 2(2) of the *Government Actions Regulation* states

   An order under any of sections 5 to 15 does not apply in respect of
   (a) any of the following entered into before the order takes effect:
      (i) a cutting permit;
      (ii) a road permit;
      (iii) a timber sale licence that does not provide for cutting permits;
      (iv) a forestry licence to cut issued by a timber sales manager under section 47.6 (3) of the Forest Act;
      (v) subject to subsection (3), a minor tenure,
   (b) a declared area,
   (c) areas described in section 196 (1) of the Act, and
   (d) areas referred to in section 110 of the Forest Planning and Practices Regulation.

2. **Compliance with the GWMs and Exemptions:** If timber harvesting and road building activities cannot be carried out in compliance with the established GWMs, an exemption is required from the requirement to comply with the GWMs if the activities are to proceed. The authority to consider an exemption is provided in section 92(1) of the FPPR. An exemption may be provided if the Minister's delegate (MoE Regional Manager, Environmental Stewardship Division, for the region that the UWR is located) is satisfied that the intent of the GWM will be achieved or that compliance with the provision is not practicable, given the circumstances or conditions applicable to a particular area.

   If an exemption is desired, an exemption application should be submitted to the Minister's delegate with a rationale describing the nature of the problem and options to integrate UWR conservation with proposed activities. This submission will assist in timely consideration of the matter, and will inform the conditions, if any, of the exemption that may be granted prior to commencement of activities. Upon receipt of a complete exemption application, a determination will normally be made within 14 days of arrival. Incomplete packages will be returned to the proponent for re-submission.

   Forest Health

   Any activities to address forest health factors within the UWR that cannot be accommodated by the established GWMs will require an exemption if they are to proceed. This approach is being taken as a short term measure until final GWM language can be developed to identify those specific circumstances where the requirements of no timber harvesting and road building should not apply to activities related to address forest

health factors, and therefore an exemption would not be required. The final GWMs will be consistent with the intent and direction contained in Forest Health report once it is finalized. It is MoE's intention that these GWMs will be completed and that U-3-005 will be considered for amendment to include these GWMs prior to late mid-2009.

3. **GWM 2**: The intent of GWM 2 is to identify those specific circumstances where the requirements of no timber harvesting and no road building do not apply in order to provide access to timber that has been isolated by the no harvest zone boundary. All the conditions in GWM 2 must be met. Where the conditions cannot be met an exemption is required.

4. **GWM 3**: The intent of GWM 3 is to identify those specific circumstances where the requirements of no timber harvesting and no road building do not apply in order to provide operational flexibility around no harvest zone boundaries. The intent of this GWM is to recognize that issues arise when reconciling a mapped boundary, often mapped at a much smaller scale, to a line on the ground. All the conditions in GWM 3 must be met. Where the conditions cannot be met an exemption is required.
   GWM 3(d) - MoE will work with MoFR to track the harvesting and road building that has occurred within the no harvest zone and make this information available to *Forest Act* agreement holders in order to meet the requirements of GWM 3(d).
   GWM 3(e) - The requirement to provide the location of an alternative area of equivalent or better quality caribou habitat to the MoE regional office will allow MoE to amend the no harvest boundary to include these areas in the future.

5. **GWM 5:** When conducting mineral exploration activities within the no harvest zone, the requirements of no timber harvesting and no road building do not apply if the conditions outlined in GWM 5 are met. These conditions are consistent with Notice of Work permit conditions that have been developed to address mineral exploration activities in mountain caribou habitat (see document titled "Notice of Work Permit Conditions and Operational Guidance for Mineral Exploration Activity in Mountain Caribou Habitat"). Where activities are carried out consistent with the permit conditions, activities will also be consistent with the conditions outlined in GWM 5 and can proceed without an exemption from the Ministry of Environment. Where either the conditions outlined in GWM 5 or associated Notice of Work permit conditions cannot be met, an exemption will be required from the Ministry of Environment prior to work proceeding. In addition to the conditions outlined in GWM 5 persons conducting mineral exploration activities should also consider the operational guidance that has been developed and available in the document referenced above. Permit conditions 9 and 10 have not been included in the conditions outlined in GWM 5 because these are not activities managed under the *Forest and Range Practices Act.*

6. **GWM 6:** When conducting activities associated with guided adventure tourism, specifically the development of ski runs, helicopter landing and pick up sites and snow trails, the requirements of no timber harvesting and no road building do not apply if the

conditions outlined in GWM 6 are met. These conditions are consistent with the standard operating practices developed for these activities (see the document titled "Standard Operating Practices for Ski Run Development, Helicopter Landing and Pickup Site Development, and Snow Trail Development in Mountain Caribou Habitat"). Where activities are carried out consistent with the standard operating practices, activities will also be consistent with the conditions outlined in GWM 6 and can proceed without an exemption from the Ministry of Environment. Where either the conditions outlined in GWM 6 cannot be met, an exemption will be required from the Ministry of Environment prior to work proceeding. In addition to the conditions outlined in GWM 6 persons conducting guided adventure tourism activities should also consider the operational guidance that has been developed and available in the document referenced above.

7. **Adaptive Management**: The Mountain Caribou Science Team identified key uncertainties related to mountain caribou ecology and the efficacy of proposed recovery actions. Government is committed to supporting the implementation of an adaptive management strategy. Both the implementation and effectiveness of management actions will need to be monitored. Implementation efforts will need to be monitored closely and assessed to determine whether the strategy needs to be modified in order to meet recovery goals. In addition, research addressing knowledge gaps should be supported. The Recovery Implementation Plan includes the development of adaptive management and effectiveness monitoring plans for habitat, recreation and predator-prey management efforts.

Appendix 3: Guidance for Subscript k HLPO_2021

Additional information on the attributes listed in subscript k of the Kootenay Boundary Higher Level Plan Order

Subscript k	**Definition**	**Sources for additional data**
Stand age	Age-based definitions for the minimum ages of old and mature forests are listed in the HLPO and are based on the age of the dominant cohort in a stand. Field-based measurements using tree cores should take precedence over forest inventory estimated ages. Ancient forests have particularly high conservation value.	HLPO, Biodiversity Guidebook (1995); LMH 25 describes Very Old Forests (structural stage 7b) as >400 in NDT 1,2,4 and >250 in NDT 3
Successional status	Describes the stand development status of a forest, including factors such as tree species composition and canopy complexity.	LMH 25 (2010) describes both Successional status and Structural stages
Presence of old growth attributes	Old forest attributes are relative to the ecosystem (BEC subzone/variant and site series). Typical old forest attributes include: large-sized live trees (large for the BEC unit), large snags and CWD in a range of decay classes; wildlife trees; multiple canopy layers (from regen to dominants); canopy gaps; well-developed plant communities.	The size of “large” and density of expected large attributes is described in a series of research projects that were completed in the Kootenay Boundary Region (1999-2006). These “index of old growthness” reports can help to inform a professional rationale.

<table>
<tr>
<td>Size of stand</td>
<td>Larger stands of old forests are preferred because they provide more habitat, more interior habitat conditions, and less edge habitat. The minimum legal size of an OGMA is 2 ha, but larger patches are encouraged, and the intention is to maintain or increase patch size where possible. Large OGMAs are intended to maximize the inclusion of old forest and should only include mature or younger forest where (1) recruitment is required or (2) conservation benefits have been assessed and old forest biodiversity values are captured equally or better than would be achieved through inclusion of different patches of old forest. In many landscapes, existing fragmentation limits the occurrence of large patches with interior habitat.</td>
<td>Guidance on expected patch size, by BEC and NDT (Holt 2000)[1]
<table>
<tr><th>Natural disturbance type</th><th>Percentage of OGMAs on landscape</th><th>Patch Size</th></tr>
<tr><td>NDT1</td><td>40-100%
40%
15%
5%</td><td>>1000ha
250 – 1000ha
50 – 250ha
<50ha</td></tr>
<tr><td>NDT2</td><td>35%
35%
25%</td><td>>500ha
250-500ha
50-250ha</td></tr>
<tr><td>NDT3 (MS)</td><td>40%
30%
30%</td><td>>250ha
50-250ha
<50ha</td></tr>
<tr><td>NDT3 (ICH/ ESSF)
NDT4</td><td>20%
40%
30%</td><td>>500ha
250-500ha
50-250ha
<50ha</td></tr>
</table>
</td>
</tr>
<tr>
<td>Amount of human impact</td>
<td>Human impacts such as historic (or recent) selective harvesting, roads, trails, linear corridors, etc. reduce the value of old forest stands.</td>
<td></td>
</tr>
<tr>
<td>Dispersion/connectivity of the stand</td>
<td>Landscape level connectivity allows for the flow of species, genes, and populations. Old forest retention planning should avoid fragmentation and creation of isolated patches. However, smaller stands may have high old forest conservation value where old forest is uncommon or where forests are very old. Riparian areas, low passes between mountains, and areas that support movement from low to high elevations provide increased connectivity value.</td>
<td>The Biodiversity Guidebook provides information on landscape connectivity.</td>
</tr>
<tr>
<td>Rarity of the stand</td>
<td>The range of ecosystems in a geographic area should be included in a network of OGMAs. Rare stands, either for the rarity of the site series or structures (e.g., very old/ancient forests or remnant/veteran trees) are often prioritized in OGMA selection.</td>
<td>The Conservation Data Centre’s Ecosystem Explorer provides lists of Ecosystems at Risk based on plant communities (e.g., site series level); these are currently being reviewed and updated with incorporation of new BEC.</td>
</tr>
</table>

1. Holt, R.F., (2000). Inventory and Tracking of Old Growth Conservation Values for Landscape Unit Planning. WR#1 Habitat Branch, MELP.

Appendix 4: Revisions & Declared Areas

Revisions are to be recorded and described in this Appendix

Appendix 4: Table of Revisions

Amendment Number	Amendment Date	Details

* Road and Block Tables are on following page(s)

Road & Block Table A

Roads and blocks listed in this table are hereby identified as “declared areas”
as per Section 14(4) of the Forest Planning and Practices Regulation

Amendment #	Road or Block	Block or Road Identifier ** (FSP)	Harvest Method/Silvi system	Total Length or Gross Area[1]	FDU	Location
	Block	140-BB	Cat/cbl/ccwt	24.4 ha	Downie	Upper Downie Creek
	Block	140-CC	Cat/cbl/ccwt	24.2 ha	Downie	Upper Downie Creek
	Block	140-CC2	Cbl	2.0 ha	Downie	Upper Downie Creek
	Block	160-F	Cbl/cc	9.5 ha	Downie	Mid Downie Creek
	Block	160-G1-3	Cat/cbl/ccwt	13.8 ha	Downie	Mid Downie Creek
	Block	220-Y	Cat/pc	23.6 ha	Downie	Key Road
	Block	224-1	Cat/pc	20.9 ha	Downie	Key Road
	Block	225-1	Cat/pc	25.5 ha	Downie	Key Road
	Block	272-2	Cat/ccwt	36.7 ha	Goldstream	Brewster/Goldstream
	Block	272-3	Cat/ccwt	37.5 ha	Goldstream	Brewster/Goldstream
	Block	280-1	Cat/ccwt	89.8 ha	Goldstream	Lookout Mtn
	Block	282-2	Cat/ccwt	5.4 ha	Goldstream	Lookout Mtn
	Block	282-4	Cat/ccwt	10.9 ha	Goldstream	Lookout Mtn
	Block	282-5	Cat/ccwt	10.0 ha	Goldstream	Lookout Mtn
	Block	293-2	Cat/ccwt	15.2 ha	Goldstream	Brewster/Goldstream
	Block	300-Q	Cbl/cc	30.6 ha	Goldstream	Coppermine/Goldstream
	Block	310-K	Cat/ccwt	31.5 ha	Goldstream	Mid Goldstream Creek
	Block	316-1	Cbl/cc	15 ha	Goldstream	Coppermine Road
	Block	320-R	Cbl/cc	12 ha	Goldstream	Mid Goldstream
	Block	320-S	Cbl/cc	16.7 ha	Goldstream	Mid Goldstream
	Block	323-4	Cat/ccwt	20 ha	Goldstream	Mid Goldstream
	Block	350-A	Cat/cbl/ccwt	12 ha	Goldstream	Upper Goldstream
	Block	350-J	Cbl/cc	16 ha	Goldstream	Upper Goldstream
	Block	350-2	Cat/ccwt	30 ha	Goldstream	Upper Goldstream
	Block	801-1	Comm Thin	47.1 ha	Downie	Keystone Creek

[1] Approximate area or length
** Includes access roads and in-block roads.

Appendix 5: Map

1:50,000 scale Forest Stewardship Plan Map

(in pocket at back of binder)

Revelstoke Community Forest Corporation

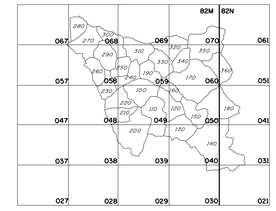
REVELSTOKE COMMUNITY FOREST CORPORATION

TREE FARM LICENSE 56

2020 FOREST STEWARDSHIP PLAN MAP

SCALE : 1:50,000

LEGEND



- TFL BOUNDARY
- DECLARED BLOCKS*
- CUTTING PERMIT APPROVED
- BCTS OPERATING AREA
- PRIVATE LAND
- CARIBOU GAR u-3-005
- OGMA NLEGC
- OGMA RCFC
- WILDLIFE HABITAT AREA
- FOREST DEVELOPMENT UNIT BOUNDARY
- LANDSCAPE UNIT BOUNDARY / LABEL — R12
- ROAD PERMIT AREA BOUNDARY / LICENSE LABEL — R07097
- DECLARED ROADS
- PERMIT ROADS / SECTION ID LABEL
- MAIN ROADS
- FSR / BCTS ROADS
- RECREATION SITE OR RESERVE
- BACKCOUNTRY LODGE / CABIN
- RECREATION TRAIL — TRAIL NAME
- SURFACE WATER INTAKE
- POWER LINE

N

KILOMETERS 0 1 2 3 4

SCALE 1:50,000

DATE: FEB. 02, 2022 DIGITIZED BY: RF

AZIMUTH FORESTRY GIS + MAPPING

Appendix 6: Section 7 Notices

BRITISH COLUMBIA

December 30, 2004

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE COLUMBIA FOREST DISTRICT

This Notice is given under the authority of section 7(2) of the *Forest Planning and Practices Regulation* (B.C. Reg. 14/04) and 9(3) of the *Woodlot Licence Planning and Practices Regulation* (B.C. Reg. 21/04).

The following Notice includes indicators of the amount, distribution and attributes of wildlife habitat required for the survival of the species at risk outlined in Schedule 1.

Approved Wildlife Habitat Areas are not included in the indicators of amount, distribution and attributes for each of the species outlined in Schedule 1. As per section 7(3) of the *Forest Planning and Practices Regulation*, forest tenure holders are exempt from the obligation to specify a result or strategy in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation*, for approved Wildlife Habitat Areas.

This Notice applies to the Columbia Forest District.

Schedule 1

1) Coeur d'Alene Salamander (*Plethodon idahoensis*)

Amount:

1. 60 ha not exceeding an impact to the mature timber harvesting landbase of 36 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Coeur d'Alene Salamander in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for Coeur d'Alene Salamander in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Table 1. Summary of mature THLB impacts for amounts included in the Notice and approved WHAs in the Columbia Forest District.

Species	Total Area (ha)	Estimated Mature THLB (ha)	Percent of 1% District Budget
Amounts in Notice			
Coeur d'Alene Salamander	60.0	36.0	2.1
Subtotal	**60.0**	**36.0**	**2.1**
No Approved Wildlife Habitat Areas			
Total	**60.0**	**36.0**	**2.1**

Figures and spatial information (shapefiles) to support the amount and distribution statements for species included in the Notices are included in the folders titled "Figures" and "Spatial Data" on the following ftp site:
ftp://ribftp.env.gov.bc.ca/pub/outgoing/edc_data/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Columbia_FD/Supporting_Info/

Inclusion of draft and proposed Wildlife Habitat Area boundaries in the supporting information does not prejudice the review and comment that may be ongoing around these Wildlife Habitat Areas. Where Wildlife Habitat Areas have not been through the full review and comment process, MWLAP will continue to work with affected parties to address the Wildlife Habitat Area boundaries.

The following section is intended to clarify the amount, distribution and attribute statements in the legal Notice.

1) Coeur d'Alene Salamander (*Plethodon idahoensis*)

Amount:
The amount in the Notice is based on the anticipated need for 6 future wildlife habitat areas for Coeur d'Alene Salamander. Information is available from the Ministry of Water, Land and Air Protection. Estimates of mature timber supply impacts are based on estimates provided in the "Estimated Impact of the Identified Wildlife Management Strategy (Version 2004) on Provincial Timber Supply".

A total of 140 ha (78 THLB), intended to address 14 future WHAs, has been identified as a long-term projection for this species.

Due to data sensitivity concerns locations of draft Coeur d'Alene Salamander WHAs are not provided here. For information on draft WHA boundaries contact the Ministry of Water, Land and Air Protection, Nelson, Ted Antifeau.

2) Grizzly Bear (*Ursus arctos*)

No amount for Grizzly Bear has been included in the Notice as there are no threatened Grizzly Bear population units in the forest district. Where habitat areas that have no mature timber supply impacts are identified with future suitability mapping, the Notice may be amended to include indicators of the amount, distribution and attributes for this species.

3) Lewis's Woodpecker (*Melanerpes lewis*)

Amount:
An amount for Lewis's Woodpecker has not been included in the Notice. This species is known to occur in the district, but there is no current information that would allow an amount, distribution and attributes to be identified. Where inventory work generates known occurrences and suitable habitat, the Notice may be amended to include indicators of the amount, distribution and attributes for this species.

A total of 56 ha, intended to address 2 WHAs, has been identified as a long-term projection for this species in this district.

4) Badger (*Taxidea taxus jeffersonii*)

Amount:
An amount for Badger has not been included in the Notice. This species is known to occur in the district, but there is no current information that would allow an amount, distribution and attributes to be identified. Where inventory work generates known occurrences and suitable habitat, the Notice may be amended to include indicators of the amount, distribution and attributes for this species.

A total of 100 ha, intended to address 2 WHAs, has been identified as a long-term projection for this species in this district.

5) Mountain Caribou (*Rangifer tarandus caribou*)

Amount:
Mountain Caribou has not been included in the Notice. The Kootenay Boundary Land Use Plan High Level Plan contains objectives for the management of Mountain Caribou. For the purpose of planning under FRPA these HLP objectives represent the objective set by government for Mountain Caribou.

Columbia Forest District April 2000
Local Area Agreement for the purpose of Fish-stream Identification pursuant to the Forest Practices Code for Category 1 Streams (Low Risk)

PURPOSE:
This Local Area Agreement (LAA) is an agreement between Ministry of Environment Lands and Parks, the Ministry of Forests, and the Forest Licensees in the Kootenay Environment Region. This agreement, through risk management, is intended to reduce the expense and time of conducting the detailed fish surveys needed to prove fish absence where the risk and consequence of error is low (Category 1 streams).

SCOPE:
This MOU applies to operational planning under the British Columbia Forest Practices Code (BCFPC) within the Columbia Forest District in the Kootenay Environment Region.

CONDITIONS:
1. Users of this agreement must be competent in fish stream identification procedures and applications as detailed in *Fish-stream Identification Guidebook* (FSIG). *Second Edition. August 1998, FPC.*
2. The Agreement is based on best available resource information and may be amended from time to time as agreed to by the FPC Implementation Team, as new information becomes available through field audits, inventory or research.
3. Amendments may increase or decrease the scope of this Agreement. For example, the latter will occur if the new information indicates an unacceptable risk to fish resources.
4. In situations where existing or future fish inventory data demonstrates fish presence contrary to application of the Agreement, the pertinent fish data prevails.
5. Annual review based on a random sampling field check, to ensure proper application of the LAA and that it accurately classifies stream reaches.
6. Users of this LAA must develop and retain a consolidated map (which may become part of an aggregated Forest District map) indicating the known classification and method of classification for streams within their operating area.
7. It remains the responsibility of Licensees to ensure that fish and fish habitat as defined by the Canada *Fisheries Act* are protected from direct or indirect adverse effects of licensee activities.
8. The effective date of this agreement is June 1 2000. A joint evaluation of the effectiveness of this agreement is to be completed prior to June 1, 2001.

DEFINITIONS:
The following terms are used throughout the agreement and not defined in the FSIG.

Category 1 stream: Low Risk of error/Low consequence of error (Framework for LAA 1999).
Standing water: greater than 1m in depth; standing water includes lakes, ponds, wetlands with an area of open water >0.25 hectares.
Stream Order: is stream order at a scale of 1:20,000 using methodology described in *Reconnaissance (1:20 000) Fish and Fish Habitat Inventory.*
Data Management: Data collection, reporting and storage must be consistent with that specified in the FSIG, for that data type being collected.
Qualified individual: Determined by Licensee.

DECISION KEY

NOTE: Reach breaking is an integral part of assigning stream riparian classes. Thus, it is important to ensure that this is done correctly by qualified individuals. A field visit is highly recommended within the area of interest to ensure that the reaches are classified correctly.

STEP 1

Procedure: Review of existing inventory data to determine if existing information is available to interpret fish or non-fish bearing status.

Test Criteria: Existing information allows for fish or non-fish bearing status determination.
→*No*; continue to *STEP 2*.
→*Yes*; classify stream with supporting data; inventory complete. Interpretations of historic data can also be used for upstream reaches. This should be discussed with the FES and/or the Inventory Specialist for different scenarios.

NOTE: Existing data must follow FSIG or RIC standards unless data is approved by FES and/or the Inventory Specialist.

STEP 2

Procedure: Channel width and Gradient are measured following RIC standards.

Test Criteria: less than 20% gradient
AND
less than 1.5m channel width
AND
does not contain standing water upstream of the stream mouth.
→*No*; not covered under agreement (for streams greater than 20% refer to *Fish-stream Identification Guidebook*, pg. 17).
→*Yes*; covered under agreement, continue to *STEP 3*.

STEP 3

Procedure: Connectivity of stream for fish passage is visually determined in field by qualified individual.

Test Criteria: connectivity of stream for fish passage is interrupted by the presence of a permanent fish barrier in stream
OR
the disappearance of a defined channel for a length that renders it a likely fish barrier.
→*No*; continue on to *STEP 4*.
→*Yes*; designate stream network upstream of barrier as non-fish bearing.

STEP 4

Procedure: Office determination of stream order, by qualified individual using 1:20,000 scale TRIM, forest cover maps and aerial photography, as available. If stream does not appear on TRIM (1:20k) or forest cover maps assume that stream is 1st Order. Determine stream reach gradient in field for reach of interest.

Test Criteria: stream reach gradient is greater than 15% (only applies to 1st Order streams flowing directly into a 3rd Order or 2nd Order stream).
OR
stream reach gradient is greater than 17% (only applies to 2nd Order streams flowing directly into a 3rd Order).

→*Yes*; designate stream reach and upstream stream network as non-fish bearing.
→*No*; continue on to *STEP 5*.

STEP 5

Procedure: Determine stream reach field gradient, channel width and stream Order for reach of interest.

Test Criteria: Channel width is <1.0m
AND
stream reach gradient is greater than 12% (only applies to 1st Order streams flowing directly into a 3rd Order or 2nd Order stream).

→*Yes*; designate stream reach and upstream stream network as non-fish bearing.
→*No*; continue on to *STEP 6*.

STEP 6

Procedure: If desirable, inventory stream reach following FSIG standards.

Agreed to on this date: June 1, 2000

Name	Bob Brade	David Raven
Position	Forest Ecosystem Specialist	District Manager
Company	Ministry of Environment	Columbia Forest District

Appendix 7: Columbia Shuswap Invasive Species Society Priority Invasive Plant List

CSISS Priority Invasive Plant Lists- Updated 2020

Invasive species are prioritized at a Provincial scale using a science-based risk assessment process. Management actions are further determined based on these priorities at a both Provincial and Regional scale and depending on available resources and treatment methods. The management categories presented below have been developed by the BC Inter-Ministry Invasive Species Working Group and the Provincial Government's Invasive Species Specialists. The invasive species are presented in management categories based on a Provincial scale, and do not take into consideration local or regional criteria. The list does not include marine species.

Provincial Definitions	
Prevent	Species determined to be high risk to BC and not yet established. Management objective is to prevent the introduction and establishment.
Provincial EDRR	Species is high risk to BC and is new to the Province. Management objective is eradication.
Provincial Containment	Species is high risk with limited extent in BC but significant potential to spread. Management objective is to prevent further expansion into new areas with the ultimate goal of reducing the overall extent.
Regional Containment/Control	Species is high risk and well established, or medium risk with high potential for spread. Management objective is to prevent further expansion into new areas within the region through establishment of containment lines and identification of occurrences outside the line to control.
Management	Species is more widespread but may be of concern in specific situations with certain high values - e.g., conservation lands, specific agriculture crops. Management objective is to reduce the invasive species impacts locally or regionally, where resources are available.

PROVINCIAL PRIORITY INVASIVE SPECIES

PROVINCIAL PRIORITY INVASIVE SPECIES			
Prevent	Camelthorn	Alhagi	maurorum
Prevent	Clary sage	Salvia	sclarea
Prevent	Common crupina	Crupina	vulgaris
Prevent	Eggleaf spurge	Euphorbia	oblongata
Prevent	Goatsrue	Galega	officinalis
Prevent	Halogeton/Saltlover	Halogeton	glomeratus
Prevent	Hydrilla	Hydrilla	verticillata
Prevent	Iberian starthistle	Centaurea	iberica
Prevent	Italian thistle	Carduus	pycnocephalus
Prevent	Johnsongrass	Sorghum	halepense
Prevent	Jointed goatgrass	Aegilops	cylindrica
Prevent	Kudzu	Pueraria	montana var. lobata
Prevent	Meadow clary	Salvia	pratensis
Prevent	Mediterranean sage	Salvia	aethiopis
Prevent	Medusahead	Taeniatherum	caput-medusae
Prevent	Purple nutsedge	Cyperus	rotundus
Prevent	Purple starthistle	Centaurea	calcitrapa
Prevent	Red bartsia	Odontites	serotina
Prevent	Silverleaf nightshade	Solanum	elaeagnifolium

Prevent	Slender/Meadow foxtail	Alopecurus	myosuroides
Prevent	Slenderflower thistle	Carduus	tenuiflorus
Prevent	Spring milletgrass	Milium	vernale
Prevent	Spurge Flax	Thymelaea	passerina
Prevent	Squarrose knapweed	Centaurea	virgata ssp. squarrosa
Prevent	Syrian bean-caper	Zygophyllum	fabago
Prevent	Texas blueweed	Helianthus	ciliaris
Prevent	Water soldier	Stratiotes	aloides
Provincial EDRR	African rue	Peganum	harmala
Provincial EDRR	Black henbane	Hyoscyamus	niger
Provincial EDRR	Brazilian elodea/Waterweed	Egeria	densa
Provincial EDRR	Dyer's woad	Isatis	tinctoria
Provincial EDRR	European common reed	Phragmites	australis
Provincial EDRR	Flowering rush	Butomus	umbellatus
Provincial EDRR	Giant reed	Arundo	donax
Provincial EDRR	Invasive cordgrasses	Spartina	spp.
Provincial EDRR	Maltese star thistle	Centaurea	melitensis
Provincial EDRR	Mouse-ear hawkweed	Hieracium	pilosella
Provincial EDRR	North African grass	Ventenata	dubia
Provincial EDRR	Perennial pepperweed	Lepidium	latifolium
Provincial EDRR	Shiny geranium	Geranium	lucidum
Provincial EDRR	Slender false brome	Brachypodium	sylvaticum subsp. sylvaticum
Provincial EDRR	Water hyacinth*	Eichhornia	crassipes
Provincial EDRR	Water lettuce*	Pistia	stratiotes
Provincial EDRR	Yellow floating heart	Nymphoides	peltata
Provincial EDRR	Yellow starthistle*	Centaurea	solstitialis
Provincial Containment	Garlic mustard	Alliaria	petiolata
Provincial Containment	Giant hogweed	Heracleum	mantegazzianum
Provincial Containment	Poison hemlock	Conium	maculatum
Provincial Containment	Rush skeletonweed	Chondrilla	juncea
Provincial Containment	Wild chervil	Anthriscus	sylvestris
Provincial Containment	Wild parsnip	Pastinaca	sativa
Regional Containment/Control	Blueweed	Echium	vulgare
Regional Containment/Control	Common bugloss	Anchusa	officinalis
Regional Containment/Control	Common tansy	Tanacetum	vulgare
Regional Containment/Control	Field scabious	Knautia	arvensis

Regional Containment/Control	Himalayan blackberry	Rubus	armeniacus
Regional Containment/Control	Himalayan knotweed	Persicaria	wallichii
Regional Containment/Control	Hoary alyssum	Berteroa	incana
Regional Containment/Control	Hoary cress	Cardaria	draba
Regional Containment/Control	Knotweeds (Japanese, Giant and Bohemian)	Fallopia/Reynoutria & Polygonum	spp.
Regional Containment/Control	Leafy spurge	Euphorbia	esula
Regional Containment/Control	Marsh plume thistle	Cirsium	palustre
Regional Containment/Control	Orange hawkweed	Hieracium	aurantiacum
Regional Containment/Control	Policeman's helmet/Himalayan balsam	Impatiens	glandulifera
Regional Containment/Control	Puncturevine	Tribulus	terrestris
Regional Containment/Control	Scotch broom	Cytisus	scoparius
Regional Containment/Control	Spotted knapweed	Centaurea	stoebe
Regional Containment/Control	Teasel	Dipsacus	fullonum
Regional Containment/Control	Whiplash hawkweed	Hieracium	flagellare
Regional Containment/Control	Yellow archangel	Lamium	galeobdolon
Regional Containment/Control	Yellow flag iris	Iris	pseudacorus
Management	Bur chervil	Anthriscus	caucalis
Management	Carpet burweed	Soliva	sessilis
Management	Cypress spurge	Euphorbia	cyparissias
Management	Gorse	Ulex	europaeus
Management	Invasive yellow hawkweeds	Hieracium	spp.
Management	Longspine Sandbur	Cenchrus	longispinus
Management	Mountain bluet	Centaurea	montana
Management	Purple loosestrife	Lythrum	salicaria
Management	Scentless chamomile	Tripleurospermum	inodorum
Management	Scotch thistle	Onopordum	acanthium
Management	Spurge laurel	Daphne	laureola
Management	Sulphur cinquefoil	Potentilla	recta
Management	Sweet fennel	Foeniculum	vulgare
Management	Tansy ragwort	Jacobaea	vulgaris

**Status under review*

Definition of Priority Ranking Categories for Invasive Plants

Priority Ranking	Description
Regional EDRR (1)	High risk invasive plant species not currently known within the Columbia Shuswap Regional District boundary or brand new incursions that are extremely limited in extent (less than 10 very small sites) within the Columbia Shuswap Regional District boundary. Management objective is eradication.
Eradication and Annual Control (2)	Species are known in the IPMA but with very limited distribution. Some species are relatively new to the IPMA so eradication is the objective. Other species may have been present for a relatively long period so monitoring for spread is the management objective.
Containment (3)	Species are abundant (with no expectation of eradication) in certain portions of the IPMA but have not yet infested all potential habitats. Management efforts are delineated by containment lines which may be based on geographic (e.g. a specific region) or jurisdictional boundaries (e.g. private gardens only). Some of these species have biocontrol (BC) agents available which may be useful within the containment line. Containment is the management objective. Treat all sites outside of containment lines.
Established (biocontrol or site-specific approach) (4)	Widespread species beyond landscape-level control and/or have relatively low impact. Land managers may choose to treat these species at high priority sites (e.g. wildlife habitat, corridors of spread, adjacent to agricultural land, restoration goals, etc.) based on specific land management objectives. Some of these species have biological control (BC) agents available.
Insufficient information (5)	Insufficient information for these species on their distribution, impacts, potential for spread and/or feasibility of control. Further information is required.

Priority invasive plants in the Columbia Shuswap by IPMA

Species	Bio-control?	Relevant legislation[1]	Salmon Arm IPMA	Revelstoke IPMA	Golden IPMA
Annual sow thistle (SONC OLE)		WCA, CCSCJ	4	4	4
Baby's breath (GYPS PAN)		CCSCJ, FRPA	2	2	2
Bachelor's button (CENT CYA)			5	5	5
Bighead knapweed (CENT MAC)			1	1	1
Black knapweed (CENT NIG)	Y	FRPA	2	2	5
Black locust (ROBI PSE)			5	5	5
Blueweed (ECHI VUL)		WCA, CCSCJ, FRPA	2	2	2
Bohemian knotweed (FALL BOH)		WCA	2	2	2
Brown Knapweed (CENT JAC)		FRPA	5	5	5
Buffalobur (SOLA ROS)			1	1	1
Bull thistle (CIRS VUL)	Y	CCSCJ, FRPA	4	4	4
Bur chervil (ANTH CAU)		WCA	1	1	1

Burdock (ARCT SPP)		WCA, CCSCJ, FRPA	4	4	4
Canada thistle (CIRS ARV)	Y	WCA, CCSCJ, FRPA	4	4	4
Caraway (CARU CAR)			5	2	2
Carpet burweed (SOLI SES)		CCSCJ	5	5	5
Chicory (CICH INT)			4	4	4
Colt's Foot (TUS FAR)			1	1	1
Common bugloss (ANCH OFF)			1	1	1
Common comfrey (SYMP OFF)			4	4	4
Common tansy (TANA VUL)		WCA, CCSCJ, FRPA	3	3	2
Contain to gardens: - Butterfly bush (BUDD DAV) - Common periwinkle (VINC MIN) - English holly (ILEX AQU) - English ivy (HEDE HEL) - Garden yellow loosestrife(LYSI VUL) - Goutweed (AEGO POD) - Japanese butterbur (PETA JAP) - Mountain bluet (CENT MON) - Russian olive (ELAE ANG) - Salt cedar/ Tamarisk (TAMA RAM) - Siberian elm (ULMU PUM)		CCSCJ (English ivy, Salt cedar)	3	3	3
Creeping buttercup (RANU REP)			5	5	5
Curled dock (RUME CRI)			4	4	4
Curly leaf pondweed (POTA CRI)		CCSCJ	5	5	5
Cypress spurge (EUPH CYP)			2	5	2
Dalmatian toadflax (LINA DAL)	Y	WCA, CCSCJ, FRPA	4	4	4
Dame's rocket (HESP MAT)			5	5	5
Diffuse knapweed (CENT DIFF)	Y	WCA, CCSCJ, FRPA	4	4	2
Eurasian Water Milfoil (MYRI SPI)		CCSCJ	3	3	5
Eyebright (EUPH NEM)			5	5	5
Field bindweed (CONV ARV)			5	5	5
Field scabious (KNAU ARV)		FRPA	2	5	5
Flat Peavine (LATH SYL)			5	5	5
Fragrant water lily (NYMP ODO)			3	5	5
Garlic mustard (ALLI PET)		WCA, CCSCJ	1	1	1
Giant hogweed (HERA MAN)		WCA, CCSCJ	1	1	1
Giant knotweed (FALL SAC)		WCA,CCSCJ, FRPA	1	1	1

Gorse (ULEX EUR)		WCA, CCSCJ, FRPA	1	1	1
Greater celandine (CHEL MAJ)			5	5	5
Greater knapweed (CENT SCA)			1	1	1
Green foxtail / green bristlegrass (SETA VIR)			5	5	5
Hairy cat's ear (HYPO RAD)			5	5	5
Himalayan blackberry (RUBU ARM)		CCSCJ	2	2	5
Himalayan knotweed (POLY POL)		WCA	1	1	1
Hoary alyssum (BERT INC)		FRPA	4	2	2
Hoary cress (CARD DRA)		WCA, CCSCJ, FRPA	1	1	1
Hound's tongue (CYNO OFF)	Y	WCA, CCSCJ, FRPA	4	4	4
Japanese knotweed (FALL JAP)		WCA, CCSCJ, FRPA	2	2	2
Knapweed species (CENT SPP)	Y		4	4	2
Kochia (KOCH SCO)			5	5	5
Lady's thumb (POLY PER)			5	5	5
Leafy spurge (EUPH ESU)	Y	WCA, CCSCJ, FRPA	2	2	2
Longspine sandbur (CENC LON)			1	1	1
Marsh plume thistle (CIRS PALU)		FRPA	2	2	5
Meadow buttercup (RANU ACR)			4	4	4
Meadow goat's beard (TRAG PRA)			4	4	5
Meadow knapweed (CENT DEB)	Y	WCA, CCSCJ, FRPA	2	2	2
Night-flowering catchfly (SILE NOC)			5	5	5
Nightshade (SOLA SPP)			4	5	5
Nodding thistle (CARD NUT)	Y	CCSCJ, FRPA	1	1	1
Orange hawkweed (HIER AUR)		WCA, CCSCJ, FRPA	4	4	5
Oxeye daisy (LEUC VUL)		FRPA	4	4	4
Perennial sow thistle (SONC ARV)		WCA, CCSCJ	4	4	4
Plumeless thistle (CARD ACA)	Y	FRPA	1	1	1
Poison hemlock (CONI MAC)		CCSCJ	2	2	2
Policeman's helmet (IMPA GLA)		CCSCJ	2	2	2
Puncturevine (TRIB TER)		FRPA	1	1	1

Purple loosestrife (LYNT SAL)	Y	WCA, CCSCJ, FRPA	4	4	4
Queen anne's lace / wild carrot (DAUC CAR)			4	5	5
Rush skeletonweed (CHON JUN)	Y	WCA, CCSCJ, FRPA	2	5	5
Russian knapweed (ACRO REP)		FRPA	5	5	5
Russian thistle (SALS KAL)			5	5	5
Scentless chamomile (MATR PER)	Y	WCA, CCSCJ, FRPA	5	5	2
Scotch broom (CYTI SCO)		CCSCJ, FRPA	2	2	5
Scotch thistle (ONOP ACA)		FRPA	2	5	5
Short-fringed knapweed (CENT NIR)	Y		1	1	1
Sow thistle spp (SONC SPP)		WCA, CCSCJ	4	4	4
Spotted knapweed (CENT BIE)	Y	WCA, CCSCJ, FRPA	4	4	2
Spurge laurel (DAPH LAU)		CCSCJ	5	5	5
St. John's wort (HYPE PER)	Y	CCSCJ, FRPA	4	4	5
Sulphur cinquefoil (POTE REC)		WCA, CCSCJ, FRPA	4	4	5
Sweet fennel (FOEN VUL)			5	5	5
Tansy ragwort (SENE JAC)	Y	WCA, CCSCJ, FRPA	1	1	1
Teasel (DIPS FUL)		FRPA	2	2	2
Western Goat's Beard (TRAG DUB)			4	4	4
Wild chervil (ANTH SYL)			2	2	5
Wild four o'clock (MIRA NYC)			5	5	5
Wild parsnip (PAST SAT)			1	1	1
Wood sage (SALV NEM)			1	1	1
Wormwood (ARTE ABS)			4	4	4
Yellow archangel (LAMI GAL)			2	2	5
Yellow flag iris (IRI PSE)		WCA, CCSCJ, FRPA	2	5	5
Yellow hawkweed spp (HIER SPP) (including: king devil, meadow, polar, queen devil, spotted, tall, whiplash, yellow devil)		FRPA (meadow)	4	4	4
Yellow toadflax (LINA VUL)	Y	WCA, CCSCJ, FRPA	4	4	4

[1] WCA= Weed Control Act; CCSCJ= Community Charter- Spheres of Concurrent Jurisdiction, Environment and Wildlife Regulation; FRPA=Forest and Range Practices Act- Invasive Plants Regulation

Unlisted Lower Priority Species for Columbia Shuswap

UNLISTED Lowest Priority in all IPMAs (therefore not included in ranking, some jurisdictions may choose to control - consider as priority 4)		
Species Name	**Rank**	**IPMA**
Annual hawksbeard (CREP TEC)	6	All
Bladder Campion (SILE VUL)	6	All
Cudweed (GNAP ULI)	6	All
Groundsel (SENE VUL)	6	All
Mullein (VERB THA)	6	All
Sheep sorrel (RUME ACE)	6	All
Shepherd's purse (CAPS BUR)	6	All
Watercress (NAST OFF)	6	All
White Cockle (LYCH ALB)	6	All
Wild buckwheat (POLY CON)	6	All

Salmon Arm IPMA Priority Plant List

REGIONAL EDRR - High risk invasive plant species not currently known within the Columbia Shuswap Regional District boundary or brand new incursions that are extremely limited in extent (less than 10 very small sites) within the Columbia Shuswap Regional District boundary. Management objective is eradication.

- Bighead knapweed
- Buffalobur
- Bur chervil
- Colt's foot
- Common bugloss
- Garlic mustard
- Giant hogweed
- Giant knotweed
- Gorse
- Greater knapweed
- Himalayan knotweed
- Hoary Cress
- Longspine sandbur
- Nodding thistle
- Plumeless thistle
- Puncturevine
- Short-fringed knapweed
- Tansy Ragwort
- Wild parsnip
- Wood sage

ERADICATION or ANNUAL CONTROL – Species are known in the IPMA but with very limited distribution. Some species are relatively new to the IPMA so eradication is the objective. Other species may have been present for a relatively long period so monitoring for spread is the management objective.

- Baby's breath
- Black knapweed (BC)
- Blueweed
- Bohemian knotweed
- Cypress spurge
- Field scabious
- Himalayan blackberry
- Japanese knotweed
- Leafy spurge (BC)
- Marsh plum thistle
- Meadow knapweed (BC)
- Poison hemlock
- Policeman's helmet
- Rush skeletonweed (BC)
- Scotch broom
- Scotch thistle
- Teasel
- Wild chervil
- Yellow archangel
- Yellow flag iris

CONTAINMENT – Species are abundant (with no expectation of eradication) in certain portions of the IPMA but have not yet infested all potential habitats. Containment is the management objective. Treat all sites outside of containment lines.

Contain to gardens:

- Butterfly bush
- Common periwinkle
- English holly
- English ivy
- Garden yellow loosestrife
- Goutweed
- Japanese butterbur

Contain to gardens Cont'd:

- Mountain bluet
- Russian olive
- Salt cedar/ Tamarisk
- Siberian elm

Contain to White Lake:

- Fragrant water lily

Contain to west portion of IPMA (treat Seymour Arm and east portion of IPMA):

- Common tansy

Contain to Shuswap/ Mara/White Lake:

- Eurasian water milfoil

ESTABLISHED (BIOCONTROL OR SITE-SPECIFIC APPROACH) – Widespread species beyond landscape-level control and/or have relatively low impact. May have biocontrol (BC) available. Treat based on land management objectives.

- Annual sow thistle
- Bull thistle (BC)
- Burdock
- Canada thistle (BC)
- Chicory
- Common comfrey
- Curled dock
- Dalmatian toadflax (BC)
- Diffuse knapweed (BC)
- Hoary alyssum
- Hound's tongue (BC)
- Knapweed spp. (BC)
- Meadow buttercup
- Meadow goat's beard
- Nightshade
- Orange hawkweed
- Oxeye daisy
- Perennial sow thistle
- Purple loosestrife (BC)
- Queen Anne's Lace
- Sow thistle spp
- Spotted knapweed (BC)
- St. John's Wort (BC)
- Sulphur cinquefoil
- Western goat's beard
- Wormwood
- Yellow hawkweed spp.
- Yellow toadflax (BC)

INSUFFICIENT INFORMATION – Insufficient information for these species on their distribution, impacts, potential for spread and/or feasibility of control. Further information is required.

- Bachelor's button
- Black locust
- Brown knapweed
- Caraway
- Carpet burweed
- Creeping buttercup
- Curly leaf pondweed
- Dame's rocket
- Eyebright
- Field bindweed
- Flat peavine
- Greater celandine
- Green foxtail
- Hairy cat's ear
- Kochia
- Lady's thumb
- Night-flowering catchfly
- Russian knapweed
- Russian thistle
- Scentless chamomile (BC)
- Spurge laurel
- Sweet fennel
- Wild four o'clock

BC – biocontrol

Revelstoke IPMA Priority Plant List

REGIONAL EDRR - High risk invasive plant species not currently known within the Columbia Shuswap Regional District boundary or brand new incursions that are extremely limited in extent (less than 10 very small sites) within the Columbia Shuswap Regional District boundary. Management objective is eradication.

- Bighead knapweed
- Buffalobur
- Bur chervil
- Colt's foot
- Common bugloss
- Garlic mustard
- Giant hogweed
- Giant knotweed
- Gorse
- Greater knapweed
- Himalayan knotweed
- Hoary Cress
- Longspine sandbur
- Nodding thistle
- Plumeless thistle
- Puncturevine
- Short-fringed knapweed
- Tansy Ragwort
- Wild parsnip
- Wood sage

ERADICATION or ANNUAL CONTROL – Species are known in the IPMA but with very limited distribution. Some species are relatively new to the IPMA so eradication is the objective. Other species may have been present for a relatively long period so monitoring for spread is the management objective.

- Baby's breath
- Black knapweed (BC)
- Blueweed
- Bohemian knotweed
- Caraway
- Himalayan blackberry
- Hoary alyssum
- Japanese knotweed
- Leafy spurge (BC)
- Marsh plume thistle
- Meadow knapweed (BC)
- Poison hemlock
- Policeman's helmet
- Scotch broom
- Teasel
- Wild chervil
- Yellow archangel

CONTAINMENT – Species are abundant (with no expectation of eradication) in certain portions of the IPMA but have not yet infested all potential habitats. Containment is the management objective. Treat all sites outside of containment lines.

Contain to gardens:

- Butterfly bush
- Common periwinkle
- English holly
- English ivy
- Garden yellow loosestrife
- Goutweed

Contain to gardens Cont'd:

- Japanese butterbur
- Mountain bluet
- Russian olive
- Salt cedar/ Tamarisk
- Siberian elm

Contain to southern portion of IPMA:

- Common tansy

Contain to Revelstoke and Arrow Reservoirs:

- Eurasian water milfoil

ESTABLISHED (BIOCONTROL OR SITE-SPECIFIC APPROACH) – Widespread species beyond landscape-level control and/or have relatively low impact. May have biocontrol (BC) available. Treat based on land management objectives.

- Annual sow thistle
- Bull thistle (BC)
- Burdock
- Canada thistle (BC)
- Chicory
- Common comfrey
- Curled dock
- Dalmatian toadflax (BC)
- Diffuse knapweed (BC)
- Hound's tongue (BC)
- Knapweed spp. (BC)
- Meadow buttercup
- Meadow goat's beard
- Orange hawkweed
- Oxeye daisy
- Perennial sow thistle
- Purple loosestrife (BC)
- Sow thistle spp.
- Spotted knapweed (BC)
- St. John's Wort (BC)
- Sulphur cinquefoil
- Western goat's beard
- Wormwood
- Yellow hawkweed spp.
- Yellow toadflax (BC)

INSUFFICIENT INFORMATION – Insufficient information for these species on their distribution, impacts, potential for spread and/or feasibility of control. Further information is required.

- Bachelor's button
- Black locust
- Brown knapweed
- Carpet burweed
- Creeping buttercup
- Curly leaf pondweed
- Cypress spurge
- Dame's rocket
- Eyebright
- Field bindweed
- Field scabious
- Flat peavine
- Fragrant water lily
- Greater celandine
- Green foxtail
- Hairy cat's ear
- Kochia
- Lady's thumb
- Night-flowering catchfly
- Nightshade
- Queen Anne's Lace
- Rush skeletonweed (BC)
- Russian knapweed
- Russian thistle
- Scentless chamomile (BC)
- Scotch thistle
- Spurge laurel
- Sweet fennel
- Wild four o'clock
- Yellow flag iris

BC – biocontrol

Golden IPMA Priority Plant List

REGIONAL EDRR - High risk invasive plant species not currently known within the Columbia Shuswap Regional District boundary or brand new incursions that are extremely limited in extent (less than 10 very small sites) within the Columbia Shuswap Regional District boundary. Management objective is eradication.		
- Bighead knapweed - Buffalobur - Bur chervil - Colt's foot - Common bugloss - Garlic mustard - Giant hogweed	- Giant knotweed - Gorse - Greater knapweed - Himalayan knotweed - Hoary Cress - Longspine sandbur - Nodding thistle	- Plumeless thistle - Puncturevine - Short-fringed knapweed - Tansy Ragwort - Wild parsnip - Wood sage
ERADICATION or ANNUAL CONTROL – Species are known in the IPMA but with very limited distribution. Some species are relatively new to the IPMA so eradication is the objective. Other species may have been present for a relatively long period so monitoring for spread is the management objective.		
- Baby's breath - Blueweed - Bohemian knotweed - Caraway - Common Tansy - Cypress spurge	- Diffuse knapweed (BC) - Hoary alyssum - Japanese knotweed - Knapweed spp. (BC) - Leafy spurge (BC) - Meadow knapweed (BC)	- Poison hemlock - Policeman's helmet - Scentless chamomile (BC) - Spotted knapweed (BC) - Teasel
CONTAINMENT – Species are abundant (with no expectation of eradication) in certain portions of the IPMA but have not yet infested all potential habitats. Containment is the management objective. Treat all sites outside of containment lines.		
Contain to gardens: - Butterfly bush - Common periwinkle - English holly	- English ivy - Garden yellow loosestrife - Goutweed - Japanese butterbur	- Mountain bluet - Russian olive - Salt cedar/ Tamarisk - Siberian elm
ESTABLISHED (BIOCONTROL OR SITE-SPECIFIC APPROACH) – Widespread species beyond landscape-level control and/or have relatively low impact. May have biocontrol (BC) available. Treat based on land management objectives.		
- Annual sow thistle - Bull thistle (BC) - Burdock - Canada thistle (BC) - Chicory - Common comfrey	- Curled dock - Dalmatian toadflax (BC) - Hound's tongue (BC) - Meadow buttercup - Oxeye daisy - Perennial sow thistle	- Purple loosestrife (BC) - Sow thistle spp. - Western goat's beard - Wormwood - Yellow hawkweed spp. - Yellow toadflax (BC)
INSUFFICIENT INFORMATION – Insufficient information for these species on their distribution, impacts, potential for spread and/or feasibility of control. Further information is required.		
- Bachelor's button - Black knapweed (BC) - Black locust - Brown knapweed - Carpet burweed - Creeping buttercup - Curly leaf pondweed - Dame's rocket - Eurasian water milfoil - Eyebright - Field bindweed - Field scabious - Flat peavine	- Fragrant water lily - Greater celandine - Green foxtail - Hairy cat's ear - Himalayan blackberry - Kochia - Lady's thumb - Marsh plume thistle - Meadow goat's beard - Night-flowering catchfly - Nightshade - Orange hawkweed - Queen Anne's Lace	- Rush skeletonweed (BC) - Russian knapweed - Russian thistle - Scotch broom - Scotch thistle - Spurge laurel - St. John's Wort (BC) - Sulphur cinquefoil - Sweet fennel - Wild chervil - Wild four o'clock - Yellow archangel - Yellow flag iris

BC – biocontrol