## ALBERNI VALLEY COMMUNITY FOREST CORPORATION

# Alberni Valley Community Forest

Forest Stewardship Plan #3

2024-2029





Prepared by:



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

Date: July 16, 2024

Mike Davis R.P.F. Econ Consulting Authorized by:



I certify that this draft Forest Stewardship Plan replacement is authorized on behalf of the Alberni Valley Community Forest Corporation.

Date: July 16, 2024

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## 1.0 INTRODUCTION

The Alberni Valley Community Forest Corporation would like to acknowledge the traditional territories of the Hupacasath and Tseshaht First Nations who's historical relationship with the land continues today.

This Forest Stewardship Plan has been prepared for the Alberni Valley Community Forest Licence (AVCF), operated by the Alberni Valley Community Forest Corporation (AVCFC). This document is replacement Forest Stewardship Plan #2 approved on June 16, 2016. The AVCF is located within the Sproat Landscape Unit (LU) west of Port Alberni, and is comprised two operating areas known as `Sproat` and `Taylor`. (Figure 1). The Alberni Valley Community Forest (AVCF) has a total land base of 6391 ha and an allowable annual allowable cut of 18,156m<sup>3</sup>.

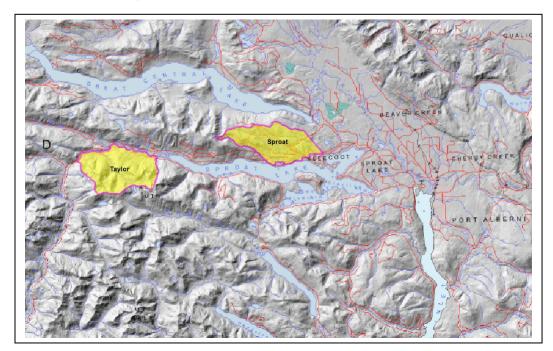


Figure 1: Location of Alberni Valley Community Forest

The Forest Stewardship Plan (FSP) is a requirement of the *Forest Range and Practices Act (2004)*. A FSP is a landscape level plan, which is focused on establishing strategies and results for conserving and protecting timber and non-timber resource values for forest management activities over the life of the plan. The FSP states measurable, enforceable results and strategies that must be consistent with objectives set by government for a variety of forest values (e.g. fish, water, biodiversity cultural and heritage resources, etc). This FSP is a plan, which shows how the AVCFC will manage all stated government objectives from a site-specific level to the landscape level over the life of the plan. FSPs are intended to allow tenure holders to be responsive to changing market conditions and to allow forest professionals to be innovative in applying management

strategies to meet and exceed environmental standards in a manner specific to their operating area.

This FSP takes direction from the Vancouver Island Land Use Plan (VILUP), the Forest and Range Practices Act (FRPA), the Land Act (LA), the Government Actions Regulation (GAR), the Forest Planning and Practices Regulation (FPPR), grandfathered sections of the Forest Practices Code Act of British Columbia (FPC), and other pertinent legislation that governs primary forest activities in British Columbia. This FSP has also considered the objectives, results and strategies stated in the approved Management Plan for the Alberni Valley Community Forest (which includes references to the Hupacasath First Nation Land Use Plan) and incorporates these where applicable.

The FSP is intended to be a succinct document stating the management objectives for the resources present in the operating areas or Forest Development Units (FDU) as they are called in the FSP. The FSP is not intended to state methodology or give direction regarding how the management objectives are to be met; that is the role of the AVCFC and their forest professionals to decide. The FSP results and strategies must be consistent with government objectives for the management of all resources, and they must be measurable and verifiable.

Throughout the FSP there are several references to the Forest Planning and Practices Regulation (FPPR) and the sections therein that are relevant to the FSP document. The FPPR can be viewed at the BC Laws website:

http://www.bclaws.ca/civix/document/id/complete/statreg/14 2004

There are also references to higher-level plans, government orders and related documents applicable to the FSP. For more information about objectives set by government and links to this related information visit the South Island Forest District `Objectives Matrix` which can be found at the South Island Natural Resource District website:

http://www.for.gov.bc.ca/dsi/Stewardship/Objectives Matrix.htm

The FSP is the primary referral process, together with the Community Forest Management Plan, for increasing community awareness and providing a notification and engagement process for the public, First Nations, and government agencies as to the future location of Forest Development Units (FDU's) and of the intended results and strategies.

#### 1.1 Acronyms used in this FSP

In this forest stewardship plan:

"AVCF"	means Alberni Valley Community Forest Agreement.	
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- "AVCFC" means the Alberni Valley Community Forest Corporation.
- "CWAP" means the coastal watershed assessment procedure
- "DSI" means South Island Forest District
- "FDU" means a forest development unit.
- "FPPR" means the Forest Planning and Practices Regulation B.C. Reg 14/2004.

- "FRPA" means the Forest and Range Practices Act.
- "FSP" means this forest stewardship plan.
- "MAMU" mean marbled murrelet
- "MOE" means the Ministry of Environment.
- "MFLNRO" means the Ministry of Forests, Lands and Natural Resource Operations, (formerly the Ministry of Forests and Range, (MOFR).)
- "OGMA" means old growth management area.
- "SEDRSS" means single entry dispersed stocking standard
- "SMZ" means special management zone
- "RMZ" means resource management zone
- "VILUP" means Vancouver Island Land Use Plan Higher Level Plan Order
- "VQO" means visual quality objective.
- "WHA" means wildlife habitat area

#### 1.2 Definitions used in this FSP

#### "Qualified Professional " means

A Qualified Professional person is one who possesses the specified knowledge, skills, training, experience and other requirements to perform a specified type of work as:

- set out in legislation
- set out in government policy or
- required by an organisation satisfactory to government that has the responsibility for specifying the requirements.

#### "Primary Forest Activities" means

A prescribed activity (including but not limited to: road construction, reactivation or deactivation, road maintenance, harvesting, and/or silviculture treatment) that is carried out by the AVCFC on the community forest (see FRPA definition)

## 2.0 DATE OF SUBMISSION

The date of submission of this Forest Stewardship Plan (FSP) is May 31, 2024.

## 3.0 TERM OF THE FSP AND COMMENCEMENT

The term of this plan was 5 years is the date specified in the approval. The approval date is as per the delegated decision maker approval letter.

## 4.0 FSP MAP

The area to which this Forest Stewardship Plan applies, including the boundaries of the FDU's and all designations in effect, are indicated on the 1:10,000 scale FSP maps located in Appendix 3.

#### 4.1 Forest Development Units

Forest Development Units (FDU's) identify areas of planned development activities for the next five years that will have a common set if objectives, results and strategies. FDU's are general in nature and do not reflect specific development plans (i.e. roads and blocks) for a particular FDU.

There are two FDU's included in this plan (based on the two operating areas) and they cover the entire community forest licence area (both operable and inoperable areas). Both FDU's are located within the Sproat Landscape Unit.

The Sproat FDU overlaps the Ash-Central-Sproat General Management Area (RMZ #35), which has no legally established land use objectives. The majority of the Taylor FDU is located within the Strathcona-Taylor Special Management Zone (SMZ #17), which does have land use objectives described in Section 5.1.1. A small area of the Taylor FDU also overlaps the Nahmint Special Management Area SMZ #13). The SMZ 13 land use objectives do not apply to the AVCF as this area is very small and is outside of the timber harvesting land base.

Table 1:	Forest	Development	Units
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FDU		Area (ha)	
A (Sproat)		3019	
B (Taylor)		3380	
	Total	6391	

#### 4.2 Designations in Effect at Date of Submission of this FSP

The FSP maps identify the designations and requirements described in FPPR S.14(3) that apply and were in effect on the Date of Submission. These designations are listed below:

FPPR 14 (3)(e)	LU	Date Designated
Scenic Areas		
2 (Highway 4 from Parksville to Ucluelet and Tofino) 3 (Sproat lake)	Sproat	November 13, 1998 Established in GAR order effective December 15, 2005.
FPPR 14 (3)(g)	LU	Date Designated

Community Watershed		
Sproat Community Watershed	Sproat	June 15, 1995
FPPR 14 (3)(h)	LU	Date Designated
Old Growth Management Area		
OGMAs as per Sproat Landscape Unit Plan	Sproat	July 18, 2005

#### 4.3 Areas to which FRPA S196(1) or (2) or FPPR S.110 Applies

There are no areas to which FRPA Section 196(1) or (2) apply within this FSP's FDUs.

#### 4.4 Areas within FDUs Subject to a RP but not subject to this FSP

The FSP maps identify the areas that are within the outer boundaries of the FDUs and are subject to an existing road permit (RP) but not to this FSP as per *FPPR S.14(3)(k)*.

#### 4.5 Provincial Old Growth Deferrals

The British Columbia Government and the Ministry of Forests announced on Nov. 2, 2021 the deferment of old growth stands throughout BC. The Technical Advisory Panel priority old growth deferral areas were a response by Government to recommendation #6 of the *New Future for Old Forests* report (April 2020).

No FSP results and strategies are required to address the ongoing old growth deferral process at this time. Until such time as new old growth objectives are released by Government, the AVCFC will:

- Ensure that priority old growth deferral areas are mapped and considered in strategic resource planning within the AVCF;
- Ensure that priority old growth stands identified by the Technical Advisory Panel as deferral areas are not harvested; and
- Field verify deferred Priority Old Growth stands according to spatial location, and the Priority Deferral Criteria according to the *Field Verification of Priority Old Forest Deferral Areas: Technical Guidance Document* (July, 2022).

This FSP may be amended to align with new Government and First Nations old growth objectives with the Old Growth Strategy is fully implemented.

## 5.0 RESULTS, STRATEGIES AND MEASURES

- Landscape level objectives for the Sproat Landscape Unit apply to the FSP areas.
- The Vancouver Island Land Use Plan (VILUP) Higher Level Plan Order includes several objectives related to resource management zones that apply to the FSP area.
- The Order for the Recovery of Marbled Murrelet (MAMU) includes several objectives that apply to the FSP area. The FPPR Schedule 7 Order also lists MAMU habitat area target and threshold objectives for the FSP area.
- The Forest Planning and Practices Regulation (FPPR) identify government objectives that must be defined in an FSP. The Government Actions Regulation (GAR) lists measures that may be applicable to an area in an FSP. These are listed in tables 3 and 4 along with their applicability to the AVCF.

Category of Objective or Measure	Relevance to AVCF	FSP Table (section)		
From Order to Establish A Landscape Unit a Landscape Unit, Legal Objectives	nd Objectives: Sproat La	ake		
Objective 1: Old Growth Management Areas	Sproat + Taylor FDU	5.1.1a		
Objective 2: Wildlife Tree Retention	Sproat + Taylor FDU	5.1.1b		
Objective 3: Special Management Zone 17	Taylor FDU	5.1.1c		
From Vancouver Island Land Use Plan Highe	er Level Plan Order (sect	ion II A)		
Objective 1. Sustain Forest Ecosystem Structure	and Function in SMZ (17)			
<ul> <li>a) Creating or maintaining stand structures and forest attributes associated with mature and old forests</li> </ul>	Taylor FDU	5.1.2a		
<ul> <li>b) Retaining within cutblocks structural forest attributes and elements with important biodiversity functions</li> </ul>	Taylor FDU	5.1.2b		
c) Applying a variety of silvicultural systems, patch size and patch shapes across the zone subject to maximum cutblock sizes	Taylor FDU	5.1.2c		
Objective 2.				
Larger cutblocks may be approved if harvesting is being carried out to recover timber that was damaged by fire, insects, wind or other similar events, cutblock to incorporate structural characteristics of natural disturbances.	Taylor FDU	5.1.2d		

#### Table 3: Higher Level Plan Order and GAR Objectives and their Relevance to the AVCF

Marbled Murrelet Order and Notice (2021)				
The Ministry of Forests, Lands, Natural Resource Operations and Rural Development Ministerial Order for the Recovery of Marbled Murrelet (Brachyramphus marmoratus), Dec. 2021 establishes land use objectives pursuant to Section 93.4 of the Land Act. Its intent is to ensure the maintenance of suitable Marbled Murrelet habitat through aspatial management objectives.	Sproat + Taylor FDU	5.1.3a		
The FPPR S. 7(2) Notice – Indicators of the Amount, Distribution, and Attributes of Wildlife Habitat Required for the Survival of Marbled Murrelet (Brachyramphus marmoratus). The Notice establishes target and minimum WHA, OGMA, and aspatial MAMU requirements, and is applicable to the Sproat WNVI Landscape Unit (LU) portion.	Taylor FDU	5.1.3b		
Order by Government Action Regulation				
SIFD - Visual Quality Objectives GAR Order (12.15.2005) and Amendment 12.30.2011) for established scenic areas	Sproat + Taylor FDU	5.3.1		
Order to Identify Karst Resource Features – Jan. 15, 2010	Sproat + Taylor FDU	5.3.2		

Category of Objective or Measure	Legislation	Relevance to AVCF	FDU	FSP Table (section)			
Objectives from Forest Planning and Practices Regulation							
Soils	FPPR s.5	Practice requirements are indicated	All	5.2.1			
Timber (including forest health)	FPPR s.6	Strategies and results not required (FPPR 12(8))	N/A	N/A			
Wildlife	FPPR s.7	Results and Strategies required for Marbled Murrelet	All	5.2.2			
Water, fish, wildlife and biodiversity within riparian areas	FPPR s.8	Practice requirements are indicated and strategies and results developed	All	5.2.3			
Fish habitat in fisheries sensitive watersheds	FPPR s.8.1	No designated fisheries sensitive watersheds within plan area therefore no strategies or results developed.	N/A	N/A			
Water in Community Watersheds	FPPR 8.2	Practice requirements are indicated and strategies and results developed	All	5.2.4			
Wildlife and biodiversity – landscape level	FPPR s.9	Practice requirements are indicated	All	5.2.5			
Wildlife and biodiversity – stand level	FPPR s.9.1	Practice requirements are indicated	All	5.2.6			
Visual Quality	FPPR s.9.2	Superseded by GAR to establish VQO for identified scenic areas	All	5.3.1			
Cultural Heritage Resources	FPPR s.10	Strategies and results developed	All	5.2.7			

#### Table 4: FPPR objectives and their relevance to the AVCF

Objectives, strategies and results have been developed for the AVCF. They are organised into tables on the following pages.

## 5.1 Land Use Objectives

#### 5.1.1 Order Establishing Sproat Lake Landscape Unit and Objectives

#### 5.1.1a Sproat Lake Landscape Unit Objective 1

5.1.1a		lishing Sproat Lake Jnit and Objectives	Objective 1: Old Growth Management Areas	
Objective	1. Maintenan	1. Maintenance or recruitment of old growth forests.		
	Maintain or recruit old growth forests in established old growth management areas (OGMAs), as shown on the attached Sproat Lake Landscape Unit map dated June 30, 2005, subject to subsection 2 below		n on the attached Sproat Lake	
	2. Permissibl	e Activities.		
	a) Minor (	OGMA boundary adjustme	ents for operational reasons:	
	and re		equirements for timber harvesting boundaries of OGMAs that are adjusted, provided that:	
	i)	the boundary adjustmen cent of the area of the O	t does not affect more than 10 per IGMA	
	ii)	values beyond or adjace	ion is required to access resource ent to the OGMA and no other ad or bridge location exists,	
	iii)	quantity is identified eith	nent forest of at least equivalent er (in order or priority) directly ne variant and landscape unit as d	
	iv)	documented, mapped ar	nd OGMA replacement areas are nd submitted to the delegated nd of each calendar year.	
	replac rehab		an alternative to finding nay permanently deactivate and bridge site within four years after	
	b) Other µ	permissible activities:		
	i)	Boundary pruning of tree	es to improve wind firmness.	
	ii)	infestations or diseases forested areas outside o	event the spread of insect that pose a significant threat to f OGMAs. Salvage within OGMAs r that retains as many old growth ible.	
	iii)	brushing and clearing or	on, removal of danger trees, or n existing roads under active f-way for safety purposes.	
	iv)		nce, tailhold anchor trees, or h value wildlife trees) along	

	<ul> <li>cutblock boundaries or within the right of way on new road/bridge alignments to meet safety requirements</li> <li>v) Construction of rock quarries and gravel pits under authority of forest tenure where the development will be located immediately adjacent to existing roads under tenure and will affect the OGMA by less than 0.5 ha in total.</li> <li>vi) Intrusions, other than those specified that affect an OGMA by less than 0.5 hectares in total.</li> <li>OGMA replacement forest is required as a result of activities under 2b) above, if the total net change to the OGMA exceeds 0.5 ha in size. Replacement forest must be biologically suitable, of at least equivalent quantity and situated (in order of priority), either immediately adjacent to the existing OGMA, or in the same wariant and long acons with a priority of the priority of priority of priority of the priority of priority of priority of the priority of priori</li></ul>
Results and Strategies	<ol> <li>variant and landscape unit as the existing OGMA.</li> <li>In these results, "suitable OGMA replacement" is forest that is biologically suitable and is of at least equivalent quantity and is identified either (in order of priority) directly adjacent to the existing OGMA, or in the same variant and landscape unit as the adjusted OGMA.</li> <li>The AVCFC will not carry out road construction or timber harvesting within Old Growth Management Areas (OGMAs) except under the circumstances described in the permissible activities under S. 10.2 (2) of the Sproat Lake Landscape Unit Plan (July 18, 2005) (see objectives above).</li> </ol>
	<ol> <li>OGMA replacement forest is required as a result of activities under S. 10.2 (2)(b) under the Sproat Lake Landscape Unit Plan (July 18, 2005), if the total net change to an OGMA exceeds 0.5 ha in size. Replacement forest must be biologically suitable, of at least equivalent quantity and situated (in order of priority), either immediately adjacent to the existing OGMA, or in the same variant and landscape unit as the existing OGMA.</li> </ol>
	4. Any OGMA boundary adjustments and OGMA replacements will be proposed to DSI staff. Proposals will include a rationale and supporting information which will be reviewed by the DSI biologist. Permissible boundary adjustments and replacements will be submitted to the District Manager for approval.
Objectives, S Developmen	Strategies and Results apply to these Forest Sproat $$ Taylor $$

#### 5.1.1b Sproat Lake Landscape Unit Objective 2

5.1.1b	Order Establishing Sproat Lake Landscape Unit and Objectives	Objective 2
		Wildlife Tree Retention
Objective	Maintain stand-level structural diversity (WTPs).	v, by retaining wildlife tree patches
	Over each 5 year period, commencing established, the target percentage of th 1, must be achieved, by each licensee adequate amounts of wildlife tree patch salvage cutblocks in which harvesting	he harvest area as noted in Table and tenure, through retention of hes on cutblocks, except minor
	In addition:	
	1. WTPs must be well distributed acr	ross the BEC subzone
	2. When designated at the operation located within or immediately adjaced	
	<i>3. No timber harvesting, including sin within WTPs, except as noted in 4</i>	
	4. Salvage of windthrown timber is period windthrow impacts 25% to 50% of stems. Salvage of windthrown timber standing stems is permitted within 50% of the dominant or co-dominatissues pose a significant threat to salvage/harvesting is planned and WTP of at least equivalent quantity to achieve the retention target.	the dominant or co-dominant ber and harvesting of remaining WTPs where windthrow exceeds ant stems; or where forest health areas outside the WTP. Where I authorized, suitable replacement
	5. WTPs should include, if present, re live or dead veteran trees, excludi	
	6. WTPs must include representative (dbh>average operational cruise) wildlife trees if available (excluding	and any moderate to high value
	7. BEC subzones and variants will be plan information.	e determined by operational site
	8. In WTPs with a likelihood of windt be carried out to maintain the integ	

 $<sup>^{1}</sup>$  A minor salvage cutblock is defined in the Sproat Lake Landscap Unit Plan as less than 2.0ha of harvesting and/or less than a total volume of 2000m<sup>3</sup> excluding volume harvested from any road clearing width, if the road is required to facilitate the removal of timber within the minor salvage cutblock

	Table 1. Wildlife Tree Retention by BEC subzone in the Sproat LakeLandscape Unit.		
	Biogeoclimatic Subzone % WTP		
	requirement           CWH mm (Coastal Western Hemlock, moist         7		
	maritime) CWH vm (Coastal Western Hemlock, very wet 5		
	maritime)		
	CWH xm (Coastal Western Hemlock, very dry 12 maritime)		
D Ita I	MH mm (Mountain Hemlock, moist maritime)     0		
Results and Strategies	<ol> <li>In these results "wildlife tree patches (WTP)" is the same as "wildlife tree retention areas (WTR)" which is defined in FPPR (Part 1, 1) as an area occupied by wildlife trees that is located in a cutblock, in an area that is contiguous to a cutblock, or in an area that is sufficiently close to the cutblock that the wildlife trees could directly impact on, or be directly impacted by, primary forest activities carried out in the cutblock.</li> </ol>		
	2. When harvesting is completed in one or more cutblocks, except for minor salvage cutblocks, during any 5 year period beginning on January 1 of any calendar year, the AVCFC will ensure that, at the end of the 5 year period, the total area covered by wildlife tree retention areas that relates to the cutblocks meets or exceeds the percent of the total area of the cutblocks by subzone presented in Table 1 of the objective above.		
	<ol> <li>In addition to (2) above, the AVCFC will ensure that WTP representation is consistent with FPPR S. 66.</li> </ol>		
	<ul> <li>a) When harvesting is completed in one or more cutblocks during any 12 month period beginning on April 1 of any calendar year, the AVCFC will ensure that at the end of that 12 month period, the total area covered by wildlife tree retention areas that relate to the cutblocks is a minimum of 7% of the cutblocks (FPPR S. 66 (1)).</li> </ul>		
	<ul> <li>b) At the completion of harvesting, the total amount of WTP that relates to any cutblock is a minimum of 3.5% of the cutblock (FPPR S. 66 (2)).</li> </ul>		
	<ul> <li>For the purposes of (a) and (b), a WTP may related to more than one cutblock if all of the cutblocsk that relate to the WTP collectively meet the applicable requirements (FPPR S. 66 (3)).</li> </ul>		
	4. The AVCFC will ensure that:		
	a. WTPs are distributed across the BEC subzone;		
	<ul> <li>WTPs are located within or immediately adjacent to a cutblock when designated at the operational site plan level;</li> </ul>		
	<ul> <li>no timber harvesting, including single tree selection, is allowed to occur within a WTP except:</li> </ul>		

Development L			Taylor √
Objectives, Str	ategies	and Results apply to these Forest	Sproat √
	h.	WTPs with a high likelihood of windthrow, as determ Qualified Professional, may be pruned or topped to integrity of the WTP.	•
	g.	BEC subzones and variants will be determined by o site plan information;	perational
	f.	WTPs include representative larger trees (dbh > ave operational cruise) for the stand and any moderate to wildlife trees if available (except danger trees);	
	e.	WTPs include, if present, remnant old-growth patche or dead veteran trees (except danger trees);	es and live
	d.	Further to c (ii),(iii) where salvage/harvesting is plan suitable replacement WTP of at least equivalent qua identified concurrently to achieve the retention targe	antity will be
		<li>iii. where forest health issues pose a significant thro outside the WTP;</li>	eat to areas
		<ul> <li>ii. salvage of windthrown timber and harvesting of standing stems within WTPs where windthrow e of the dominant or co-dominant stems, or</li> </ul>	
		<ul> <li>i. salvage of windthrown timber within WTPs when impacts 25% to 50% of the dominant or co-domi</li> </ul>	

## 5.1.1c Sproat Lake Landscape Unit Objective 3

5.1.1c	Order Establishing Sproat LakeObjective 3: SpecialLandscape Unit and ObjectivesManagement Zone 17
Objective	Sustain forest ecosystem structure and function within the portion of Special Management Zone (SMZ) 17 located in the Sproat Lake Landscape Unit, by retaining mature and old forests (i.e. > 80 years of age) on an area covering at least 25 per cent of the total forested area of the SMZ portion located within the landscape unit.
Description	The Taylor FDU is located within SMZ 17 forming a portion (28%) of the overall area of SMZ17.
Results and Strategies	<ol> <li>In these results: "mature forest" is forest &gt; 80 years and &lt; 250 years of age. "old forest" is forest &gt; 250 years of age.         </li> <li>The AVCFC will participate in landscape unit planning processes for SMZ 17.     </li> </ol>
	<ol> <li>Within the portion of SMZ 17 that is within the Taylor LU, the AVCFC may carry out timber harvesting or road construction if doing so will not result in the amount of old or mature forested area</li> </ol>

Objectives, St	AVCFC will not carry out or authorize timber harvesting in mature or old forest in the Taylor LU. rategies and Results apply to these Forest Development Taylor $$
	<ol> <li>During the term of this plan, if at least 25% of the forested landbase within SMZ 17 is not spatially defined as being mature or old, the</li> </ol>
	to drop below 25% within the total SMZ 17 area.

#### 5.1.2 Vancouver Island Land Use Plan Higher Level Plan Order

The Vancouver Island Land Use Plan, Higher Level Plan (VIHLP) Order (effective December 1, 2000) establishes Resource Management Zones and Resource Management Zone Objectives within the area covered by the Vancouver Island Land Use Plan (VILUP). The applicable Higher Level Plan Order Objectives for the Special Management Zones (SMZs) are listed in the following table and described below.

#### Table 5: VILUP Special Management Zones

Special Management Zone	Applicable HLP Objective	FDU
SMZ 13 – Nahmint *	N/A*	Taylor
SMZ 17 – Strathcona-Taylor	1, 2	Taylor

\* SMZ 13 borders and occasionally overlaps the southern tenure boundary in the Taylor LU. The SMZ 13 area that is located within the Taylor LU is located in inoperable areas, outside of the timber harvesting landbase. For the purpose of this FSP, VILUP objectives for SMZs have not been included for SMZ 13.

#### 5.1.2a VILUP HLP II A Objective 1a

5.1.2a	Vancouver Island Land Use PlanSection II A, Objective 1aHigher Level Plan OrderSection II A, Objective 1a
Objective	1. Sustain forest ecosystem structure and function in SMZs, by:
	a. Creating or maintaining stand structures and forest attributes associated with mature <sup>2</sup> and old <sup>3</sup> forests subject to the following:
	<ol> <li>The target for mature seral forest should range from one quarter to one third of the forested area of each SMZ<sup>4</sup>; and</li> </ol>
	ii. In the SMZs where the area of mature forest is currently less than the mature target range referred to in (i) above, the target amount of mature forest must be in place within 50 years.
Results and	1. Within areas designated as SMZ 17, the AVCFC will:
Strategies	<ul> <li>Ensure that mature seral forest is represented within the range of at least one quarter to one third within the SMZ as per objective 1(a) above;</li> </ul>
	<ul> <li>b. Work with other licensees within SMZ 17 to ensure that VILUP Section II A, Objective 1(a) is met.</li> </ul>
Objectives, St Units	rategies and Results apply to these Forest Development Taylor $\checkmark$

#### 5.1.2b VILUP HLP II A Objective 1b

5.1.2b	Vancouver Island Land Use Plan Section II A, Objective 1b Higher Level Plan Order	
Objective	1. Sustain forest ecosystem structure and function in SMZs by:	
	b. Retaining, within cutblocks <sup>5</sup> , structural forest attributes and elements with important biodiversity functions <sup>6</sup> .	
Results and Strategies	<ol> <li>In this strategy, 'structural forest attributes with important biodiversity functions' includes but is not limited to snags, wildlife trees and downed logs.</li> </ol>	
	2. Within areas designated as SMZ 17, the AVCFC will:	

<sup>&</sup>lt;sup>2</sup> The mature seral forest is defined as generally 80 to 120 years old or older, depending on species and site conditions. The structure of mature seral forests generally includes canopies that vary vertically or horizontally, or both. The age and structure of the mature seral stage will vary significantly by forest type and from one biogeoclimatic zone to another.

<sup>&</sup>lt;sup>3</sup> The old seral forest is defined as generally greater than 250 years old, containing live and dead (downed and standing) trees of various sizes, including large diameter trees, and of various tree species, including broad-leaved trees. The structure of old seral forest varies significantly by forest type and from one biogeoclimatic zone to another.

<sup>&</sup>lt;sup>4</sup> Mature seral targets will be established through landscape unit planning. See transition provisions under III.

<sup>&</sup>lt;sup>5</sup> Within cutblocks: generally means non-contiguous with cutblock boundaries.

<sup>&</sup>lt;sup>6</sup> This includes, but is not limited to snags, wildlife trees, and downed logs.

	<ul> <li>a. design cutblocks in a manner that is consistent with the objective of retaining structural forest attributes and elements with important biodiversity functions that exist in each of the following:</li> </ul>
	i. wildlife tree retention areas;
	ii. no-work zones;
	iii. riparian management areas;
	iv. other potential leave areas,
	that are generally within cutblock boundaries, and
	<ul> <li>b. carry out primary forest activities only if the activities are consistent with the design for the cutblock referred to in paragraph (a), and such that the result is consistent with the objective.</li> </ul>
Objectives, S Units	trategies and Results apply to these Forest Development $${ m Taylor}$$ $$

## 5.1.2c VILUP HLP IIA Objective 1c

5.1.2c	Vancouver Island Land Use PlanSection II A, Objective 1 cHigher Level Plan Order	
Objective	<ol> <li>Sustain forest ecosystem structure and function in SMZs by:</li> <li>Applying a variety of silvicultural systems, patch sizes and patch shapes across the zone, subject to a maximum cutblock size of 5 ha if clearcut, clearcut with reserves or seed tree silvicultural systems are applied, and 40 ha if shelterwood, selection or retention silvicultural systems are applied<sup>7</sup>.</li> </ol>	
Results and Strategies	<ul> <li>1.Within areas designated as SMZ 17, the AVCFC will: <ul> <li>a. design cutblocks in a manner that is consistent with:</li> <li>iii. establishing a variety of silvicultural systems and patch sizes and shapes across the SMZ, and</li> <li>iv. for shelterwood, selection, or retention silvicultural systems:</li> <li>A. maintaining varying levels of retention within the cutblock based on a consideration of the site-specific site conditions and the forest values, and</li> <li>B. limiting the Net Area to be Reforested (NAR) to 40 hectares except as provided in the result or strategy for VIHLP Objective 2, and</li> </ul> </li> </ul>	
	<ul> <li>v. for clear-cut, clear-cut with reserves or seed tree silvicultural systems, limiting the NAR to 5 hectares except as provided in</li> </ul>	

<sup>&</sup>lt;sup>7</sup> Maximum cutblock sizes refer to net area to be reforested.

b.	esult or strategy for VIHLP Objective 2, and carry out primary forest activities only if the acti consistent with the design for the cutblock refer paragraph a), and such that the result is consis the objective.	red to in
Objectives, Strategies and R Units	esults apply to these Forest Development	Taylor √

## 5.1.2d VILUP HLP Objective 2

5.1.2d	Vancouver Island Land Use Plan HLP Objective 2 Higher Level Plan Order	
Objective	2. Despite subsection 1(c) above, cutblocks larger than 5 or 40 ha as the case may be, may be approved if harvesting is being carried out to recover timber that was damaged by fire, insects, wind or other similar events and wherever possible, the cutblock incorporates structural characteristics of natural disturbances.	
Results and Strategies	<ol> <li>If, within areas designated as SMZ 17, timber harvesting is to be carried out in a cutblock to recover timber damaged by fire, insects, wind or other similar events, the AVCFC may design the cutblock to have a NAR that exceeds         <ul> <li>40 hectares for shelterwood, selection, or retention silvicultural systems, and</li> </ul> </li> </ol>	
	<ul> <li>b. 5 hectares for clear-cut, clear-cut with reserves or seed tree silvicultural systems</li> </ul>	
	provided that the design incorporates structural characteristics of natural disturbances into the cutblock where safe, and practicable.	
Objectives, S Units	trategies and Results apply to these Forest Development Taylor $$	

#### 5.1.3 Marbled Murrelet Notice and Order

5.1.3a Order for the Recovery of Marbled Murrelet,	Objectives for MAMU nesting
habitat	

5.1.3a	Order for the Recovery of Marbled Murrelet (Brachyramphus marmoratus), Dec. 2021
Objectives	<ol> <li>Maintain Suitable Habitat as follows:         <ul> <li>a) For each:</li> </ul> </li> <li>Iandscape unit aggregate in the order area:</li> <li>Retain all timber in an amount equal to or greater than the minimum habitat threshold listed in Column "A" in Table 1 in Schedule "7".</li> <li>b) For each:</li> <li>Iandscape unit portion in the order area:</li> <li>Retain all timber in an amount equal to or greater than the suitable habitat target listed in Column "A" in Table 2 in Schedule "7";</li> <li>Despite subsection (1)(b), the amount of timber that must be retained within a landscape unit portion in the West and North Vancouver Island and Southern Mainland Coast Conservation Regions may be less than the suitable habitat target listed in Column "A" in Table 2 in Schedule "7";</li> <li>Despite subsection (1)(a), Sutiable Habitat torget listed in Column "A" in Table 2 in Schedule "7".</li> <li>Despite subsection (1)(a), Suitable Habitat polygons shown in Schedule "1 to 6" in the East Vancouver Island Conservation Region may be harvested, provided that harvesting is required for road access, other infrastructure, or to address safety concerns, where there is no practicable alternative.</li> <li>Variance from the Objectives in Sections 3.(1) to 3.(3) for the Suitable Habitat polygons shown in Schedule "1 to 6" may be allowed, provided that:         <ul> <li>(a) A Qualified Professional:</li> <li>(i) Completes a field assessment that identifies the characteristics of Suitable Habitat using established standards; and</li> <li>(ii) Confirms the alteration will result in no net loss or functional loss of Suitable Habitat</li> <li>(b) A Regional Ministry of Forests, Lands, Natural Resource Operations and Rural Development biologist approves the alteration of the Suitable Habitat polygons</li> </ul> </li> </ol>

#### Marbled Murrelet Order – Schedule 7 Tables

The following tables describe the portions of the Order overlapping the area covered by this FSP.

#### Table 1

Landscape Unit Aggregate	Column "A" Suitable Habitat Target (Hectares Suitable Habitat)
East Coast (Easter Vancouver Island Conservation Region – EVI)	6,916
Central (West and North Vancouver Island Conservation Region – WNVI)	2,238

#### Table 2

Landscape Unit Portion	Landscape Unit Aggregate	Column "A" Suitable Habitat Target (ha Suitable Habitat)	Column "B" Minimum Habitat Threshold (ha Suitable Habitat)
Sproat Lake EVI	East Coast	883	883
Sproat Lake WNVI	Central	293	234

#### Results and 1. <u>Sproat Lake EVI</u> Strategies

Within the Sproat Lake EVI area, the AVCFC will conserve all suitable MAMU habitat within the AVCF (K2D) agreement area, to contribute to meeting the Land Use Order and Section 7 targets.

#### 2. Sproat Lake WNVI

Within the Sproat Lake WNVI area, the AVCFC will ensure the conservation of suitable MAMU habitat within the AVCF (K2D) agreement area, which will contribute to meeting the Land Use Order and Section 7 targets.

#### 3. Special Situations Where Harvest Will Be Allowed

In both the Sproat EVI and Sproat WNVI Landscape Unit Portions, suitable MAMU areas may be harvested, in situations where it is required for road access, or other infrastructure, or to address other safety concerns, where there is no other practical alternative, as per S.3(3) of the Order.

Where MAMU spatial layers are not consistent with field verification, these areas may be harvested provided that a Qualified Professional completes a field assessment, and confirms that the alteration will not result in a net loss of suitable MAMU habitat, as per S.3(4)(a) of the

	Order. The alteration of a suitable habitat polygon must approved by the Regional Biologist for the South Island For as per S.3(4)(b) of the Order.	
Objectives, S Units	trategies and Results apply to these Forest Development	Sproat √ Taylor √

# 5.1.3b FPPR S. 7(2) Notice target and minimum WHA, OGMA, and Aspatial MAMU Requirements

5.1.3b	FPPR S. 7(2)	Noti	ce for Ma	arbled Mu	<b>irrele</b>	t -
	Backgrounder					
FPPR						blishes target and
S.7(2)						uirements, and is
Notice						ortion. The Sproat
	EVI LU portion is	not co	vered by the	FPPR S.7(2	2) Noti	ce.
	<b>-</b>				NI 11	
	The following table			rtions of the	Notice	e overlapping the
	area covered by th	nis Fo	Γ.			
	Table 2 provides	s the	minimum	amount of	Suitah	ole Habitat to be
						OGMAs combined
						maintained within
	Marbled Murrelet					
	Table 2. South Isl					
	Landscepe Unit		MAMU WH			IU WHA
	Aggregate		OGMA Su			able Habitat
			Habitat Mi	nimum	MINI	mum (ha)
	Central		(ha) 1296		1041	
	1230 1041					
	Table 3 provides the target and minimum amount of suitable habitat to					
	be maintained within both Marbled Murrelet WHAs and OGMAs					
	combined and the minimum amount fo Suitable Habitat to be maintained					
	within Marbled Murrelet WHAs within landscape unit portions					
	Table 3. Sproat W					
	MAMU WHA and OGMA		IU WHA OGMA	MAMU WF Suitable	1A	MAMU WHA Suitable
	Suitable	Suita		Habitat Ta	raot	Habitat
	Habitat Target	Habi		(ha)	iyei	Minimum (ha)
	(ha)		mum (ha)	(114)		
	157	126	()	64		51
Results and	1. Participation		ional Workir			1
Strategies						
	The AVCFC will participate in working groups with other licensees and					
	the South Island Natural Resource District to ensure that suitable habitat					
	is maintained within the Sproat Lake LU, in the West and North Vancouver Island Conservation Region (WNVI).					
	vancouver Island	Conse	ervation Reg	ion (WINVI).		

	<ul> <li>As per FPPR S.7(2), a WNVI working group will establish areas that will be suitable for: <ul> <li>a) Establishment of new WHAs as well as addition to existing WHAs,</li> <li>b) Establishment of new OGMAs,</li> <li>c) Meeting aspatial targets from the Section 7 notice, and</li> <li>d) If a working group is not able to come to an agreement, the AVCFC will seek a ministerial established habitat target under FPPR S.19.</li> </ul> </li> <li>2. Sproat Lake WNVI</li> </ul>
Objectives, St	Within the Sproat Lake WNVI LU portion, the AVCFC will ensure the conservation of all suitable MAMU habitat area that will contribute to meeting the FPPR S.7(2) targets, until such time as a working group can complete planning for the Sproat WNVI LU portion.
Units	trategies and Results apply to these Forest Development Taylor √

## 5.2 Objectives prescribed under FRPA S.149

#### 5.2.1 Objectives set by government for soils [FPPR s.5]

5.2.1	Objectives set by government for wildlife [FPPR S.5]	Soils
Objective	The objective set by government for soils is to cor productivity and the hydrologic function of soils.	nserve the
Results and Strategies	In accordance with FPPR s. 12.1(1), the AVCFC is exempt from the requirement to specify intended results and strategies set out in FPPR S. 5.	
Practice Requirements		
Objectives, Strategies and Results apply to these Forest Development Sproat Units		Sproat $$

#### 5.2.2 Wildlife

5.2.2	Objectives set by government for wildlife [FPPR S.7] Wildlife
Objective	1. The objective set by government for wildlife is to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for
	a. the survival of species at risk,
	b. the survival of regionally important wildlife, and
	c. the winter survival of specified ungulate species.
	2. A person required to prepare a forest stewardship plan must specify a result or a strategy in respect of the objective stated under subsection (1) only if the minister responsible for the Wildlife Act gives notice to the person of the applicable
	a. species referred to in subsection (1), and
	<ul> <li>b. indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).</li> </ul>
	3. If satisfied that the objective set out in subsection (1) is addressed, in whole or in part, by an objective in relation to a wildlife habitat area or an ungulate winter range, a general wildlife measure, or a wildlife habitat feature, the minister responsible for the Wildlife Act must exempt a person from the obligation to specify a result or strategy in relation to the objective set out in subsection (1) to the extent that the objective is already addressed.
	4. On or after December 31, 2004, a notice described in subsection (2) must be given at least 4 months before the forest stewardship plan is submitted for approval.

Context	The Dec. 4, 2004 FPPR S. 7 Species at Risk Notice for Southern Vancouver Island specifies the amount, distribution and attributes of wildlife habitat required for "Queen Charlotte" Goshawk, MAMU, and Scouler's Corydalis.	
	Exemptions from the obligation of preparing a result or strategy for the South Island Forest District have been provided as set out FPPR S. 7(1) for the Queen Charlotte Goshawk and the Scouler's Corydalis. Therefore, this FSP does not contain any results or strategies for these two species.	
	The Notice does specifiy the amount, distribution and attributes of suitable habitat required for MAMU.	
Results	Results and strategies relating to MAMU can be found under the MAMU Order in section 5.1.3.	
Objectives, S Units	Objectives, Strategies and Results apply to these Forest Development Sproat $$ Taylor $$	

## 5.2.3 Water, Fish, Wildlife and Biodiversity within Riparian Areas

5.2.3	Objectives set by government for Water, Fish, Wildlife and water, fish, wildlife and biodiversity Biodiversity within within riparian areas (FPPR S. 8) Riparian Areas
Objective	The objective set by government for water, fish, wildlife and biodiversity within riparian areas is at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.
Results and Strategies	<ol> <li>In respect of FPPR Section 8, the AVCFC will comply with as a result/strategy, FPPR Section, 47 (1) to (6), 48(3) to (5), 49(2) and (3), 50(1), 51(1), 51(3), 52(2) and 53, (riparian management area, reserve zone and management zone standards and restrictions) as they were on the date of submission except in those circumstances as described below.</li> </ol>
	<ul> <li>The AVCF is located within the Sproat Lake Community Watershed. Riparian classification within community watersheds is specified under FPPR Section 47(2).</li> </ul>
	<ul> <li>For areas of primary forest activity carried out by the AVCFC, the widths of the riparian management area, riparian reserve zone and riparian management zone will be</li> </ul>
	<ul> <li>i) As specified in FPPR Sections 47(2), 47(4) to (6), 48(3) to</li> <li>(5) and 49(2) to (3), or</li> </ul>
	<ul> <li>As per FPPR S. 12.3, an alternative riparian management area, riparian reserve zone, and riparian management zone may be proposed for non-fish bearing streams within a community watershed provided that:</li> </ul>
	I. Any increase or decrease in width from section 1a)(i) of

Objectives, Str Units	ategies and Results apply to these Forest Development $$ Sproat $$ $$
	<li>iii) retention is applied to the riparian management zone area directly adjacent to primary forest activities.</li>
	<li>ii) retention may be dispersed through the riparian management zone, or grouped, and</li>
	<ul> <li>Basal area is based on pre-harvest levels measured and recorded within the riparian management zone for each riparian feature found within the gross block area prior to the commencement of primary forest activities,</li> </ul>
	c. For areas of primary forest activity carried out by the AVCFC within a riparian management zone, retention of trees will be based on the table in FPPR S.52, provided that:
	IV. is reviewed and approved by the delegated district decision maker prior to commencement of the primary forest activity.
	III. is consistent with <i>Legislated Riparian Assessment in BC</i> Professional Practice Guidelines (FPBC, CAB, APEGBC), and
	II. is specified in a rationale prepared by a qualified professional, which states the alternative riparian management area, riparian reserve zone, and riparian management zone widths for each feature affected by the activity,
	this result/strategy considers the factors in FPPR Schedule 1, Section 2,

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### 5.2.4 Community Watersheds

5.2.4	Objectives set by government for water Community Watersheds in community watersheds (FPPR S. 8.2)		
Description	The majority of the AVCF area is located within the Sproat Lake Community Watershed.		
Objective	<ol> <li>In this section, "community watershed" refers to the Sproat Community Watershed as designated on 15 June 1995 under the Forest Practices Code and continued under FRPA S 180(e).</li> </ol>		
	2. The objective set by government for water being diverted for human consumption though a licensed waterworks in a community watershed is to prevent the cumulative hydrological effects of primary forest activities within the community watershed from resulting in		
	a. a material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or		
	b. the water from the waterworks having a material adverse impact		

	on human health that cannot be addressed by water treatment required under
	i. an enactment, or
	ii. the licence pertaining to the waterworks.
Results and Strategies	1. In respect of FPPR S. 8.2 (2), the AVCFC will comply with, as a result, practice requirements in FPPR S. 59 ( <i>protecting water quality</i> ), 60 ( <i>licensed water works</i> ) and 61( <i>excavated or bladed trails</i> ).
	2. With respect to managing cumulative watershed effects for primary forest activities within the AVCF, the AVCFC will work with other tenure holders operating within the Sproat Lake Community Watershed to monitor, assess and manage cumulative effects. Watershed assessments will be completed by a Qualified Professional, according to the current <i>Community Watershed Assessment Procedure Guidebook</i> (1999), and the Watershed Assessment and Management of Hydrologic Risk and Geomorphic Risk in the Forest Industry (2020) procedures.
	3. Where the watershed assessment makes recommendations that are specific to sub basins or the community watershed as a whole, and/or are applicable to AVCFC primary forest activities, then the AVCFC will follow the recommendations in primary forest activities.
	4. With regards to primary forest activities, the AVCFC will:
	<ul> <li>Design cutblocks and roads in a manner that is consistent with a cumulative low to moderate risk threshold for material adverse hydrological effects as defined in current CWAP methodology, and minimizes sediment erosion and transport to local streams,</li> </ul>
	b. Minimize soil disturbance during harvesting,
	<ul> <li>Design road ditchlines so that they filter out into the forest rather than entering directly into streams,</li> </ul>
	d. Install adequate culverts to ensure natural water drainage is maintained, and
	<ul> <li>Revegetate right-of-ways, cut slopes, road surfaces, and landings where revegetation will reduce soil erosion into watercourses.</li> </ul>
	5. With regards to road sections occurring on sensitive slopes (terrain stability class IVR, IV, or V, or as prescribed by a Qualified Professional), upstream of a licensed water work where the water is diverted for human consumption, or where road surface drainage has the potential to enter into a stream flowing into Sproat Lake, stream, or licensed water work, the AVCFC will apply the following best practices:
	<ul> <li>a. <u>Ditch Cleaning</u>: where needed, ditches are to be cleaned when conditions are dry. Ditch spoil is not to be</li> </ul>

		windrowed along the road shoulder. On moderate slopes, the ditch spoil could be thinly spread on the slope below
		the road, but not heaped or piled against trees. Where the road is on steep slopes, the ditch spoil should be end hauled to a suitable spoil site.
	b.	<u>Culvert replacement</u> : Where required culvert replacements are to be done during dry weather (except for emergency repairs or replacements). The inlet and outlet areas on new culverts, and the adjacent fill slopes, will be armored to prevent erosion or sloughing.
	C.	Rock Ballasting of road surface: The road surface is also to be rock ballasted with clean rock for 30 metres either side of stream culverts.
	d.	<u>Road grading practices:</u> grading is to be avoided during heavy rain.
	e.	Shutdown or harvest completion: In preparation for a shutdown for a period longer than 30 days or at a harvest completion, the following measures will be taken:
		<ul> <li>No excavated or end hauled material will be left piled in such a way as to become unstable during the shutdown period. Spoil sites, piles and fills will be sloped uniformly to prevent instability.</li> </ul>
		<li>Ditches and culverts will be left clear and functional, with adequate inlet basins to minimize the potential for plugging.</li>
		<li>iii. Cross ditches and back-up swales will be constructed where needed to minimize ditch erosion.</li>
		<ul> <li>iv. If road construction has reached a drainage course but a drainage structure has not been installed prior to shutdown, the drainage course will be left open and unimpeded.</li> </ul>
		v. Where exposed fine textured soils could erode and enter surface streams or ditches connected to streams, silt fences and hay bales will be applied within streams or ditches as needed for temporary protection. Erosion blankets, grass seeding, or spreading of logging debris over exposed mineral soil will help to prevent erosion.
Objectives Strategies Units:	and F	Results apply to these Forest Development Sproat $$ Taylor $$

#### 5.2.5 Wildlife and Biodiversity – Landscape Level

5.2.5	Objectives set by government for wildlife and biodiversity – landscapeWildlife and Biodiversity – landscape levellevel [FPPR S. 9]
Objective	The objective set by government for wildlife and biodiversity at the landscape level 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.
Results and Strategies	<ol> <li>The AVCFC will comply with FPPR Sections 64 (<i>cutblock size</i>) and 65 (<i>cutblock adjacency</i>), as results or strategies under this FSP.</li> <li>Further to subsection 1, cutblocks located in SMZ 17 will have a net area to be reforested in accordance with the result or strategy for VILUP HLP Order Objective 1(c) or HLP Order Objective 2.</li> </ol>
Objectives St Units:	rategies and Results apply to these Forest Development Sproat $$ Taylor $$

#### 5.2.6 Wildlife and Biodiversity – Stand Level

5.2.6	Objectives set by government for wildlife and biodiversity – stand levelWildlife and Biodiversity – stand level[FPPR S 9.1]	
Objective	The objective set by government for wildlife and biodiversity at the stand level is, to retain wildlife trees.	
Results and Strategies	1. The AVCFC will comply with section 66 ( <i>wildlife tree retention</i> ) and 67 ( <i>restriction on harvesting</i> ) of the FPPR.	
	2. Further to subsection 1, the AVCFC will comply with the wildlife tree retention targets in Sproat Lake Landscape Unit Order by biogeoclimatic subzone.	
	3. Where bear dens are located during cutblock layout, they will be protected. A management strategy will be prepared prior to the commencement of primary forest activities, and will be guided by the assessment and recommendations of a Qualified Professional. Recommendations proposed in the management strategy will be adhered to by the FSP holder.	
-	ategies and Results apply to these Forest Development $$ Sproat $$	
Units:	Taylor √	

#### 5.2.7 Cultural Heritage Resources

5.2.7	Objectives set by government for cultural heritage resources [FPPR S. 10]		
Description	The AVCF lies within the asserted traditional territories of the Hupacasath and Tseshaht First Nations.		
Objective	The objective set by government for cultural heritage resources is to conserve, or, if necessary, protect cultural heritage resources that are		
	a. the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and		
	b. not regulated under the Heritage Conservation Act.		
Results and	1. In these strategies:		
Strategies	"cultural heritage resource" means a cultural heritage resource, other than a resource feature, that includes:		
	<ul> <li>a. the focus of a traditional use by the Hupacasath or Tseshaht peoples that is of continuing importance to those peoples,</li> </ul>		
	<ul> <li>b. cultural heritage resources not regulated under the Heritage Conservation Act,</li> </ul>		
	<ul> <li>c. "monumental western redcedar or cypress " (which refers to western redcedar or cypress used for making paddles, masks, totems, canoes, and other traditional use items), or</li> </ul>		
	<ul> <li>cultural heritage resources identified by the Hupacasath or Tseshaht First Nations.</li> </ul>		
	The following steps will be undertaken by the AVCFC:		
	<ol> <li>The AVCFC will refer to the Hupacasath and Tseshaht First Nations, areas within their traditional territories, identified for potential timber harvesting and road construction:</li> </ol>		
	<ul> <li>a. on an ongoing basis, using a process that is jointly developed and mutually acceptable to each First Nation, with consideration to the factors described in the FPPR schedule 1(4),</li> </ul>		
	<ul> <li>b. to request information respecting special cultural heritage resources within the identified areas, and</li> </ul>		
	<ul> <li>with the intention of adhering to the overall cultural and forest management objectives contained in First Nations land use planning processes.</li> </ul>		
	3. If the AVCFC identifies that adhering to one or more standards and expectations of the Hupacasath First Nation Land Use Plan will conflict with other objectives, results or strategies contained in this FSP, the AVCFC will consult with the Hupacasath First Nation and the District Manager to review options and seek mutually acceptable		

	sol	lutions.
4.		e AVCFC will, prior to submitting a cutting permit and/or road rmit application:
	a.	engage with the appropriate First Nation(s) in advance to: allow for a field assessment and/or comment relating to cultural heritage resources,
	b.	consider the factors listed in the FPPR schedule 1 (4), and
	C.	mutually develop measures to manage identified cultural heritage resources.
	d.	where a First Nation has provided comment relating to a cultural heritage resource, the AVCFC will notify the applicable First Nation in writing as to:
		<ul> <li>whether the cultural heritage resource is to be preserved, and</li> </ul>
		<li>ii. if the cultural heritage resource is to be preserved, what constraints, if any, are to apply to primary forest activities carried out in that area.</li>
5.	AV	r each cultural heritage resource that has been identified, the /CFC will carry out primary forest activities only to the extent that s consistent with measures developed in subsection 4.
6.	pri	within a cutblock or road where the AVCFC is carrying out mary forest activities, a previously unidentified special cultural ritage resource is encountered, the AVCFC will:
	a.	require operations within the cutblock or road to cease or be modified to the extent necessary to protect the special cultural heritage resource,
	b.	involve the appropriate First Nation(s) to determine:
		i. the nature of the special cultural heritage resource,
		ii. whether the special cultural heritage resource is to be protected, and
		iii. if the special cultural heritage resource is to be protected, what constraints or measures, if any, are to apply to primary forest activities carried out on the area,
	C.	modify the design of the cutblock or road to conform with subsection 6(b)(iii), and
	d.	resume operations within the cutblock or road to the extent that the operations are consistent with the modified design.
7.	loc res	e AVCFC recognizes that mature western red cedar and cypress cated within the identified FDUs are special cultural heritage sources to the Hupacasath and Tseshaht First Nations and the /CFC will ensure that, in addition to subsections 2 through 6,
	a.	western red cedar and cypress, where ecologically suited, will

	b.	be planted on areas referred to in section 29 (1) of the accordance with the stocking standards specified in the stewardship plan, where requested by the Hupacasath or Tseshaht First the AVCFC will assist in developing a strategy for and identification of monumental western red cedar or cyp	nis forest t Nation, l in the
	C.	their traditional territory, and where a strategy for monumental western red cedar of as outlined in 7(b) has been developed and agreed up AVCFC, the applicable First Nation and the Ministry N Resource Operations, the AVCFC will seek an amend this section of the current FSP.	oon by the latural
Objectives Strategies and Results apply to these Forest Development Units:		Sproat $$	

#### 5.2.8 Recreation

5.2.8	Interpretative forest sites, recreation Recreation Features sites and recreation trails [FRPA 56(1)]			
Description	A number of recreation trails as shown on the FSP maps are known to the AVCFC including the Teodore and Sproat Lake Lookout Trails in the Sproat FDU (including access to karst features) and the Mt Adder, Gibson-Klitsa (Brigade Lake) [Rec 6390 1] and the Klitsa (aka Brooke George) trails in the Taylor FDU.			
	The AVCFC is also aware of a trail system in the Weiner Creek watershed (Weiner Falls) and connecting the Teodore and Sproat Lake Lookout trails, along with numerous trials motorcycle trails, which have not yet been mapped. There are also several popular camping sites that exist along the south side of the Taylor River between the river and South Taylor Main, which also serves as an access point for the Snow Creek campsite on the North Side of Sproat Lake (located outside of the AVCF). Existing recreation features are further described in the AVCFC Management Plan section 13.3.4.			
Objective	There are no legally established (FRPA 56(1)) interpretative forest sites, recreation sites or recreation trails within the community forest area and consequently no legally established objectives for these features.			
	Although not legally required, this section is retained within the FSP for information purposes only reflecting the importance of recreational features within the community forest.			
	The AVCFC objective is that industrial activities will coexist and complement recreational opportunities within the community forest.			
Results and	When planning for primary forest activities, the AVCFC will:			
Strategies	1. Engage recreation users to find solutions where conflicts between primary forest activities and recreation features occur,			

Units:	Taylor √
	rategies and Results apply to these Forest Development $$ Sproat $$
	<ol> <li>In coordination with BC Rec Sites and Trails, explore opportunities for additional recreation features, where they do not interfere with primary forest activities.</li> </ol>
	<ol> <li>Reach out to the District Recreation officer if there are plans to complete road maintenance or closures on the South Taylor FSR, so that appropriate notification can be put in place to avoid potential conflict with recreation users, and</li> </ol>
	<ol><li>Keep and inventory of roads required to recreation access, and maintain these roads where practicable,</li></ol>
	<ol> <li>Where appropriated, provide interpretive signs to explain multiple forest use concepts, harvesting techniques, and silviculture practices,</li> </ol>
	<ol> <li>Where trails run through cutblock areas, consider maintenance, improvement, or alteration to showcase forest practices and/or provide an interesting viewscape,</li> </ol>
	<ol> <li>Consider recreation features where they conflict with primary forest activity operations,</li> </ol>
	<ol> <li>Work with local user groups to maintain, enhance, and improve recreation features, including preparing and developing directional and informational signage at trailheads,</li> </ol>

## 5.3 Objectives Established under the GAR

## 5.3.1 Visual Quality

5.3.1	Objectives Established under the Visual Quality Objectives Government Actions Regulation			
Objective	Visual Quality Objectives (VQO) are established for the South Island Natural Resource District, including areas of the Alberni Valley Community Forest, pursuant to Section 7(2) of the Government Action Regulation (GAR) by an approved GAR order dated December 15, 2005 and amended effective December 30th, 2011. These VQOs apply to the scenic areas identified as known in the district manager's letter dated November 13, 1998 and grand parented under Section 180 of the Forest and Range Practices Act. These objectives apply to the crown land portions of the South Island Forest District, and to the private land within Woodlot Licenses and Tree Farm Licenses.			
Results and Strategies	<ol> <li>In these results:</li> <li>"applicable scenic area" means a scenic area that was made known in the South Island Forest District by letter dated November 13, 1998, and</li> </ol>			

	0	<b>"applicable visual quality objective"</b> means the visual quality objective established for a scenic area in the South Island Forest District pursuant to Section 7(2) of the Government Actions Regulation and as defined in the FPPR Section 1.1.		
	2.	<ul> <li>Within each applicable scenic area, the AVCFC will:</li> <li>a. ensure that each cutblock or road is designed in a manner such that the alteration to the forest landscape of the applicable scenic area, when assessed from a significant public viewpoint<sup>8</sup>, will be consistent with the applicable visual quality objective,</li> </ul>		
		b. where cutblocks or roads are visible from a significant public viewpoint, visual quality assessments will be completed by a Qualified Professional and follow the principles that are described in the <i>Visual Impact Assessment Handbook</i> (May 2022), and		
		c. carry out primary forest activities only if the activities are consistent with the design for the cutblock or road referred to in paragraph (a) and that the result is consistent with the applicable visual quality objective.		
Objectives Strategies and Results apply to these Forest Development Units:				

#### 5.3.2 Karst

5.3.2	Objectives Established under the Karst Resource Features Government Actions Regulation				
Objective	The 2010 Order to Identify Karst Resource Features identifies surface and subsurface elements of a karst system as resource features wherever they are found in the South Island Resource District. These features include:				
	Karst caves,				
	<ul> <li>Significant surface karst features, and</li> </ul>				
	<ul> <li>Important features and elements within high and very high vulnerability karst terrain.</li> </ul>				
	Areas shown in Appendix 1 of the Order contain surface and subsurface elements of karst systems as per GAR Section 5(1)(a). While none of the areas listed in the Order are located within the AVCF, known karst features are found within the AVCF.				
Results and Strategies	<ol> <li>The AVCFC will ensure that primary forest activity does not damage karst resource features as per FPPR S. 70(1).</li> </ol>				

<sup>&</sup>lt;sup>8</sup> The Visual Impact Assessment Handbook (2022) defines a public viewpoint as a place or location on the land or water that is accessible to the public and provides a direct viewing opportunity to the alteration and landform being assessed, including but not limited to travel routes, settlements, public use areas, tourism facilities, and parks.

		The AVCFC will satisfy annual reporting requirements for resource features as per FPPR S. 86(3)(b). Karst features will be assessed by a Qualified Profession the commencement of primary forest actives. The recommendations of this assessment will be incorporated	al prior to
	4.	cutblock and road designs. The AVCFC will communicate with local caving clubs when undertaking primary forest activities near known cave features. Comments received will be considered prior to the commencement of primary forest activities.	
Objectives Strategies and Results apply to these Forest Development Units:			

# 5.4 Measures

#### 5.4.1 Measures to prevent the introduction and spread of invasive plants

Measures to Prevent the Introduction and Spread of Invasive Plants (FRPA S.47, FPPR S.17) FRPA S. 47 requires that:

A person carrying out primary forest activities or a range practice must carry out measures that are

- (a) specified in the applicable operational plan, or
- (b) authorized by the minister to prevent the introduction or spread of prescribed species of invasive plants. FPPR S. 17

For the purpose of section 47 [invasive plants] of the Act, a person who prepares a forest stewardship plan must specify measures in the plan to prevent the introduction or spread of species of plants that are invasive plants under the Invasive Plants Regulation, if the introduction or spread is likely to be the result of these activities.

Therefore, the AVCFC's objective with regards to invasive plants is:

" to prevent the introduction or spread of species of plants that are invasive plants under the Invasive Plants Regulation, if the introduction or spread is likely to be the result of primary forest activities."

5.4.1	Measures to Prevent the Introduction and Spread of Invasive Plants
Measures	The AVCFC will:
	<ul> <li>a. identify known locations of invasive plants within the FSP area using the provincial InvasivesBC database and/or ongoing observation,</li> </ul>
	<ul> <li>b. distribute information to staff and contractors on priority invasive plants (as defined in the <i>Invasive Plants Regulation</i> S.2) that exist or threaten to establish within the FSP area,</li> </ul>
	<ul> <li>c. direct staff to monitor and report new incidences of priority invasive plants and enter them into the provincial InvasivesBC database,</li> </ul>
	d. require contractors or staff carrying out timber harvesting, road building, and/or silviculture activities to inspect equipment and vehicles to be used within the FSP area for soil and invasive plant material, and to clean equipment prior to transporting equipment to a worksite within the FSP area.
	e. require that outside sources of road ballast materials (eg. pits, quarries or borrow areas) be inspected for the presence of invasive plant species before transport, and that material containing invasive plant seed not be transported into the AVCF.
	2. If the AVCFC carries out primary forest activities in an area where invasive plants are likely to spread (due to nearby or adjacent occurrence of invasive plants or well used public access corridors), and where revegetation is likely to prevent the spread of invasive plants, the AVCFC will, within one year of completing the activity:
	<ul> <li>a. revegetate contiguous areas of exposed soil resulting from primary forest activities that exceed 0.1 ha. This includes roadsides, spoil sites, stream crossings, temporary access structures or areas of soil disturbance within or adjacent to cutblocks,</li> </ul>
	<ul> <li>b. use only Common # 1 Forage grade seed mixtures or better that: are of native origin, and have been certified by the Canadian Seed Growers Association for varietal purity and free of weed and/or invasive species. Certificates of seed analysis reports will be verified by the AVCFC prior to seed mixing and purchase, and</li> </ul>
	<ul> <li>promptly control invasive species infestations resulting from primary forest activities.</li> </ul>
These measu	res apply to these Forest Development Units: Sproat $$ Taylor $$

# 5.4.2 Measures to Mitigate the Effect of Removing or Rendering Ineffective Natural Range Barriers

5.4.2	Measures to Mitigate the Effect of Removing or Rendering Ineffective Natural Range Barriers.										
	Not applicable to the AVCF. There are no agreements under the range act in the vicinity of the community forest nor livestock grazing within the FDU.										
These measures apply to these Forest Development Units: Spr Tay											

# 6.0 STOCKING STANDARDS

# 6.1 Situations or Circumstances that determine whether Free Growing is assessed on a Block Basis or Across Blocks

FPPR S. 44(1) applies in all situations or circumstances under the FSP where a free growing stand is required to be established under FRPA S. 29(1).

# 6.2 Regeneration Date and Stocking Standards, Free Growing Height

The Stocking Standards specify the regeneration date, free growing height and stocking standards for the situations or circumstances where FPPR S. 44(1) applies.

The even aged stocking standards for the AVCF are found in Appendix 1, Table A.

# 6.3 Situations or Circumstances that Determine when FPPR S. 44(4) and the Standards Applicable Under FPPR S.16(4) Applies

Uneven aged stocking standards as per FPPR S.44(4) will apply, if the AVCFC carries out harvesting involving commercial thinning, removal of individual trees, intermediate cutting or harvest of special forest products as per FPPR S.44(3)(h) and S.44(3)(i). The uneven aged stocking standards for the AVCF are found in Appendix 1, Table B. The AVCFC will ensure that harvested areas to which these stocking standards apply will conform to these stocking standards for a period of 12 months after the completion of harvest

In situations where post-harvest stands do not meet the Appendix 1, Table B uneven aged stocking standards, the AVCFC will default to the Appendix 1, Table A stocking standards. The stocking standards in Appendix 1, Table A are only appropriate where <9m<sup>2</sup>/ha is prescribed for retention in old growth Hw and Cw stands and <5m<sup>2</sup>/ha is prescribed for retention in second growth Fd stands. The stocking standards in Appendix 1, Table B are only appropriate where >40m<sup>2</sup>/ha is prescribed. In specific situations where a cutblock is proposed with an uneven aged standard (where neither Table A or B apply), an amendment to this FSP will be proposed, based on the Single Entry Dispersed Retention Stocking Standard (SEDRSS).

For salvage of timber resulting from windthrow, root rot mortality, or other similar events, openings of up to 0.1 ha in size are acceptable and do not require a site plan or associated requirements for the regeneration and establishment of a free growing stand. No long-term impact on timber yield is expected as the subject areas are likely to regenerate naturally or will be planted concurrent with harvest in adjacent areas. For openings larger than 0.1 ha, the even-aged stocking standards found in Appendix 1, Table A will apply.

# 7.0 SIGNATURES

Alberni Valley Community Forest Corporation



RPF Signature:Name:Mike Davis RPFPosition:Consulting Forester, Econ ConsultingDate:July 16, 2024



AVCFC Signature: \_ Name: Position:

Date:

Chris Law R.F.T. Manager, Alberni Valley Community Forest Corporation July 16, 2024

# **APPENDIX 1: STOCKING STANDARDS**

# Table A: Even-Aged Stocking Standards

ADMIN	ADMINISTRATION																								
Coast F	ores	t Region	Se	outh Isla	nd For	est l	Distr	rict		Al	bern	i Valle	y Co	omn	unit	y Fore	st			K2D				Jan. 2024	
Standards																									
ID	ID #	BEC	2		Preferred Species							Acceptable Species						St	ocking (w/s)		Min Inter Tree Dist (m)	Regen Delay	FG Date	Tree Ht > Brush (min %)	Comments:
	"	Zone & variant	Site Series	1	Ht (min)	2	Ht (min)	3	Ht (min)	4	Ht (min)	1	Ht (min)	2	Ht (min)	3	Ht (min)	Target P&A (sph)	Min P&A (sph)	Min P (sph)	MITD (m)	Max (yrs)	Late (yrs)		
	1	CWHmm1	01	Fd	3.0	Cw	1.5					$\mathrm{Hw}^{10}$	2.0					900	500	400	2.0	6	20	150	
	2	CWHmm1	02	Pl	1.25	Fd	2.0					Cw	1.0					800	400	400	2.0	6	20	150	
	3	CWHmm1	03	Fd	2.0							Cw	1.0	Hw*	1.75			800	400	400	2.0	3	20	150	
	4	CWHmm1	04	Fd	2.0							Cw	1.0	Pw <sup>31</sup>	2.5	Hw*	1.75	900	500	400	2.0	3	20	150	
	5	CWHmm1	05	Fd	3.0	Cw	1.5					Pw <sup>31</sup>	2.5	Hw*	2.0	Ba*	0.75	900	500	400	2.0	3	20	150	
	6	CWHmm1	06	Cw	1.5	Hw	2.0					Fd <sup>7</sup>	3.0	Ba*	0.75			900	500	400	2.0	6	20	150	
	7	CWHmm1	07	Cw	2.0	Fd	4.0					Ba*	1.0	Hw*	2.5			900	500	400	2.0	3	20	150	
	8	CWHmm1	12	$Cw^1$	1.0							$Hw^1$	1.5	Ss <sup>1,3</sup>	5 2.0			800	400	400	2.0	3	20	150	
	9	CWHmm1	05,07	Dr	4.0	Mb	4.0					Act	4.0					1200	1000	800	1.5	3	20	150	Broadleaf management***
	10	CWHmm2	01	Hm <sup>13</sup> /Hw	1.0/1.25	Cw	1.0	Fd <sup>10</sup>	2.25	Yc	1.0	Ba	0.75					900	500	400	2.0	6	20	150	
	11	CWHmm2	02	Pl	1.25	Fd	1.5					Cw	0.75					800	400	400	2.0	6	20	150	
	12	CWHmm2	03	Fd	1.5	Hw	1.0					Cw	0.75	Hm <sup>1</sup>	<sup>3</sup> 0.75	Yc	0.75	800	400	400	2.0	3	20	150	
	13	CWHmm2	04	Fd	1.5							Cw	0.75	Yc	0.75			900	500	400	2.0	3	20	150	
	14	CWHmm2	05	Ba <sup>47</sup>	0.75	Cw	1.0	Yc	1.0	Fd <sup>9</sup>	2.25	Pw <sup>31</sup>	2.5	Hw*	1.5			900	500	400	2.0	6	20	150	
	15	CWHmm2	06	Hw	1.25	Cw	1.0	Yc	1.0			Ba <sup>47</sup>	0.75	Hm <sup>1</sup>	<sup>3</sup> 1.25	Fd <sup>14</sup>	2.25	900	500	400	2.0	6	20	150	
	16	CWHmm2	07	$Cw^1$	0.75	Hw	1.0	Ba <sup>47</sup>	0.75			Hm <sup>13</sup>	0.75	Yc <sup>1</sup>	0.75			800	400	400	2.0	3	20	150	

Standards ID	ID #	BEC	:		]	ies					A	.cceptab	le Speci	ies		Sto	ocking (w/s)		Min Inter Tree Dist (m)	Regen Delay	FG Date	Tree Ht > Brush (min %)	Comments:		
	"	Zone & variant	Site Series	1	Ht (min)	2	Ht (min)	3	Ht (min)	4	Ht (min)	1	Ht (min)	2	Ht (min)	3	Ht (min)	Target P&A (sph)	Min P&A (sph)	Min P (sph)	MITD (m)	Max (yrs)	Late (yrs)		
	17	CWHmm2	08	Cw	1.25	Yc	1.25	Ba <sup>47</sup>	1.0			Hw <sup>9</sup>	1.75	Fd <sup>9</sup>	3.0			900	500	400	2.0	3	20	150	
	18	CWHmm2	10	$\mathbf{C}\mathbf{w}^{1}$	0.75							Pw <sup>31</sup>	2.5	Yc1	0.75			800	400	400	2.0	3	20	150	
	19	CWHvm2	01	Hw	2.5	Cw <sup>14</sup>	1.5	Yc <sup>13</sup>	1.5	Ba <sup>47</sup>	1.75	Fd <sup>1,14</sup>	2.25	Hm <sup>13</sup>	1.0	Yc <sup>13</sup>	1.5	900	500	400	2.0	6	20	150	
	20	CWHvm2	03	Cw	1.0	Hw	1.75	Fd <sup>9</sup>	1.5	Yc <sup>13</sup>	1.0	Pw <sup>31</sup>	2.5					800	400	400	2.0	6	20	150	
	21	CWHvm2	04	Cw	1.0	Hw	1.75	Fd <sup>9</sup>	1.5	Yc <sup>13</sup>	1.0	Ba <sup>47</sup>	1.5	Pw	2.5			900	500	400	2.0	6	20	150	
	22	CWHvm2	05	Cw	1.5	Hw	2.5	Yc <sup>13</sup>	1.5	Ba <sup>47</sup>	1.75	Fd <sup>1,8,9</sup>	2.25					900	500	400	2.0	3	20	150	
	23	CWHvm2	06	Cw	1.5	Hw	2.5	Yc <sup>13</sup>	1.5	Ba <sup>47</sup>	1.75							900	500	400	2.0	6	20	150	
	24	CWHvm2	07	Cw	2.0	Hw	3.5	Yc <sup>13</sup>	2.0	Ba <sup>47</sup>	2.25							900	500	400	2.0	3	20	150	
	25	CWHvm2	08	Cw <sup>14</sup>	2.0	Hw	3.5	Yc <sup>13</sup>	2.0	Ba <sup>47</sup>	2.25							900	500	400	2.0	3	20	150	
	26	CWHvm2	09	$Cw^1$	1.0	$\mathbf{H}\mathbf{w}^1$	1.75	Yc <sup>1,13</sup>	1.0			Ba <sup>47</sup>	1.5	Hm <sup>13</sup>	0.75			800	400	400	2.0	3	20	150	
	27	CWHvm2	11	$Cw^1$	1.0	Yc <sup>1,13</sup>	1.0					$Hw^4$	1.75					800	400	400	2.0	3	20	150	
	28	CWHxm	01	Fd	3.0							Hw	2.0	Cw	1.5	Pw <sup>31</sup>	2.5	900	500	400	2.0	3	20	150	
	29	CWHxm	03	Fd	2.0	Pl <sup>6</sup>	1.25					Cw	1.0	Hw*	2.0			800	400	400	2.0	8	20	150	
	30	CWHxm	04	Fd	3.0							Cw	1.5	Pw <sup>31</sup>	2.5			900	500	400	2.0	3	20	150	
	31	CWHxm	05	Cw	2.0	Fd	4.0					Pw <sup>31</sup>	2.5	Bg*	3.5	Hw*	2.0	900	500	400	2.0	3	20	150	
	32	CWHxm	06	Cw	1.50	Hw	2.0					Fd	3.0	Bg*	3.0			900	500	400	2.0	6	20	150	
	33	CWHxm	07	Cw	2.0	Fd	4.0					Bg <sup>47</sup>	3.5	Hw*	2.0			900	500	400	2.0	3	20	150	
	34	CWHxm	12	Cw <sup>4</sup>	1.0							Hw	1.25					800	400	400	2.0	3	20	150	
	35	CWHxm	01,06	Dr	4.0							Mb	4.0	Act	4.0		1								Broadleaf Management ***
	36	CWHxm	05,07	Dr	4.0	Mb	4.0					Act	4.0					1200	1000	800	1.5	3	20	150	Broadleaf Management ***

Standards ID	ID #	BEC			Preferred Species								table S	Specie	es		Sto	ocking (w/s)		Min Inter Tree Dist (m)	Regen Delay	FG Date	Tree Ht > Brush (min %)	Comments:
		Zone & variant	Site Series	1	Ht (min)	2	Ht (min)	3	Ht (min) 4	Ht (min)	1	Ht (min) 2		Ht nin)	3	Ht (min)	Target P&A (sph)	Min P&A (sph)	Min P (sph)	MITD (m)	Max (yrs)	Late (yrs)		
	37	CWHxm	01/06	Cw	1.5	Pw <sup>31</sup>	2.5				Fd	3.0 H	w 2	2.0			900	500	400	2.0	3	20	150	Alternate species Fd root rot treatment **
	38	CWHxm	03	Cw	1.0	Pw <sup>31</sup>	2.5				Fd	2.0 Pl	<sup>31</sup> 1.	.25			800	400	400	2.0	3	20	150	Alternate species Fd root rot treatment **
	39	CWHxm	04	Cw	1.5	Pw <sup>31</sup>	2.5				Fd	3.0					900	500	400	2.0	3	20	150	Alternate species Fd root rot treatment **
	40	CWHxm	05/07	Cw	2.0	Pw <sup>31</sup>	2.5				Fd	4.0 Bg	<sup>47</sup> 3	3.5			900	500	400	2.0	3	20	150	Alternate species Fd root rot treatment **
	41	MHmm1	01	$\mathrm{Ba}^4$	0.6						Hm <sup>13/</sup> Hw <sup>14</sup>	1.0 Fd <sup>4</sup>	<sup>0,14</sup> 1.	.25	Yc <sup>13</sup> /Cw <sup>14</sup>	1.0	900	500	400	2.0	7	20	125	
	42	MHmm1	02	Hm	0.75	Yc	0.75				Ba <sup>47</sup>	0.6					800	400	400	2.0	4	20	125	
	43	MHmm1	03	Ba <sup>47</sup>	0.6	Hm	1.0	Yc	1.0		Hw*	1.0					900	500	400	2.0	4	20	125	
	44	MHmm1	04	Ba <sup>47</sup>	0.6	Hm	1.0	Yc	1.0		Hw*	1.0					900	500	400	2.0	7	20	125	
	45	MHmm1	05	Ba <sup>47</sup>	0.6	Yc	1.0				Hm	1.0 Hv	v* 1	.0			900	500	400	2.0	4	20	125	
	46	MHmm1	06	$Hm^1$	0.75	Yc <sup>1</sup>	0.75				Ba <sup>1,47</sup>	0.6					800	400	400	2.0	7	20	125	
	47	MHmm1	07	Ba <sup>1,47</sup>	0.6	Yc1	0.75				$Hm^1$	0.75					900	500	400	2.0	4	20	125	
	48	MHmm1	09	Yc <sup>1</sup>	0.75						$Hm^1$	0.75					800	400	400	2.0	4	20	125	

# Reference Notes for stocking standards

## Tree Species

'Act' is black cottonwood
'Ba' is amabilis fir
'Bg' is grand fir
'Cw' is western red cedar
'Dr' is red alder
'Fd' is coastal Douglas fir
'Hm' is mountain hemlock
'Hw' is western hemlock
'Mb' is bigleaf maple
'Pl' is lodgepole pine
'Pw' is white pine
'Ss' is sitka spruce
'Yc' is yellow cedar

'Biogeoclimatic unit' or 'BGC classification' means the zone, subzone, variant and site series described in the most recent field guide published by the Ministry of Forests for the identification and interpretation of ecosystems, as applicable to a harvested area.

MIN' or 'Min' means minimum

## **Stocking Standard Footnotes**

- 1 suitable on elevated microsites
- 4 suitable on medium textured soils
- 6 suitable on nutrient-very-poor sites
- 7 suitable on nutrient-medium sites
- 8 suitable on steep slopes (>50%)
- 9 suitable on warm aspects
- 10 suitable on cool aspects
- 13 suitable at upper elevations
- 14 suitable at lower elevations
- 31 must use Pw blister rust resistant stock. See BC Journal of Ecosystems and Management 10(1):97-100 for supplementary information
- 35 must use resistant Ss stock to mitigate risk of spruce weevil damage See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042
- 47 risk of balsam wolly adelgid within quarantine area See <u>http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/animals-and-</u> <u>crops/plant-health/insects-and-plant-diseases/nursery-and-ornamentals/balsam-</u> <u>woolly-adelgid</u>
- \* Species are listed as tertiary in the Vancouver Forest Region (VFR) recommended stocking standards, but not listed as acceptable species. They have been included as acceptable for a minor portion of the stand if a cruise report indicates it was present as merchantable and utilized volume in the preharvest stand comprising =>20% of the cruised volume. The percentage of the free-growing stand that may be comprised of the species will be a maximum of 20%, as per the 2023 Silviculture Survey Procedures Manual.

- \*\* Alternate species root rot stocking standards may be prescribed as a treatment for Douglas-fir laminated root rot (*Phellinus weirii*). More informatonion is available in the Alternate Root Rot Stocking Standards rationale in Appendix 2.
- \*\*\* Broadleaf management stocking standards may be prescribed on a limited scale, where it is proposed as a forest health treatment or where a major component of broadleafed trees are found in the pre-harvest stand. More information is available in the Rational in Support of Stocking Standards in Appendix 2.

The Table A Even-Aged Stocking Standards are based on the Vancouver Forest Region *Reference Guide for FDP Stocking Standards* dated Sept. 7, 2021. BEC zones and variants not present within the AVCF licence area have been excluded from this table.

Where standards units (SUs) are comprised of an un-mappable mosaic of site series, the practice will be to manage for the stocking standards of the dominant site series (>50% representation with a SU).

Reduction of inter-tree spacing to 1.5m is acceptable for site-specific conditions involving bedrock, large blocky colluvium or hygric sites, or on disturbed roadside areas. This reduction in minimum inter-tree spacing may be applied generally, in situations where plantable spots are limited due to these conditions.

## Balsam Woolly Adelgid (Adelges piceae)

A risk of balsam woolly adelgid exists throughout Vancouver Island and applies to all Abies species. To be considered as acceptable in a free growing survey, a balsam tree must be free of adelgid damage. Severely infested trees should be brushed and destroyed during the fall or winter months, in order to limit the infestation of other trees in the area.

# White Pine Blister Rust (Cronartium ribicola)

Western white pine (Pw) occur naturally within the plan area and are susceptible to white pine blister rust. The use of resistant stock, and/or first lift pruning mitigates the risk of white pine blister rust. To be considered as acceptable in a free growing survey, a tree must be free of blister rust, and either grown from resistant stock or first lift pruned.

White pine pruning will follow the following regime:

# <u>First Lift</u> –

• Trees will be pruned when mean height of white pine is 1.0 to 2.5 m for plantations.

- Natural white pine will be pruned when height is 1.5 to 3.0 m
- Trees will be pruned to 50 to 65% of total tree height.
- Infected branches above target pruning height will be selectively pruned
- In high hazard areas, early pruning will be considered

#### Second Lift -

- Trees will be pruned when mean height of white pine is > 5m
- Trees will be pruned to 3.0 m or 50% of total height
- Trees < 5 m will be pruned to 50% of total height

#### Third Lift (optional) -

• May be performed to approx. 5.5 m to improve wood quality, mainly when used to reforest areas infected with root disease

## Spruce Weevil (Pissodes storbi)

The risk of spruce weevil is high for the plan area below 700m elevation. For this reason Sitka spruce (Ss) will be limited to minor components (<20%) within planted stands, unless planted spruce comes from improved 'A' seed or 'B+' seed selected for resistance from naturally resilient stands.

## Dwarf Hemlock Mistletoe (Arceuthobium tusgense)

Hemlock dwarf mistletoe (DMH) occurs endemically throughout the plan area. To mitigate the effects of DMH on regenerating stands, non-host trees (Fd, Cw, Yc, Pw) will be planted within 8m of an affected residual tree. In heavily infested DMH stands, all western hemlock (Hw) greater than 3m in height will be knocked down concurrent with harvest.

#### Stocking Standards for FPPR S.44(4) areas

FPPR S.44(4) areas include areas subject to commercial thinning, the removal of individual trees, areas subject to single/group tree selection, salvage of scattered windthrow or root rot mortality, or other types of intermediate cutting, and areas subject to the harvest of special forest products.

Stocking	BEC	Cite Carias	Ecologically Suitable Species	Stocking Ba	sal Area
Standard ID	Zone/Variant	Site Series	Layer 1*>= 12.5cm DBH	Minimum**	m²/ha
	CWHmm1	01	Fd, Cw, Hw	>=	40
	CWHmm1	04	Fd, Cw, Hw, Pw	>=	40
	CWHmm1	05	Fd, Cw, Pw, Hw, Ba	>=	40
	CWHmm1	06, 07	Cw, Hw, Fd, Ba	>=	40
				>=	40
	CWHvm2	01	Ba, Fd, Hw, Cw, Ss, Yc, Hm	>=	40
	CWHvm2	03	Cw, Hw, Fd, Yc, Hm, Pl, Pw	>=	40
	CWHvm2	04	Cw, Hw, Ba, Fd, Yc, Pw, Ss, Hm	>=	40
	CWHvm2	05	Ba, Cw, Fd, Hw, Ss, Yc, Hm	>=	40
	CWHvm2	06, 07	Ba, Cw, Fd, Hw, Yc, Hm, Ss	>=	40
	CWHvm2	08	Ba, Cw, Hw, Ss, Yc, Hm	>=	40
	CWHvm2	09	Ba, Cw, Hw, Yc, Hm, Pl	>=	40
	CWHvm2	11	Cw, Yc, Hm, Hw, Ss	>=	40
	CWHxm	01	Fd, Hw, Cw, Pw	>=	40
	CWHxm	04	Fd, Cw, Pw	>=	40
	CWHxm	05	Cw, Fd, Bg, Hw, Pw	>=	40
	CWHxm	06/07	Cw, Hw, Fd, Bg	>=	40

#### Table B: Stocking Standards for FPPR S.44(4) areas

\*Layer 1 crop trees >12.5cm DBH must meet the damage criteria outlined in Section 27 of the FS 660 field card and the SEDRSS Framework Implementation Guide (Coastal) 2014.

\*\*Minimum is the average basal area across a standard unit post harvest with no openings >0.1ha.

The standards listed above in Table B apply to FPPR S.44(4) areas and will be assessed during a post harvest assessment. Post harvest assessments will focus on remaining layer 1 trees only. Layer 1 refers to dominant, over-story trees  $\geq$  12.5cm dbh of ecologically suitable species that are free of damage as per applicable damage criteria described in Section 17 of the FS 660 field card and the SEDRSS Framework Implementation Guide (Feb. 14, 2014). Retained layer 1 trees must be healthy and have suitable silvical characteristics including sufficient live crown (typically >30%) to respond to increased light availability and be of suitable form to increase in volume and value over time.

These stocking standards are not intended to act as a guide for commercial or precommercial thinning prescriptions. They provide minimum stocking standards that ensure adequate site occupancy and stocking of the residual stand is maintained and subsequent regeneration is not required. In all cases areas harvested under these situations or circumstances must conform to the applicable stocking standards for a period of 12 months after the completion of harvest. Prescriptions for these areas will consider the factors relating to stocking specifications (FPPR Schedule 1(6)).

# APPENDIX 2: RATIONALE IN SUPPORT OF STOCKING STANDARDS

Alternative broadleaf and root rot stocking standards are proposed given the high root rot risk in the CWHxm and the licensee's full intent to facilitate the best practices in forest management and to improve site productivity and species/product diversity.

## Alternate Root Rot Stocking Standards

Forest health concerns raise issues as to the appropriateness of the default stocking standards in areas where Douglas fir laminated root rot impacts the regeneration and long-term health and productivity of the preferred species. The proposed alternative stocking standards for root rot treatment provide an alternate species selection which are immune or tolerant to root rot infection. This system mimics ecological processes where resistant or tolerant species will have a higher productivity than susceptible species. In the case of Douglas-fir laminated root rot, cedar, pine, and broadleafed species have natural tolerance or resistance.

Site Plan prescriptions relating to forest health, survey and assessment must be completed by a Qualified Professional. A formal assessment should be conducted to determine root rot distribution and severity if a visual assessment indicates >5% root rot incidence during site plan fieldwork, as per the methods outlined in the Managing Root Disease in British Columbia guidebook (2018).

Alternate root rot stocking standards may be prescribed in areas stratified as a standard unit, where an alternate disease treatment level is recommended in a Site Plan. An alternate disease treatment level can be prescribed in areas with a root disease incidence >5%, or areas where intensive root disease treatments such as push over harvesting or de-stumping are impractical. In the case of the AVCF, de-stumping may be impractical due to high levels of soil disturbance, and the increased chance of sedimentation within the Sproat Lake Community Watershed. The stumping flowchart in Figure 1 of Managing Root Disease in British Columbia (2018) should be used as a decision aid in determining whether push over harvesting or de-stumping are practical options.

The root rot stocking standards are supported by the following literature.

- Managing Root Disease in British Columbia (BC Ministry of Forests, Lands, and Natural Resource Operations, April 2018)
- Laminated Root Rot Forest Health Stand Establishment Decision Aid, BC Journal of Ecosystems and Management (R. Sturrock, S. Zeglen, and J. Turner, 2006)
- 2021-2023 Coast Area Forest Health Overview, May 2023, v.3.0
- Common Tree Diseases of British Columbia (E. Allen, D. Morrison, and G. Wallis, 1996).

#### Broadleafed Stocking Standards

The Chief Forester's stocking standards indicate black cottonwood (Act), red alder (Dr) and bigleaf maple (Mb) as being a productive, reliable and feasible regeneration options on some site series within the CWHxm and CWHmm1. The use of broadleaf species is

proposed in consideration of the Chief Forester's memorandums dated August 22<sup>nd</sup>, 2000 and May 1<sup>st</sup>, 2008 and the supporting note 'Common Principles for the Management of Red Alder within the Coast Forest Region' dated August 2004.

The management for broadleaf species is proposed on a limited scale, in site series 05 and 07 of the CWHmm1, and in site series 01, 05, 06, and 07 of the CWHxm. Site plan prescriptions proposing a broadleaf or mixedwood management regime may be used as a forest health management strategy or where it can be shown that a major component of broadleafed trees (>50%) are found in the pre-harvest stand.

As per the Coastal Mixedwood Management Strategy in section 9.3.3.1 of the 2023 Silviculture Survey Procedures Manual, where broadleafed species are proposed as part of a mixedwood management strategy, mixedwood regimes must be stratified into forest types (>0.5ha) based on the leading species component:

- Conifer leading (C): >80% conifer;
- Conifer leading mixedwood (CD): >50% but <80% conifer;
- Broadleaf leading mixedwood (DC): >50% but <80% broadleaf; or
- Broadleaf leading (D): >80% broadleaf.

For site plan prescriptions with conifer leading (C) and conifer leading mixedwood (CD) strata, regular CWHxm stocking standards will be used. For site plan prescriptions with broadleaf (D) and broadleaf leading mixedwood (DC) strata, CWHxm broadleaf management stocking standards will be used.

The minimum height criterion for broadleaf species is based on the tallest conifer standard of the particular site series since the listed hardwoods are at least as rapid growing as their conifer counterpart. If a cedar or Sitka spruce understory is planted in addition to the full hardwood stocking, then the natural pruning of the alder would be enhanced. However, the stand's status will only be measured using the broadleaf standards. The removal of the alder at harvest age is operationally possible, while leaving a fully stocked, semi-mature conifer pole stand behind.

A limited number of scattered broadleaf trees will be tolerated on all conifer plantations to provide a nurse crop, promote nutrient cycling and for general biodiversity objectives. Up to 50 stems per hectare (sph) of broadleaf trees will be allowed such that they do not influence the free to grow status of adjacent conifers. Because the standard methodology (3.99m radius plot) is too small to reflect appropriate broadleaf densities only 1 broadleaf tree per 4 sample plots will be allowed.

The Local Geographic Free Growing Competition Assessment Criteria, described in Appendix 8.1 of the 2023 Silviculture Survey Procedures Manual may also be used in site series 01 and 03 of the CWHxm. In this assessment criteria:

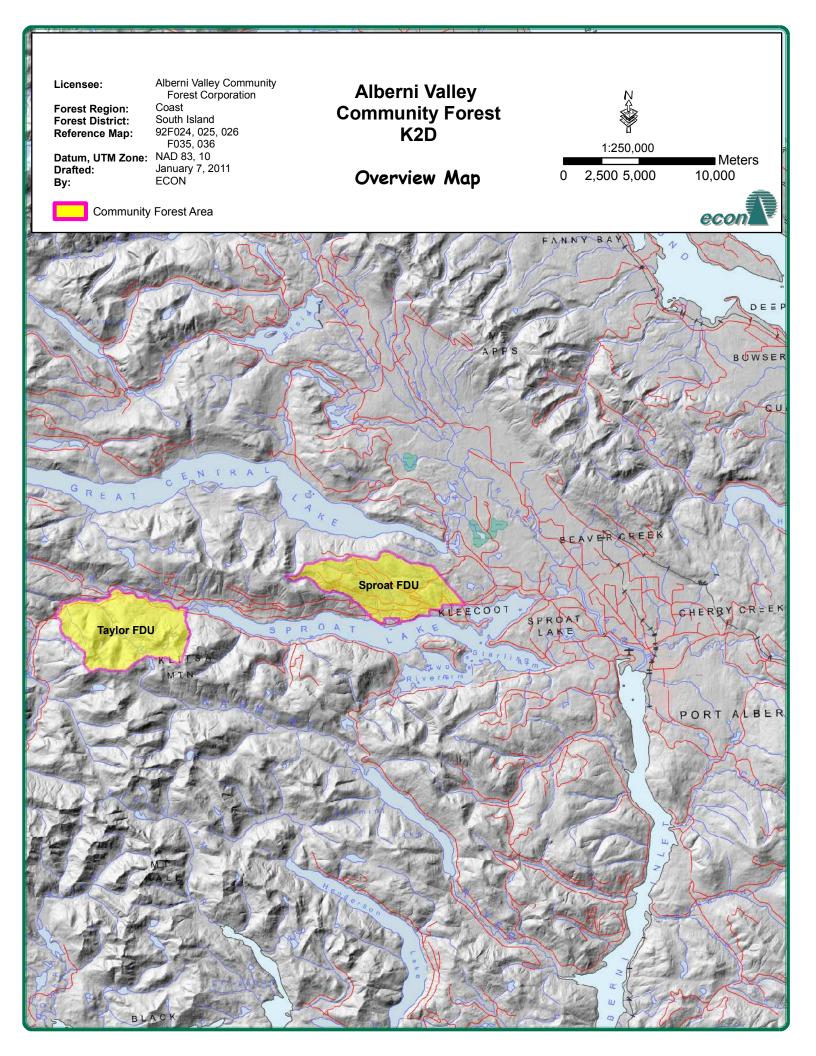
- Herb and shrub competition must not be taller than crop trees in more than one quadrant;
- Mb and Act must meet the Conifer/Brush ratio;
- For 01 site series, 1 Dr is allowed per plot that is taller than the median freegrowing crop tree height; and
- For 03 site series, 2 Dr are allowed per plot that are taller than the median free-growing crop tree height.

Broadleaf and mixedwood management standards are supported by the following literature:

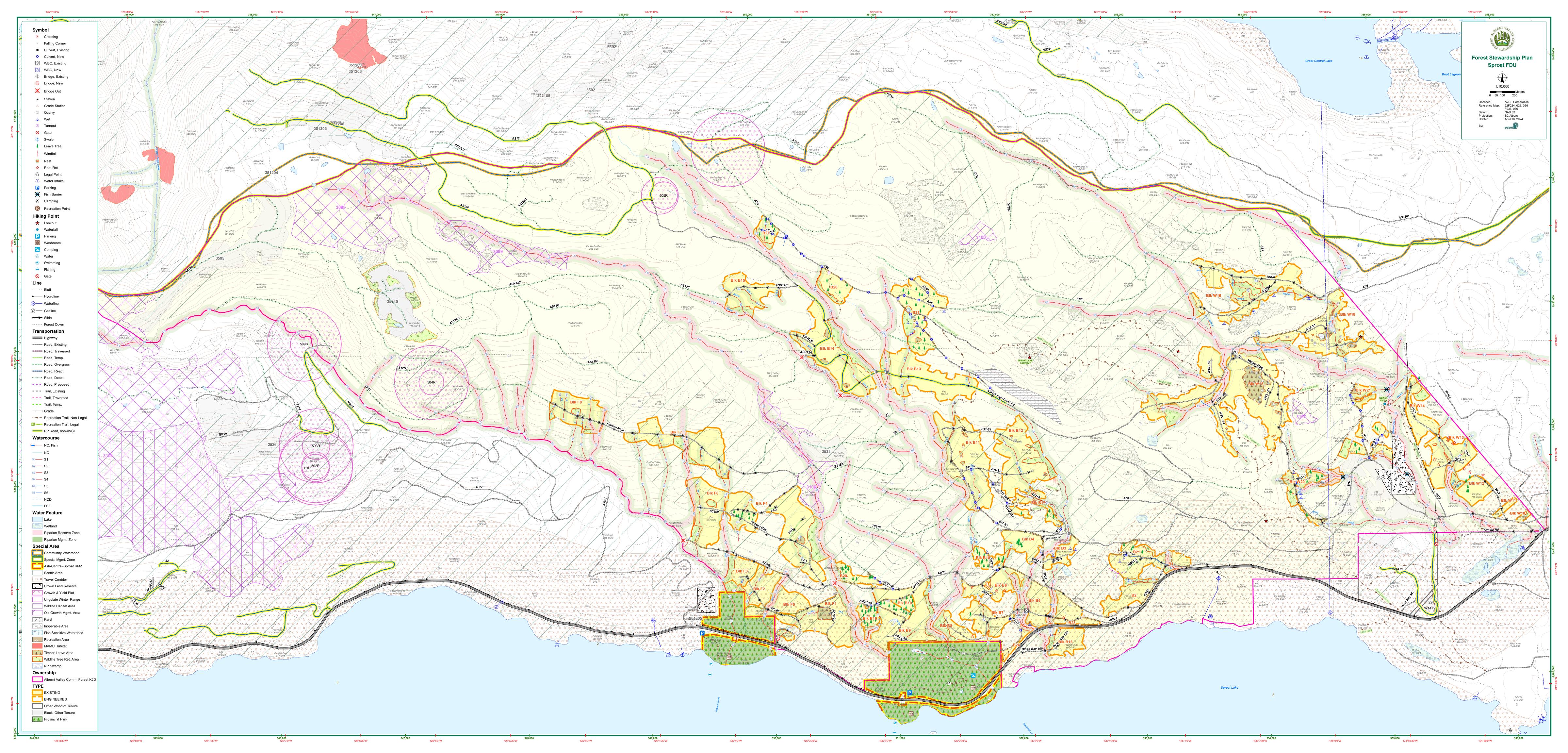
- Hibbs et al. The Biology and Management of Red Alder (1994),
- E.B. Petersons et al. FRDA Report 250 Black Cottonwood and Balsam poplar manager's handbook for British Columbia (1996).
- L. Sigurdson et al. 2nd draft report on Weyerhaeuser's Red Alder Management Practices (1998),
- P.J. Courting et al. Forest Research Extension Note 016 Red Alder management trials in the Vancouver Forest Region (2002).
- Province of B.C. (2020), Silviculture Survey Procedures Manual, Ministry of Forests, Land, Natural Resources Operations and Rural Development -Resources Practices Branch

# **APPENDIX 3 - FSP MAPS**

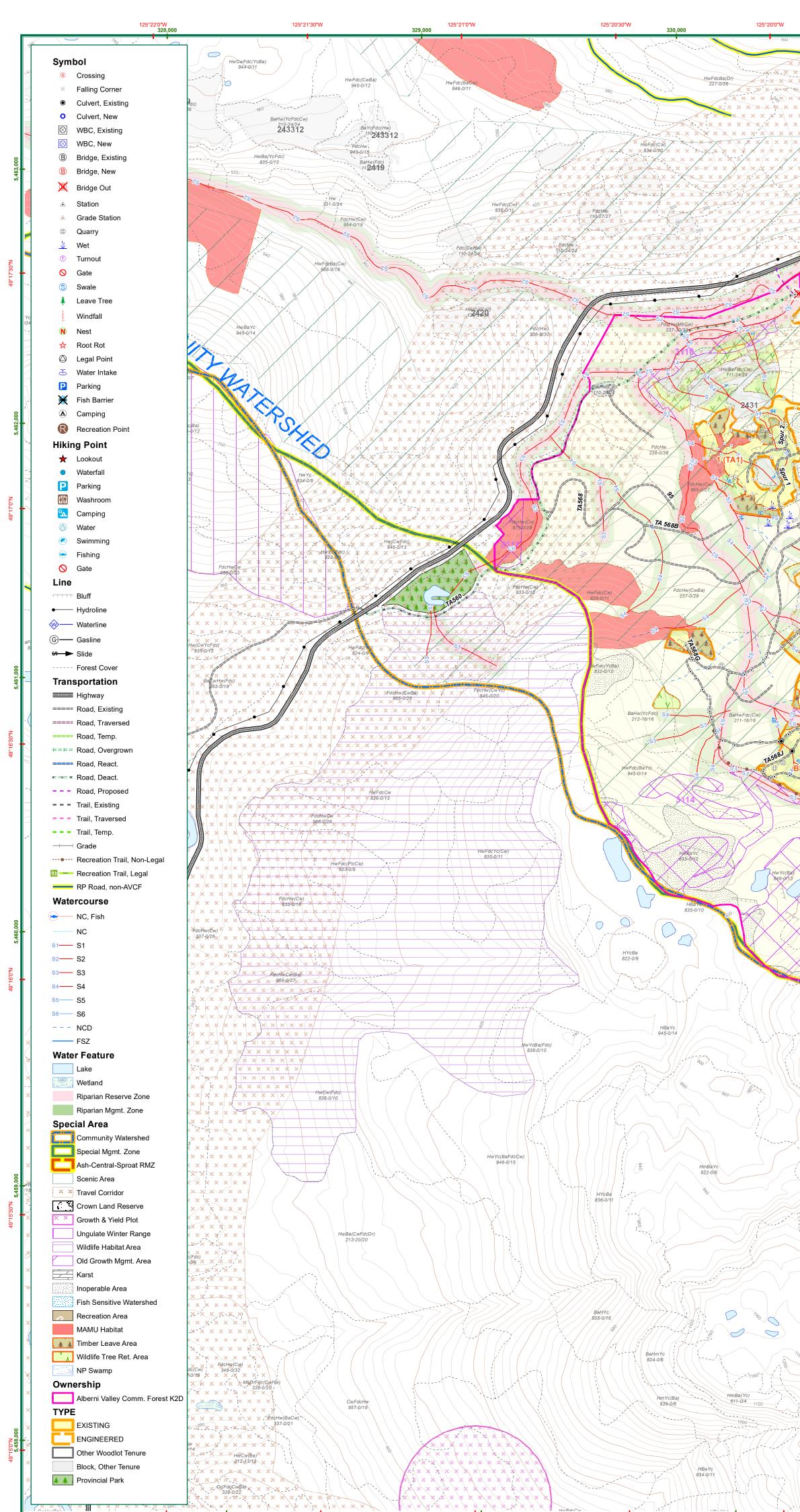
Overview Map FDU A – Sproat Operating Area FDU B – Taylor Operating Area **Overview Map** 



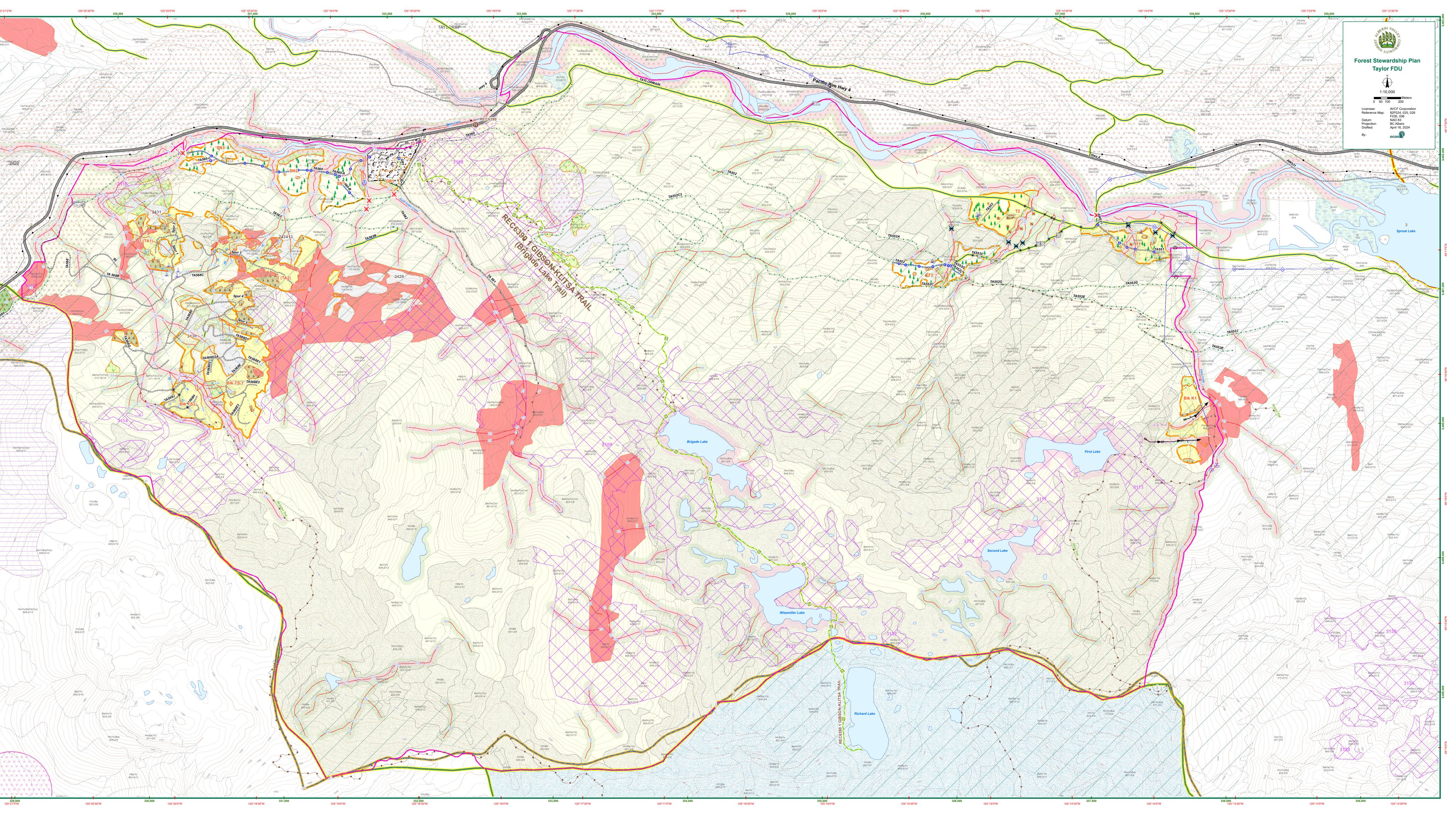
# FDU A – Sproat Operating Area



# FDU B – Taylor Operating Area



125°21'30"W



For more information contact:

