



## Implementation Guidance

### South Central Coast Forest Stewardship Plan Amendment # 1

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by BCTS Strait of Georgia

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## **1 Introduction**

This guidance document is intended to be a companion document to the BCTS and Pallen Timber Loughborough Forest Stewardship Plan (FSP) Amendment #1. The FSP amendment was required to include results and strategies to address the objectives established as part of the South Central Coast Order consistent with sections 7(1.1)(a) (i) and 8(1) of the Forest and Range Practices Act (FRPA).

It is important to note that the information provided in this document should not be construed as legal interpretation or legal advice. It is not intended to limit the accountability and flexibility of the professionals but rather to provide supplemental information regarding the results and strategies that will assist in the successful implementation of the FSP.

## 2 FSP Commitments & Guidance

### 2.1 Landscape Level Biodiversity

- **South Central Coast Objectives for Landscape Level Biodiversity (SCCO s. 14)**
- **FRPA s. 149 Objectives for Wildlife and Biodiversity - Landscape Level (FPPR s. 9)**

#### 2.1.1 Description of Objectives

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The South Central Coast Order established objectives for landscape level biodiversity. The Order specifies target amounts of old forest to be retained for the site series surrogates (SSS) specified where old forest is defined as a stand of trees 180 years or older. The Order includes provisions to allow for less than the specified amount to be retained where alteration or removal of old forest is required for road access, other infrastructure, or to address a safety concern. The Order also requires that no more than 50% of each site series specified is maintained as mid-seral forest age class. For the purpose of the strategy, the amount of old growth will be based on an annual analysis using the most up to date SSS data set available at that time.

**FPPR s. 9** objective for landscape level biodiversity is 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.

#### 2.1.2 Legal Commitments

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In situations where there is insufficient old forest to meet the retention targets, the FSP commits to not harvesting old forest within the SSS that is in deficit.

The FSP does allow for harvesting of old forest where there is insufficient old forest to meet the retention targets provided that:

- (1) alteration or removal is required for road access, other infrastructure, or to address a safety concern; or
- (2) information sharing or consultation with First Nations determines there is no practicable alternative.

Where there is insufficient old forest to meet the retention targets, the FSP commits to preparing a recruitment strategy that will ensure the targets are met within 180 years, to the extent practicable.

The FSP commits to not harvesting within the specified SSS, if doing so would result in the amount of mid-seral forest in that site series to exceed 50%. If the amount of mid-seral forest in a particular site series already exceeds 50%, then the FSP commits to a cooperative approach between other FSP holders to reduce the amount of mid-seral forest to less than 50% within 80 years, to the extent practicable.

The FSP commits to complying with FPPR s. 64 which restricts maximum cutblock sizes and s. 65 which provides restrictions when harvesting adjacent to another cutblock, to satisfy the FPPR objective for landscape level biodiversity. By agreeing to comply with those practice requirements, there is no additional requirement to write a result or strategy. As such, the site plan does not need to indicate how these practice requirements are applied to the site however, operations must be consistent with FPPR s. 64 and 65.

### 2.1.3 Implementation Guidance

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Successful implementation of this commitment requires:

- a) accurate SSS information that correctly reflects what is in the field, and
- b) an analysis to determine:
  - i) current status of old forest retention amounts in the SSS being proposed for harvest,
  - ii) if proposed harvest will result in amount of old forest required to meet retention targets by SSS not being able to be met. Bearing in mind that old forest is defined as 180 years or older in the South Central Coast Order,
  - iii) the amount of mid-seral forest in the SSS being proposed for harvest, and
  - iv) if proposed harvest will result in the amount of mid-seral forest in the SSS to exceed 50% of that particular SSS.

Current SSS mapping by Landscape Unit and operating area has been completed at a 1:20000 scale and can be obtained from BCTS GIS department. This level of accuracy may be useful for strategic level planning. To ensure accurate application of the result/strategy, BCTS requires that field recces are completed to determine the actual SSS of the area proposed for development prior to blocks being included on an Operational Plan. Sizes of SSS stratification units are to be determined by the prescribing forester. Where field recces are completed by other Holders of the FSP, or by contractors working on behalf of BCTS, the results must be provided to BCTS at the site plan stage. Coast Forest Conservation Initiative (CFCI) has created two forms which must be completed; an EBM checklist and an SSS depletion.

The SSS tracking form can be obtained through the following link:

[http://www.coastforestconservationinitiative.com/ebm\\_new/documents/documents/RepresentationTrackingSpreadsheetFinal-March30-2006\\_000.xls](http://www.coastforestconservationinitiative.com/ebm_new/documents/documents/RepresentationTrackingSpreadsheetFinal-March30-2006_000.xls)

The EBM checklist can be obtained through the following link:

[http://www.coastforestconservationinitiative.com/ebm\\_new/documents/documents/EBMSiteLevelChecklist-2007September\\_000.xls](http://www.coastforestconservationinitiative.com/ebm_new/documents/documents/EBMSiteLevelChecklist-2007September_000.xls)

Analysis must consider areas harvested and planned for harvest (in cutting permit) by other license holders and BCTS. If the analysis indicates that there is insufficient old forest to meet the retention targets then a recruitment strategy must be prepared, which will assess if the proposed for harvest is required for the recruitment strategy. Stands required to meet the recruitment component of the strategy are to be considered for 1 rotation and must be tracked. Successful implementation of a recruitment strategy will be dependent upon communication with other Licensees operating within the same area.

Where analysis indicates that the area proposed for harvest is required to either meet the old forest or mid-seral commitments, and alteration or removal is proceeding for road access, other infrastructure or to address a safety concern, ensure documentation that supports this is retained on file.

Where analysis indicates that the area proposed for harvest is required to either meet the old forest or mid-seral commitments, and alteration or removal is proceeding after information sharing or consultation with First Nations determines that there is no other practicable alternative, ensure documentation that supports this is retained on file.

Site plans for roads and cutblocks must indicate how this result/strategy applies to the site. If harvesting of the timber associated with the site plan will not result in the harvest of old forest required to meet the retention as per the Order, then the site plan should include a statement indicating that. If the site plan includes harvesting of old forest that is required to meet the old forest retention targets, then the site plan needs to indicate this. Information that supports such actions must be documented and retained on file.

## 2.2 Stand Level Biodiversity/Retention

- **South Central Coast Objectives for Stand Level Retention (SCCO s. 16)**
- **FRPA S 149 Objectives for Wildlife and Biodiversity - Stand Level (FPPR s. 9.1)**

### 2.2.4 Description of Objectives

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The South Central Coast Order established objectives for stand level retention requiring that if a clearcut silviculture system is used, a minimum of 15% of a cutblock must be retained as stand level retention or timbered leave areas (TLA's). If such cutblocks are greater than 15 hectares in size, then at least 50% of the retention must be distributed within the cutblock, except if the stand being harvested is second growth and a windthrow assessment indicates a high windthrow hazard.

FPPR objective for stand level biodiversity is to retain wildlife trees.

### 2.2.5 Legal Commitments

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Objectives FPPR s. 9.1 and SCCO s.16 have been addressed in the same result/strategy. Where a clearcut or clearcut with reserves silviculture system is being implemented, the FSP commits to retaining at least 15% of the cutblock area as stand level retention/TLA. If those cutblocks are greater than 15 hectares, the FSP commits to retaining at least 50% of the stand level retention/TLA to be within the cutblock boundary. Where practicable, stand level retention/TLA areas will be selected that include:

- i) habitat elements important for species at risk, ungulate winter range, and regionally important wildlife;
- ii) representation of ecosystems and plant communities that are red-listed or blue-listed in the watershed and landscape.
- iii) functional riparian forest adjacent to active fluvial units, forested swamps, fen and marsh wetlands and upland streams with unique climate and other characteristics;
- iv) Western red cedar and Yellow cedar in a range of diameters and species representative of the preharvest stand; and
- v) wildlife trees and coarse woody debris.

The FSP commits to adopting FPPR s. 66 and s. 67. Section 66 specifies that a minimum of 7% of the total area of cutblocks harvested must be retained as wildlife tree retention area (wtra). There is flexibility provided within the legislation to allow for the 7% wtra to be reduced to a minimum of 3.5% on a particular cutblock. If this option is utilized, then a higher amount of wtra will have to be retained on another cutblock, to ensure that within the one year period at least 7% of the total area of cutblocks harvested is retained in wtra. Section 66 also allows for wtra's to relate to more than one cutblock, provided that sufficient amounts of wtra are identified to represent the minimum requirements for all cutblocks. FPPR s. 67 specifies that wtra's must not be harvested unless the cutblock to which the wtra applies has developed attributes consistent with mature seral condition.

An agreement holder who carries out timber harvesting must comply with FPPR s. 68 which specifies the amount of coarse woody debris to be retained on a cutblock.

### 2.2.6 Implementation Guidance

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It is anticipated that in most circumstances, the amount for wtra set aside for each cutblock will be 7%, and that the option to reduce to 3.5% will only be utilized when site specifics require such a reduction. The amount of wtra specified for a cutblock (at least 7%) contributes to the amount of stand level retention/TLA specified for a cutblock (at least 15%); therefore if you specify 7% wtra for a particular cutblock, you will need an additional 8% to meet the stand level retention/TLA targets. The regulations specify that the wtra is not available for harvest until the associated

cutblock has developed attributes consistent with mature seral condition. The SCCO does not specify that any timelines for retaining areas identified as stand level retention/TLA. As the stand level retention/TLA is associated with the cutblock, once those cutblocks reach free-growing and all obligations are met, the stand level retention/TLA is no longer tied to a cutblock and is available for harvest.

Determining the Percent Retention:

Individual cutblocks must have at least 15% retention (which includes at least 7% wtra). Retention can be internal, external (but must be contiguous as defined in the SCCO), dispersed or a combination of these. In order to calculate the percent retention, the following formula is used:

$$F = (D/E) \times 100$$

where, D = total retention area

E\* = total area under prescription (TAUP)

F = percent retention

\* Use of TAUP as denominator in the calculation is consistent with GENUS.

The table below illustrates an example of calculating percent retention from the CFCI EBM: 2007 Operational Guidance document.

**Table 1. Calculating percent retention**

| Area Descriptor                                                  | Area (ha) |
|------------------------------------------------------------------|-----------|
| Wildlife Tree Patch (WTP)                                        | 1.0       |
| Retention Patch (RP)                                             | 1.2       |
| Riparian Reserve Zone (RRZ)                                      | 0.5       |
| Net Harvest Area                                                 | 15.0      |
| Total Area Under Prescription                                    | 17.7      |
| Total Retention Area (WTP + RP + RRZ)                            | 2.7       |
| Percent retention = $(2.7 / 17.7) \times 100 \Rightarrow 15.3\%$ |           |

Selection and Distribution of Stand Level Retention:

Selection and distribution of stand level retention (TLA's and wtra's) should consider, where appropriate, incorporating other potential constraints such as red and blue-listed plant communities, and cedar requirements to meet the First Nations strategy, but is ultimately at the discretion of the prescribing forester.

When incorporating dispersed retention into the percent retention calculation, the basal area retained ( $m^2$ ) must be converted to an area retained, measured in hectares. The formula for converting basal area retained, to an area in hectares is:

$$L = J/K$$

where, J = the sum of the post harvest basal area

K = the average pre-harvest basal area per hectare in the stand

L = the dispersed retention equivalent in hectares

The table below is an example for calculating how much area dispersed retention equals from the CFCI EBM: 2007 Operational Guidance document.

**Table 2. Calculating dispersed retention equivalent**

| Area Descriptor                                                                                     | Value                   |
|-----------------------------------------------------------------------------------------------------|-------------------------|
| Total basal area of dispersed retention                                                             | 30.0 m <sup>2</sup>     |
| Average pre-harvest basal area/ha in the cutblock                                                   | 85.0 m <sup>2</sup> /ha |
| The dispersed retention equivalent in hectares = 30/85 ⇒ 0.35 ha                                    |                         |
| Now the dispersed retention area equivalent can be entered into the cutblock retention calculation. |                         |

Tracking and documentation:

All stand level retention areas/TLA's and wildlife tree retention areas must be identified spatially and provided to BCTS GIS for mapping and tracking purposes. Because of the different restrictions on future harvesting, it is important to clearly identify which areas are to be retained as wtra's and those that are to be retained as stand level retention/TLA areas. Tracking is to be kept via a spreadsheet developed by CFCI that can be incorporated into the Provincial database RESULTS. The amount of wtra and stand level retention/TLA required is to be determined based on the net cutblock area (net area of cutblock plus non-productive areas).

If the proposed cutblock is greater than 15 hectares and 50% of the retention is not being distributed within the cutblock because of the high windthrow hazard, ensure that this is documented and retained on file.

If the area being proposed for harvest has been previously identified as a wildlife tree retention area and the cutblock that it is associated with has not developed mature seral attributes, then ensure that the amount of wtra being proposed for harvest is replaced and the appropriate site plan amended.

Site plans need to identify how this result/strategy applies to the site (FRPA s. 10(2(c))). In accordance with FRPA s. 10(2)(b), the site plan also needs to be consistent with applicable regulations, such as FPPR s. 68, but does not need to demonstrate this consistency in the site plan.

#### 2.2.7 Exemptions

FPPR s. 91 enables the Minister to provide an exemption from FPPR s. 68 provided that the Minister is satisfied that it is not practicable given the circumstances or conditions applicable.

## 2.3 Soils – (FPPR s. 5)

### 2.3.8 Description of Objective

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The FPPR objective for soils is to conserve the productivity and the hydrological function of the soils.

### 2.3.9 Legal Commitments

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The FSP commits to comply with FPPR s. 35 which sets soil disturbance limits and FPPR s. 36 which sets permanent access structure limits. FPPR s. 35 and 36 apply to agreement holders.

FPPR s. 35 limits soil disturbance within the NAR to:

- 5% if the SU is comprised of sensitive soil;
- 10% if the SU is not comprised of sensitive soil
- 25% of roadside work areas.

FPPR 35(4)(a) allows for soil disturbance to be exceeded if removing infected stumps, or salvaging windthrow and FPPR 35(4)(b) also allows soil disturbance to be exceeded temporarily.

FPPR s.36 limits permanent access structures in a cutblock to 7% of the harvest area. 7% site degradation can be exceeded if:

- no other practicable option exists taking into account the size, topography, engineering constraints, safety of road users and the harvesting system;
- providing access beyond the block.

An authorized person who carries out primary forest activity must comply with FPPR s. 37 (landslides), s. 38 (gully processes), s. 39 (natural surface drainage patterns), and s. 40 (revegetation).

### 2.3.10 Implementation Guidance

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By agreeing to comply with FPPR s. 35 and 36, there is no additional requirement to write a result or strategy. As such, the site plan does not need to indicate how these practice requirements are applied to the site however, operations must be consistent with FPPR 35 and 36. The site plan also needs to be consistent with applicable regulations, such as FPPR s. 37, 38, 39 and 40, but does not need to demonstrate this consistency in the site plan.

FPPR s. 34(1) requires that site plans for cutblocks must identify the standards units for the area; and the stocking standards and soil disturbance limits that apply to those standards units.

## 2.4 Wildlife – Marbled Murrelet (FPPR s. 7)

### 2.4.11 Description of Objective

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Objective for wildlife (FPPR s. 7) is to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes for the survival of species at risk, survival of regionally important wildlife, and winter survival of specified ungulate species. A notice was issued by the Ministry of Environment under the Wildlife Act that specified indicators of the amount, distribution and attributes for wildlife, including marbled murrelet.

### 2.4.12 Legal Commitments

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The FSP commits to not harvest timber in a defined amount of marbled murrelet habitat, where the suitable habitat meets the distribution and attributes as described in the Notice and supported by IWMS 2004.

Suitable habitat is forests with age classes 8 or 9 and height class  $\geq 4$  in areas where a detailed marbled murrelet habitat survey has not been conducted or Class 1, 2 or 3 marbled murrelet habitat where a detailed habitat survey has been conducted. The maximum amount of impact to the THLB is 139 hectares as specified in the FSP.

### 2.4.13 Implementation Guidance

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Implementing this strategy requires determining if the proposed activities are within suitable murrelet habitat as defined in the Wildlife Notice and determining if the proposed activities will result in the amount specified in the strategy to be unattainable. As the Notice specifies retaining “an amount of habitat in the non-contributing land base equal to the amount of suitable nesting habitat in the non-contributing land base”, the first step is to determine what this amount is before an assessment can be made to determine the implications of the proposed harvesting. The second step is to determine how much of this target has already been set aside; either in WHA’s established since the Notice or in OGMA. Maps which illustrate the contributing classes and maps are essential tools. The non-contributing landbase for the purpose of the strategy is as defined in the TSR for the Strathcona TSA dated January 2000. Note that the amount of impact allowed on the THLB as specified in the strategy is a pro-rated amount and once met will satisfy the strategy but will not be sufficient to satisfy the amount in the Notice in full. This strategy applies until the target amount of habitat is set aside in WHA and relief is granted under FPPR s.7(3).

The MoE has added a page on their website that tracks the amount of habitat set aside in WHA’s for each species by forest district. This information is located at <http://www.env.gov.bc.ca/wld/frpa/notices/sar.html>

The site plan must indicate how the strategy applies to the site. If proposed activities do not include the harvest of suitable marbled murrelet nesting habitat, then the site plan should indicate this. If the proposed activities include the harvest of suitable marbled murrelet nesting habitat, then the site plan should indicate this and an assessment should be completed to ensure that proposed activities will not result in the amount of specified habitat to be retained in the Notice to not being able to be achieved. To determine if the area where the proposed activities includes marbled murrelet nesting habitat as defined in the Notice, persons conducting field work must be familiar with habitat features as specified in the wildlife Notice and IWMS 2004.

## 2.5 Wildlife – Red-legged Frog (FPPR s. 7)

### 2.5.14 Description of Objective

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Objective for wildlife (FPPR s. 7) is to conserve a sufficient wildlife habitat in terms of amount of area, distribution of areas and attribute for the survival of species at risk, survival of regionally important wildlife, and winter survival of specified ungulate species. A notice was issued by the Ministry of Environment under the Wildlife Act that specified indicators of the amount, distribution and attributes wildlife, including red-legged frog.

### 2.5.15 Legal Commitments

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The FSP commits to not harvest timber or construct roads within 50 ha of suitable red-legged frog habitat, where the suitable habitat meets the distribution and attributes as described in the Notice and supported by IWMS 2004. The FSP also commits to not harvesting or road construction within 30 ha of suitable red-legged frog habitat within the THLB that meets the distribution and attributes as described in the Notice and supported by IWMS 2004.

### 2.5.16 Implementation Guidance

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The site plan must indicate how the strategy applies to the site. If the proposed activities include the harvest of suitable red-legged frog habitat, then the site plan should indicate this and an assessment should be completed to ensure that proposed activities will not result in the amount of habitat to be retained as specified in the Notice to not be attainable. To determine if the area where the proposed activities includes red-legged frog habitat as defined in the Notice, persons conducting field work and especially classification of riparian features must be familiar with habitat features of breeding wetlands as noted in the wildlife Notice and IWMS 2004 that pertain to red-legged frogs. According to IWMS 2004, red-legged frogs require standing water to breed and although they can utilize a diversity of waterbodies and wetlands, the highest proportion has been noted in bogs and fens. This assessment of suitable habitat is meant to take place during the ordinary course of carrying out forest practices in the area. If specialists are used to assess streams in the cutblock or road location, they should be asked to observe for the presence of red-legged frogs. If a breeding wetland is identified, a biologist should be engaged and the habitat surrounding the wetland will need to be defined as guided by the amount, distribution and attributes identified in the FSP.

This strategy applies until the target amount of habitat is set aside in WHA and relief is granted under FPPR s.7(3).

The MoE has added a page on their website that tracks the amount of habitat specified in the Notice set aside in WHA's for each species by forest district. This information is located at <http://www.env.gov.bc.ca/wld/frpa/notices/sar.html>

## 2.6 Wildlife – Keen’s Long-eared Myotis (FPPR s. 7)

### 2.6.17 Description of Objective

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Objective for wildlife (FPPR s. 7) is to conserve a sufficient wildlife habitat in terms of amount of area, distribution of areas and attribute for the survival of species at risk, survival of regionally important wildlife, and winter survival of specified ungulate species. A notice was issued by the Ministry of Environment under the Wildlife Act that specified indicators of the amount, distribution and attributes wildlife, including Keen’s long-eared myotis.

### 2.6.18 Legal Commitments

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The FSP commits to not harvest timber or construct roads within 40 ha of suitable habitat, where the suitable habitat meets the distribution and attributes as described in the Notice and supported by IWMS 2004. The FSP also commits to not harvesting or constructing roads within 30 ha of suitable keen’s long-eared myotis habitat within the THLB that meets the distribution and attributes as described in the Notice and supported by IWMS 2004.

### 2.6.19 Implementation Guidance

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The goal of the identified wildlife provisions for Keen’s long-eared myotis are to protect known colonies (maternity or hibernacula) and roosting sites as well as their adjacent foraging areas and movement corridors (i.e. riparian areas). According to IWMS 2004, Keen’s long-eared myotis are associated with cool wet coastal montane forest and karst features. Caves >100m in length and above 500m elevation are known to be important winter hibernation sites. In summer, rock faces and knolls with crevices that are solar or geothermally heated are important maternity roosts. Tree cavities and loose bark are important natural roost sites and low elevation coastal forests and riparian areas are important foraging areas.

The site plan must indicate how the strategy applies to the site. If the proposed activities include the harvest of suitable keen’s long-eared myotis habitat, then the site plan should indicate this and an assessment should be completed to ensure that proposed activities will not result in the amount of habitat to be retained as specified in the Notice to not be attainable. To determine if the area where the proposed activities includes Keen’s long-eared myotis habitat as defined in the Notice, persons conducting field work must be familiar with habitat features as noted in the wildlife Notice and IWMS 2004 that pertain to this species. This assessment of suitable habitat is meant to take place during the ordinary course of carrying out forest practices in the area. If a hibernacula or maternity roost is identified, a biologist should be engaged and the habitat surrounding the feature will need to be defined as guided by the amount, distribution and attributes identified in the FSP.

This strategy applies until the target amount of habitat specified in the Notice is set aside in WHA and relief is granted under FPPR s.7(3).

The MoE has added a page on their website that tracks the amount of habitat set aside in WHA’s for each species by forest district. This information is located at <http://www.env.gov.bc.ca/wld/frpa/notices/sar.html>

## 2.7 Wildlife – Great Blue Heron (FPPR s. 7)

### 2.7.20 Description of Objective

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Objective for wildlife (FPPR s. 7) is to conserve a sufficient wildlife habitat in terms of amount of area, distribution of areas and attribute for the survival of species at risk, survival of regionally important wildlife, and winter survival of specified ungulate species. A notice was issued by the Ministry of Environment under the Wildlife Act that specified indicators of the amount, distribution and attributes wildlife, including great blue heron.

### 2.7.21 Legal Commitments

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The FSP commits to not harvest timber or construct roads within 80 ha of suitable great blue heron habitat, where the suitable habitat meets the distribution and attributes as described in the Notice and supported by IWMS 2004. The FSP also commits to not harvesting or constructing roads within 12 ha of suitable great blue heron habitat within the THLB that meets the distribution and attributes as described in the Notice and supported by IWMS 2004.

### 2.7.22 Implementation Guidance

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The goal of the identified wildlife provisions for great blue heron is to protect nesting sites and adjacent foraging areas from human disturbance and habitat loss or alteration. According to IWMS 2004, great blue herons require abundant and accessible prey within 10 km of a breeding location. Important foraging habitats include aquatic areas such as tidal mudflats, riverbanks, lakeshores, and wetlands. Colonies occur in relatively contiguous forest, fragmented forest and solitary trees.

The site plan must indicate how the strategy applies to the site. If the proposed activities include the harvest of suitable great blue heron nesting habitat, then the site plan should indicate this and an assessment should be completed to ensure that proposed activities will not result in the amount of habitat to be retained as specified in the Notice to not be attainable. To determine if the area where the proposed activities includes great blue heron nesting habitat as defined in the Notice, persons conducting field work must be familiar with habitat features as noted in the wildlife Notice and IWMS 2004 that pertain to this species. This assessment of suitable habitat is meant to take place during the ordinary course of carrying out forest practices in the area. If an active nest or nesting colony is identified, a biologist should be engaged and the habitat surrounding the feature will need to be defined as guided by the amount, distribution and attributes identified in the FSP.

This strategy applies until the target amount of habitat specified in the Notice is set aside in WHA and relief is granted under FPPR s.7(3). Note that the amount of impact allowed on the THLB as specified in the strategy is a pro-rated amount and once met will satisfy the strategy but will not be sufficient to satisfy the amount in the Notice in full.

The MoE has added a page on their website that tracks the amount of habitat set aside in WHA's for each species by forest district. This information is located at <http://www.env.gov.bc.ca/wld/frpa/notices/sar.html>

## 2.8 Wildlife – Coastal Tailed Frog (FPPR s. 7)

### 2.8.23 Description of Objective

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Objective for wildlife (FPPR s. 7) is to conserve a sufficient wildlife habitat in terms of amount of area, distribution of areas and attribute for the survival of species at risk, survival of regionally important wildlife, and winter survival of specified ungulate species. A notice was issued by the Ministry of Environment under the Wildlife Act that specified indicators of the amount, distribution and attributes wildlife, including coastal tailed frog.

### 2.8.24 Legal Commitments

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The FSP commits to not harvest timber or construct roads within 80 ha of suitable coastal tailed frog habitat, where the suitable habitat meets the distribution and attributes as described in the Notice and supported by IWMS 2004. The FSP also commits to not harvesting or constructing roads within 20 ha of suitable coastal tailed frog habitat within the THLB that meets the distribution and attributes as described in the Notice and supported by IWMS 2004

### 2.8.25 Implementation Guidance

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The goal of the identified wildlife provisions for coastal tailed frog is to maintain important streams and suitable breeding areas. According to IWMS 2004, coastal tailed frogs inhabit mountain streams with step-pool morphologies, and overall gradients that are not too low or excessively steep. The creeks must remain cool throughout the summer as the species has a narrow temperature tolerance. Streams characterized by regularly spaced pools and interlocked cobble/boulder (or wood) steps that withstand moderate floods and sediment pulses are preferred as tailed frogs have been shown to be negatively associated with the amount of fine sediment on streams.

The site plan must indicate how the strategy applies to the site. If the proposed activities include the harvest of suitable coastal tailed frog habitat, then the site plan should indicate this and an assessment should be completed to ensure that proposed activities will not result in the amount of habitat to be retained as specified in the Notice to not be attainable. To determine if the area where the proposed activities includes coastal tailed frog habitat as defined in the Notice, persons conducting field work must be familiar with habitat features as noted in the wildlife Notice and IWMS 2004 that pertain to this species. This assessment of suitable habitat is meant to take place during the ordinary course of carrying out forest practices in the area. If a natal stream is identified, a biologist should be engaged and the habitat surrounding the feature will need to be defined as guided by the amount, distribution and attributes identified in the FSP.

This strategy applies until the target amount of habitat specified in the Notice is set aside in WHA and relief is granted under FPPR s.7(3).

The MoE has added a page on their website that tracks the amount of habitat set aside in WHA's for each species by forest district. This information is located at <http://www.env.gov.bc.ca/wld/frpa/notices/sar.html>

## 2.9 Sensitive Grizzly Bear Habitat (SCCO s. 17)

### 2.9.26 Description of Objective

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The SCCO objective is to maintain sensitive grizzly bear habitat that was spatially identified by the Minister on January 7, 2008

### 2.9.27 Legal Commitments

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The FSP commits to not harvesting timber or constructing roads within areas identified by the Minister as sensitive grizzly bear habitat except where:

- a) an RPBio has confirmed that the disturbance proposed will not cause a material adverse impact to the suitability of the sensitive grizzly bear habitat;
- b) to the extent practicable, the Holder of the FSP prepares and implements an adaptive management plan and monitors the ecological impacts of the proposed development; and
- c) the Holder of the FSP engages in information-sharing or consultation with the applicable First Nation.

### 2.9.28 Implementation Guidance

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Maps (dated October 26, 2007) illustrating the location of the sensitive grizzly bear habitat can be obtained at the ILMB website: [http://ilmbwww.gov.bc.ca/lup/lrmp/coast/cencoast/docs/schedule\\_6.pdf](http://ilmbwww.gov.bc.ca/lup/lrmp/coast/cencoast/docs/schedule_6.pdf)

Site plans for roads and cutblocks must indicate how this result/strategy applies to the site. If the proposed development is not within or adjacent to one of the spatially identified sensitive grizzly bear polygons, then the site plan should indicate this. If the proposed development is located within one of the areas identified as sensitive grizzly bear habitat, ensure that the three criteria listed under legal commitments have all been met. Any information that supports such actions must be documented and retained on file.

Areas reserved from harvesting should be considered for use to meet stand and landscape level retention requirements.

There are no FPPR practice requirements that apply to this objective.

## 2.10 Red-listed and Blue-listed Plant Communities (SCCO s. 15)

### 2.10.29 Description of Objective

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The SCCO established objectives for red-listed and blue-listed plant communities. Schedule 4 of the Order indicates which plant communities are considered red-listed within the plan area and Schedule 5 indicates which plant communities are considered blue-listed within the plan area.

### 2.10.30 Legal Commitments

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The FSP commits to not conducting primary forest activities where a red-listed plant community has been identified that is greater than 0.25 ha but does allow for an encroachment on the occurrence of up to 5% for road access, other infrastructure or to address a safety concern, provided that there is not other practicable alternative

Where occurrences of blue-listed plant communities are identified or mapped that are greater than 0.25 ha in size, then the FSP commits to either of the following:

- a) not harvesting or building road within the occurrence if doing so would result in  $\geq 30\%$  of the occurrence being harvested, or
- b) not harvesting or building road within the occurrence if doing so would result in  $\geq 30\%$  of that occurrence **over a landscape unit** to be harvested.

### 2.10.31 Implementation Guidance

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In British Columbia red-listed plant communities are considered rare, threatened or extirpated while blue-listed plant communities are of special concern. It is noted in the CFCI EBM: 2007 Operational Guidance document that in most cases red-listed plant communities are associated with old seral forest conditions. The CDC ranking process that incorporated both rarity and risk to these older plant communities, and as such plant communities that have old seral characteristics should be assessed for presence of red-listed plant communities.

Appendix B of this document includes a table that identifies which site series and biogeoclimatic variants the red-listed and blue-listed plant communities are found within. An ecosystem map used in combination with VRI/forest cover mapping and TRIM data can be used to identify potential red-listed or blue-listed plant communities at the planning phase.

Another option for determining location of red-listed and/or blue-listed plant communities is through the Conservation Data Center (CDC). The CDC provides information and links to reports and summaries that can help identify red and blue listed plant communities through the BC Species and Ecosystems Explorer feature which is located at: <http://www.env.gov.bc.ca/atrisk/toolintro.html> . The tool will provide a list of occurrences by plant association for each red-listed and/or blue-listed plant community queried. Locations of such occurrences can then be determined by using the range map.

All mapping should conform to the standards specified in the *Standard for Mapping Ecosystems at Risk in British Columbia: an Approach to Mapping Ecosystems at Risk and Other Sensitive Ecosystems* v 1.0 dated December 5, 2006.

Verification of these delineations on the ground is essential as some occurrences may exist that have not been mapped and other occurrences that have been mapped may be incorrect. To aid in identification of Red and Blue Listed plant communities, use local BEC field guides. If field reconnaissance determines that a site identified as red-listed or blue-

listed by one of the above mapping methods is not accurate, and development is proposed, then information that supports this must be documented and retained on file. Such information should also be forwarded to the CDC.

Conversely field staff and contractors for BCTS and Pallen Timber may identify red-listed and/or blue-listed plant communities in the field regardless of whether or not they have been identified as such on ecosystem maps. If red-listed and/or blue-listed plant communities are identified in the field that is contradictory to information provided by the CDC, this information should be documented and forwarded to the CDC.

If proposed development will encroach on a red-listed or blue-listed plant community as permitted in the strategy detailed above, ensure information that supports such decisions is documented and retained on file.

Where proposed development may impact red-listed or blue-listed plant community because of proximity to the known occurrence, ensure an assessment of the potential impacts take place and that development is designed and carried out in a manner consistent with protecting the occurrence. Such assessment should consider, but is not limited to the following: windthrow, drainage patterns, linkage corridors, light interception, and canopy closure.

## **2.11 Important Fisheries Watersheds (SCCO s. 8)**

## **2.12 Upland Streams – (SCCO s. 12)**

### 2.12.32 Description of Objective

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The SCCO established objectives for important fisheries watersheds that were identified in Schedule 2 of the Order. Objectives were also set for the upland streams within the identified important fisheries watersheds.

### 2.12.33 Legal Commitments

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The FSP commits to not harvesting timber or constructing road in important fisheries watersheds if:

- a) the watershed has an ECA of  $\geq 20\%$ ; or
- b) proposed activities will result in  $<70\%$  of the forest in the portion of the important fisheries watershed occupied by upland streams being functional riparian forest.

The FSP does include provisions to exceed these limits provided that all of the following criteria are met:

- a) information sharing or consultation with applicable First Nation has taken place,
- b) a coastal watershed assessment, or equivalent, of watershed sensitivity to forest development disturbance has been completed to appropriate standards,
- c) amount, type and distribution of forest cover that is sufficient to sustain natural hydrological and fluvial processes is maintained at the watershed level, and
- d) an adaptive management plan is developed and implemented to monitor environmental impacts during primary forest activity, to the extent practicable.

### 2.12.34 Implementation Guidance

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Maps (dated July 11, 2007) illustrating location of the areas identified in the SCCO as important fisheries watersheds can be obtained through ILMB at: [http://ilmbwww.gov.bc.ca/lup/lrmp/coast/cencoast/docs/schedule\\_2.pdf](http://ilmbwww.gov.bc.ca/lup/lrmp/coast/cencoast/docs/schedule_2.pdf)

If operations are proposed within an area identified as an important fisheries watershed, an analysis must be carried out to determine what the Equivalent Clearcut Area (ECA) is for the watershed. If the ECA is determined to be  $\geq 20\%$  or proposed operations will result in the ECA being  $\geq 20\%$ , then such operations will not be carried out or authorized unless the criteria listed above are all met. If this option is being exercised, ensure that documentation that supports such decision is retained on file. Note that the entire important fisheries watershed area is to be taken into account when calculating ECA.

ECA will be determined based on either the guidance provided in the 1999 Coastal Watershed Assessment (CWAP) Guidebook, or other accepted methodology such as that provided by Robert Hudson and Glynnis Horel in “An Operational Method of Assessing Hydrologic Recovery for Vancouver Island and South Coastal BC”

If operations are proposed in areas of the important fisheries watershed that are occupied by upland streams, then an analysis must be carried out to determine:

- a) how much of the watershed is occupied by upland streams, and
- b) how much of the area occupied by upland streams is classified as functional riparian forest, and
- c) will the proposed activities result in the amount of area occupied by upland streams to be less than 70% functional riparian forest.

Hydrologic recovery occurs proportionally as a stand develops toward Hydrological Effective Green-up (HEG). According to the CWAP Guidebook states that complete hydrological recovery incorporates many hydrological components, including the recovery of snow accumulations and melt characteristics, recovery of precipitation interception during storms, and recovery of evapotranspiration. The Guidebook goes on to state that snow pack recovery is used as an index of true hydrological recovery in BC because the most important components of hydrological recovery involve snow accumulations and melt characteristics. Stand height and canopy closure are needed to estimate hydrological recovery. Table 1 from the CWAP Guidebook shows snowpack recovery factors resulting from forest regeneration. It is important to note that the recovery relationship in table 1 assumes full stocking. Where regeneration is patchy, which is often the case where tree heights are below 7m, then the coverage of the regeneration must be taken into account.

Table 3. Hydrological recovery for fully stocked stands that reach a maximum crown closure of 50 to 70%.

| <b>Average height of the main canopy (m)</b> | <b>% Recovery</b> |
|----------------------------------------------|-------------------|
| 0 – <3                                       | 0                 |
| 3 – <5                                       | 25                |
| 5 – <7                                       | 50                |
| 7 – <9                                       | 75                |
| 9 +                                          | 90                |

The holder(s) of the FSP will work in cooperation with other FSP holders working in the same watershed to ensure that all operations are monitored.

### **2.13 High Value Fish Habitat – (SCCO s. 9)**

### **2.14 Aquatic Habitat That is Not High Value Fish Habitat – (SCCO s. 10),**

### **2.15 Water, Fish, Wildlife and Biodiversity within Riparian Areas – (FPPR s.8),**

#### 2.15.35 Description of Objective

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The SCCO established objectives for fish habitat that is considered high value as defined in the Order, and objectives for fish habitat that is not high value, as defined in the Order.

FPPR s. 8 objective for Water, Fish, Wildlife and Biodiversity within Riparian Areas is to conserve, at a landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.

#### 2.15.36 Legal Commitments

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Classification for streams, wetlands, and lakes must be consistent with FPPR Practice Requirements s. 47(1) and (2), 48 (1) and (2), and 49 (1).

The FSP commits to riparian reserve zones (RRZ), riparian management zones (RMZ) and riparian management areas (RMA) that are consistent with those specified for habitat that meets the SCCO definition of “high value fish habitat”, and habitat that meet the SCCO definition of “aquatic habitat that is not high value fish habitat”. Where the SCCO does not specify riparian widths, the FSP commits to riparian widths consistent with those specified in FPPR practice requirements s. 47(4), 48(3) and 49(2). Table 4 illustrates which riparian widths apply to which riparian classification..

The FSP provides the opportunity to specify different riparian widths that those specified in FPPR provided that the prescribed width

- is specified in a written rationale that is prepared before commencement of primary forest activities and is signed by a qualified professional; and
- will maintain or increase the effectiveness and/or functioning of the riparian reserve and is consistent with the Factors specified in Schedule 1 s. 2 of the FPPR.

Specifying different riparian widths is at the discretion of the prescribing forester and may be based on, but is not limited to, the following circumstances: windthrow hazard and consequence, sensitive stream protection, environmental sensitivity such as terrain stability class 4 or 5, topography, or worker safety.

Where timber harvesting and road construction is adjacent to aquatic habitat that is not high value fish habitat, the FSP commits to retaining 90% of the RMZ as functional riparian forest unless managing these riparian features as per FRPA and FPPR which requires consultation with First Nations, an adaptive management plan and retention of functional riparian forest sufficient to maintain stream bank stability and stream channel integrity. Where cutblock harvesting includes harvesting in a RMZ, the FSP commits to specifying, in a written rationale prepared by a qualified professional prior to harvest, a level of retention within the RMZ that reflects the Factors specified in Schedule 1 s. 2 of the FPPR.

The FSP also commits to adopting FPPR s. 50 which specifies restrictions in an RMA, s. 51 which specifies restrictions in an RRZ, and s. 52(2) which specifies restrictions in an RMZ.

The FPPR Practice Requirements also include additional guidance on how to determine riparian widths in s. 47(7), (8), 48 (4 through 7), and 49 (3 through 5). Applying riparian classifications must be consistent with these sections.

An authorized person who fells, modifies or removes trees in an RMA adjacent to a temperature sensitive stream must retain trees/vegetation consistent with s. 53 of the FPPR.

An authorized person who carries out primary forest activities on the Coast must ensure primary forest activity does not cause fan destabilization consistent with s. 54 of the FPPR.

An authorized person who builds a stream crossing must ensure activities are consistent with limitations provided in s. 55 of the FPPR.

An authorized person who carries out primary forest activity must ensure those activities do not have a material adverse effect on fish passage in a fish stream consistent with s. 56 of the FPPR.

An authorised person who carries out primary forest activity must conduct those activities in a time and in a manner that is unlikely to harm fish or destroy, damage or harmfully alter fish habitat consistent with s. 57 of the FPPR.

#### 2.15.37 Implementation Guidance

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Where riparian widths are to be based on dominant tree heights, the applicable heights are to be determined by the prescribing forester. Some options for how to determine the heights include; using dominant tree heights provided in the cruise for the block, or heights taken adjacent to the riparian feature. Ensure that documentation to support the height used is retained on file.

Where widths are to be 1.5 times the height of the dominant tree and are being increased or decreased by up to 0.5 tree heights as allowed in the result, ensure that the change in riparian width is required to address site specific values and that supporting documentation is retained on file.

Where aquatic habitat that is not high values fish habitat is being managed consistent with FPPR as per s. 4 of the strategy, ensure that adequate consultation has taken place, an adaptive management plan has been developed and will be implemented and that an assessment of how much functional riparian forest is sufficient to maintain stream bank stability and stream channel integrity has been completed and will be followed. Ensure supporting documentation if retained on file.

The FPC Fish Stream Crossing Guidebook, dated March 2002, provides guidance for determining critical spawning habitat. <http://www.for.gov.bc.ca/tasb/legsregs/fpc/FPCGUIDE/FishStreamCrossing/FSCGdBk.pdf>

Site plans need to identify how the result/strategy applies to the site (FRPA s. 10(2)(c)). In accordance with FRPA s. 10(2)(b), the site plan also needs to be consistent with applicable regulations, including FPPR s. 53, 54, 55, 56 and 57 but does not need to demonstrate this consistency in the site plan.

#### 2.15.38 Exemptions

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FPPR s. 91 enables the Minister to provide an exemption from FPPR s. 55, 56, and 57 provided that the Minister is satisfied that is not practicable given the circumstances or conditions applicable.

Table 4. Riparian Widths

| Riparian Class      | High Value Fish Habitat as defined in SCCO |                                    |        | Fish Habitat that is not High Value as defined in SCCO |         |                                    | Fish/not-fish habitat to which only FPPR widths apply |         |                                    |
|---------------------|--------------------------------------------|------------------------------------|--------|--------------------------------------------------------|---------|------------------------------------|-------------------------------------------------------|---------|------------------------------------|
|                     | RMA (m)                                    | RRZ (m)                            | RMZ(m) | RMA (m)                                                | RRZ (m) | RMZ(m)                             | RMA (m)                                               | RRZ (m) | RMZ(m)                             |
| S1A                 | RRZ plus RMZ                               | average 1.5* times Dom. Tree ht.** | 100    | RRZ plus RMZ                                           | 0       | average 1.5* times Dom. Tree ht.** | RRZ plus RMZ                                          | 0       | average 1.5* times Dom. Tree ht.** |
| S1B                 | RRZ plus RMZ                               | average 1.5* times Dom. Tree ht.** | 20     | RRZ plus RMZ                                           | 50      | average 1.5* times Dom. Tree ht.** | RRZ plus RMZ                                          | 50      | average 1.5* times Dom. Tree ht.** |
| S2                  | RRZ plus RMZ                               | average 1.5* times Dom. Tree ht.** | 20     | RRZ plus RMZ                                           | 30      | average 1.5* times Dom. Tree ht.** | RRZ plus RMZ                                          | 30      | average 1.5* times Dom. Tree ht.** |
| S3                  | RRZ plus RMZ                               | average 1.5* times Dom. Tree ht.** | 20     | RRZ plus RMZ                                           | 20      | average 1.5* times Dom. Tree ht.** | RRZ plus RMZ                                          | 20      | average 1.5* times Dom. Tree ht.** |
| S4                  | RRZ plus RMZ                               | average 1.5* times Dom. Tree ht.** | 30     |                                                        |         |                                    | 30                                                    | 0       | 30                                 |
| S5                  |                                            |                                    |        |                                                        |         |                                    | 30                                                    | 0       | 30                                 |
| S6                  |                                            |                                    |        |                                                        |         |                                    | 20                                                    | 0       | 20                                 |
| W1 marsh or fen     |                                            |                                    |        | RRZ plus RMZ                                           | 10      | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |
| W1 NOT marsh or fen |                                            |                                    |        |                                                        |         |                                    | 50                                                    | 10      | 40                                 |
| W2 NOT marsh or fen |                                            |                                    |        |                                                        |         |                                    | 30                                                    | 10      | 20                                 |
| W3 marsh or fen     |                                            |                                    |        | RRZ plus RMZ                                           | 0       | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |
| W3 NOT marsh or fen |                                            |                                    |        |                                                        |         |                                    | 30                                                    | 0       | 30                                 |
| W4 marsh or fen     |                                            |                                    |        | RRZ plus RMZ                                           | 0       | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |
| W4 NOT marsh or fen |                                            |                                    |        |                                                        |         |                                    | 30                                                    | 0       | 30                                 |
| W5 marsh or fen     |                                            |                                    |        | RRZ plus RMZ                                           | 10      | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |
| W5 NOT marsh or fen |                                            |                                    |        |                                                        |         |                                    | 50                                                    | 10      | 40                                 |
| L1A                 |                                            |                                    |        | RRZ plus RMZ                                           | 0       | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |
| L1B                 |                                            |                                    |        | RRZ plus RMZ                                           | 10      | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |
| L2                  |                                            |                                    |        | RRZ plus RMZ                                           | 10      | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |
| L3                  |                                            |                                    |        | RRZ plus RMZ                                           | 0       | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |
| L4                  |                                            |                                    |        | RRZ plus RMZ                                           | 0       | average 1.5* times Dom. Tree ht.** |                                                       |         |                                    |

= widths derived from FPPR s. 47, 48 and 49. Subsection 3 of the riparian strategy sets out criteria for altering FPPR prescribed widths.

\* width may be increased or decreased by 0.5 tree height, in any one location, to address site specific values.

\*\* Dominant tree height and associated riparian widths are to be determined by the prescribing forester.

All Riparian widths are to be based on slope distance.

## 2.16 Forested Swamps – (SCCO s. 11)

### 2.16.39 Description of Objective

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SCCO set objectives for retaining a percentage of functional riparian forest adjacent to forested swamps.

### 2.16.40 Legal Commitments

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Where timber harvesting or road constructions activities are adjacent to forested swamps, the FSP commits to retaining 70% of the functional riparian forest in a management zone with a width, on average, equal to 1.5 times the height of the dominant trees.

The FSP does allow for an additional 10% of the functional forest within the management zone to be harvested provided that:

- a) the alteration or removal is required for road access, other infrastructure or to address a safety concern., or
- b) where 70% retention would make harvesting the cutblocks economically unviable.

as long as the following has taken place prior to alteration of the functional riparian forest:

- ascertain and retain the amount of functional riparian forest sufficient to maintain the integrity of the forested swamp;
- to the extent practicable, develop and implement an adaptive management plan and monitor environmental impacts during any primary forest activity; and
- engage in information sharing or consultation with the applicable First Nation.

The FSP allows for the width of the management zone to be increased or decreased by up to 0.5 tree height provided that the change in prescribed width is required to address site specific values.

Where some or the entire management zone described above has been previously altered or harvested, the FSP commits to recruit functional riparian forest in that management zone, to the extent practicable.

### 2.16.41 Implementation Guidance

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Successful implementation of this strategy relies on correct identification of forested swamps and an accurate calculation of the amount of functional riparian forest. A clear definition for both of these is provided in the SCCO and the FSP. According to the *Draft Background and Guidance Document for the South central Coast Land Use Objectives Order*, forested swamps are more likely to be found throughout the wetter portions of the SCC such as CWHvh and CWHvm than in the drier portions of the SCC such as the CWHxm and CWHdm. Additional guidance for classification can be found in the “*Wetlands of British Columbia: A Guide to Identification*”, 2004.

Dominant tree heights are to be determined by the prescribing forester. Some options for how to determine the heights include; using dominant tree heights provided in the cruise for the block, or

heights taken adjacent to the riparian feature. Ensure that documentation to support the height used is retained on file.

Where widths are to be 1.5 times the height of the dominant tree height and are being increased or decreased by up to 0.5 tree height, as permitted for in the result, ensure that the change in riparian width is required to address site specific values and that supporting documentation is retained on file.

Site plans need to identify how the strategy applies to the site (FRPA s. 10(2(c))).

## 2.17 Active Fluvial Units – (SCCO s. 13)

### 2.17.42 Description of Objective

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SCCO set objectives for retaining a percentage of functional riparian forest on active fluvial units.

### 2.17.43 Legal Commitments

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The FSP commits to not harvesting or building roads through functional riparian forest on an active fluvial unit if doing so will result in more than 10% of the functional riparian forest on the active fluvial unit to be altered or harvested.

The FSP does allow for an additional 10% of the functional riparian forest on the active fluvial unit to be altered or harvested provided that:

- (1) the amount of natural riparian forest that is sufficient to maintain bank stability and channel integrity on the active fluvial unit is retained;
- (2) to the extent practicable, develop and implement an adaptive management plan and monitor the environmental impacts during any primary forest activities; and
- (3) information sharing or consultation with the applicable First Nation has occurred.

FPPR Practice Requirement 54 requires that a person who carries out primary forest activity on the Coast must ensure that those activities do not cause fan destabilization that has a material adverse effect in relation to soils, visual quality, timber, forage and associated plant communities, water, fish, wildlife, biodiversity, recreation resources, resource features, and cultural heritage resources.

### 2.17.44 Implementation Guidance

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Successful implementation of this strategy relies on correct identification of active fluvial units and associated riparian features and an accurate calculation of the amount of functional riparian forest. Aerial photography and satellite imagery are useful tools for determining the boundaries of active fluvial units. Clear definitions for both of these are provided in the SCCO and the FSP.

Where operations are proposed that may impact an active fluvial unit, as permitted in the strategy, ensure adequate steps are prescribed for associated road construction and timber harvesting to maintain the integrity and natural ecological function of the active fluvial unit. Ensure information that supports such activities is documented and retained on file.

Dominant tree heights are to be determined by the prescribing forester. Some options for how to determine the heights include; using dominant tree heights provided in the cruise for the block, or heights taken adjacent to the riparian feature. Ensure that documentation to support the height used is retained on file.

Site plans need to identify how the result/strategy applies to the site (FRPA s. 10(2)(c)). In accordance with FRPA s. 10(2)(b), the site plan also needs to be consistent with applicable regulations, including FPPR s. 54 but does not need to demonstrate this consistency in the site plan.

## **2.18 First Nations – (SCCO s. 3, 4, 5, 6 and 7) (FPPR s. 10)**

### 2.18.45 Description of Objective

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FPPR s. 10 established objectives for managing cultural heritage resources. The SCCO established objectives for First Nations' traditional forest resource, traditional heritage feature, culturally modified trees, monumental cedar and stand level retention of Western red and Yellow cedar. These objectives were all addressed in one strategy in the FSP.

### 2.18.46 Legal Commitments

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The FSP commits to annually referring areas proposed for timber harvesting or road construction to First Nations and requesting information respecting traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree areas. If any are identified through information sharing or consultation, the FSP commits to evaluating the nature and extent of them.

When designing cutblocks and road, the FSP commits to identifying: the location, the nature, the extent to which the resource will be maintained or protected, the constraints that are to apply to the forest practices required to maintain or protect the resource, and a management zone, if required, to adequately protect the integrity of the resource.

Where it is determined that a traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree area needs to be protected or maintained, the FSP commits to only carry out forest practices that do not damage or render the resource ineffective.

The FSP allows for alteration or removal of traditional heritage features and/or culturally modified trees provided that information sharing or consultation with the applicable First Nation determines whether:

- a) the alteration will cause a material adverse impact on the resource,
- b) alteration is required for road access, other infrastructure or to address a safety concern,
- c) protecting all the cmts in the block would make harvesting the block uneconomical,
- d) there is any practicable alternative to the alteration or removal, and
- e) an alteration permit is issued by the Arch. Branch where required.

If previously unidentified traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree area are encountered where harvesting or road construction activities have been authorized or are being carried out, operations will be ceased or modified to the extent necessary to protect the resource, and modify the design of the block/road to confirm with the strategy. Operations may resume provided they are consistent with the modified design.

The FSP commits to maintaining a sufficient volume and quality of monumental cedar to support applicable FN present and cultural use of monumental cedar.

The FSP commits to designing any dispersed stand retention so that the first 15% of the total BA retained consists of mature and old cedar and cypress representative of the pre-harvest stand.

#### 2.18.47 Implementation Guidance

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Holders of Timber Sale License A64729 are responsible for their own implementation of the results/strategies that pertain to First Nations.

The holders of the FSP will undertake operational planning that provides an avenue for information sharing with First Nations. The Timber Sales Manager is responsible for ensuring that adequate consultation has taken place with respect to First Nations.

CMT's and appropriate buffer widths will be determined by the prescribing forester taking in consideration CMT inventory and windthrow potential.

## 2.19 Visual Quality– (GAR)

### 2.19.48 Description of Objective

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Scenic areas and associated Visual Quality Objectives (VQO's) were established under GAR s 7(1) and (2) on December 14, 2005. Categories of visually altered forest landscape apply as defined in [FPPR s. 1.1](#).

### 2.19.49 Legal Commitments

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The FSP commits to road construction and timber harvesting being consistent with established VQO's and the altered forest landscape as defined in FPPR s. 1.1

The FSP does allow for the established VQO's to be exceeded where timber harvesting or road construction are related to the harvesting of timber that is damaged, destroyed or threatened by fire, insects, disease, wind, flooding or other similar factors where the cutblock or road design, to the extent practicable, will:

- a) mimic naturally occurring landscape characteristics; and
- b) retain timber that is not damaged, destroyed or threatened where safe, and operationally practicable.

### 2.19.50 Implementation Guidance

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Although there are various ways of determining compliance with VQO's and altered forest landscape, Visual Impact Assessments (VIA's) are the most common tool used. Guidance on conducting a VIA is in the FPC Visual Impact Assessment guidebook, 2001. Methodology and results of VIA's or other assessments undertaken should be documented and retained on file.

Site plans for roads and cutblocks must indicate how R/S applies to the site. If proposed activities are consistent with established VQO's and altered forest landscape as defined in FPPR s. 1.1, then the site plans should include a statement indicating that proposed activities are consistent with the established VQOs and altered forest landscape. If proposed activities will result in alteration in excess of that specified in the VQO's ensure that this is for one of the reasons permitted in the strategy. In this case, the site plan should include a statement indicating that proposed activities will result in the VQO being exceeded and should also indicate if the associated timber is damaged, destroyed or threatened and by what.

### 3 Appendix A

#### Red listed Plant Communities

| BGC unit | Site code | series | Name                                                         |
|----------|-----------|--------|--------------------------------------------------------------|
| CWHvm1   | 09        |        | Sitka spruce / salmonberry                                   |
| CWHvh2   | 08        |        | Sitka spruce / false lily-of-the-valley                      |
|          | 09        |        | Sitka spruce / tall trisetum                                 |
| CWHms2   | 07        |        | Sitka spruce / salmonberry                                   |
|          | 09        |        | Black cottonwood / Sitka willow - thimbleberry               |
| CWHvh1   | 08        |        | Sitka spruce / false lily-of-the-valley                      |
|          | 09        |        | Sitka spruce / tall trisetum                                 |
| CWHws1   | 07        |        | Sitka spruce / salmonberry                                   |
| CWHds2   | 01        |        | western hemlock - Douglas-fir / electrified cat's-tail moss  |
|          | 02        |        | Douglas-fir - lodgepole pine / kinnikinnick                  |
|          | 04        |        | Douglas-fir / Douglas maple / Hooker's fairybells            |
|          | 05        |        | western redcedar - Douglas-fir / vine maple                  |
|          | 06        |        | western hemlock / queen's cup                                |
|          | 07        |        | western redcedar / devil's club                              |
|          | 08        |        | western hemlock - black cottonwood / salmonberry             |
| CWHxm2   | 01        |        | Western hemlock - Douglas-fir / Oregon beaked-moss           |
|          | 02        |        | Douglas-fir - lodgepole pine / reindeer lichens              |
|          | 04        |        | Douglas-fir / sword fern                                     |
|          | 06        |        | Western hemlock - western redcedar / deer fern               |
|          | 07        |        | Western redcedar / three-leaved foamflower                   |
|          | 08        |        | Sitka spruce / salmonberry                                   |
|          | 13        |        | Western redcedar / salmonberry                               |
|          | 14        |        | Western redcedar / black twinberry                           |
| CWHdm    | 02        |        | Douglas-fir - lodgepole pine / oceanspray / reindeer lichens |
|          | 04        |        | Douglas-fir / sword fern                                     |
|          | 06        |        | Western hemlock - western redcedar / deer fern               |
|          | 08        |        | Sitka spruce / salmonberry Dry                               |
| CWHmm1   | 03        |        | western hemlock - western redcedar / salal                   |
|          | 05        |        | amabilis fir - western redcedar / three-leaved foamflower    |
|          | 06        |        | western hemlock - amabilis fir / deer fern                   |
|          | 07        |        | amabilis fir - western redcedar / salmonberry                |
| CWHmm2   | 06        |        | western hemlock - amabilis fir / deer fern                   |

### Blue listed Plant Communities

| BGC unit | Site series code | Name                                                           |
|----------|------------------|----------------------------------------------------------------|
| CWH dm   | 01               | western hemlock / flat-moss                                    |
|          | 03               | Douglas-fir - western hemlock / salal                          |
|          | 05               | western redcedar / sword fern                                  |
|          | 07               | western redcedar / three-leaved foamflower                     |
|          | 09               | black cottonwood / red-osier dogwood                           |
|          | 10               | black cottonwood / Sitka willow                                |
|          | 12               | western redcedar - Sitka spruce / skunk cabbage                |
| CWH ds2  | 03               | Douglas-fir - western hemlock / falsebox                       |
|          | 09               | black cottonwood / red-osier dogwood                           |
|          | 10               | black cottonwood / willows                                     |
|          | 12               | western redcedar - Sitka spruce / skunk cabbage                |
| CWH mm1  | 01               | western hemlock - amabilis fir / pipecleaner moss              |
|          | 02               | Douglas-fir - western hemlock / salal                          |
|          | 04               | western redcedar - western hemlock / sword fern                |
|          | 09               | black cottonwood / red-osier dogwood                           |
|          | 12               | western redcedar - Sitka spruce / skunk cabbage                |
| CWH mm2  | 01               | western hemlock - amabilis fir / pipecleaner moss              |
|          | 02               | Douglas-fir - western hemlock / salal                          |
|          | 03               | western hemlock - western redcedar / salal                     |
|          | 04               | western redcedar - western hemlock / sword fern                |
|          | 07               | western redcedar - yellow-cedar / spleenwort-leaved goldthread |
|          | 08               | amabilis fir - western redcedar / salmonberry                  |
| CWH ms2  | 02               | Douglas-fir - lodgepole pine / kinnikinnick                    |
|          | 03               | Douglas-fir - western hemlock / falsebox                       |
|          | 04               | amabilis fir - western redcedar / oak fern                     |
|          | 06               | amabilis fir - western redcedar / devil's club                 |
|          | 11               | western redcedar - Sitka spruce / skunk cabbage                |
| CWH vh2  | 07               | western redcedar - Sitka spruce / devil's club                 |
|          | 13               | western redcedar - Sitka spruce / skunk cabbage                |
| CWH vm1  | 10               | black cottonwood / red-osier dogwood                           |
|          | 14               | western redcedar - Sitka spruce / skunk cabbage                |
| CWH ws1  | 08               | black cottonwood / red-osier dogwood                           |
|          | 11               | western redcedar - Sitka spruce / skunk cabbage                |
| CWH ws2  | 08               | black cottonwood / red-osier dogwood                           |
| CWH wm   | 02               | western hemlock - Sitka spruce / step moss                     |
|          | 05               | Sitka spruce / salmonberry                                     |
|          | 06               | black cottonwood / red-osier dogwood                           |
|          | 08               | western hemlock / common green peat-moss                       |
|          | 09               | Sitka spruce / skunk cabbage                                   |
| CWH xm   | 03               | Douglas-fir - western hemlock / salal                          |
|          | 05               | western redcedar / sword fern Very Dry Maritime                |
|          | 09               | black cottonwood / red-osier dogwood                           |
|          | 10               | black cottonwood / Sitka willow                                |
|          | 12               | western redcedar - Sitka spruce / skunk cabbage                |