ALBERNI VALLEY COMMUNITY FOREST CORPORATION

Alberni Valley Community Forest

Forest Stewardship Plan 2011-2016 FINAL





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1.0 INTRODUCTION

This Forest Stewardship Plan has been prepared for the Alberni Valley Community Forest Licence (AVCF), operated by the Alberni Valley Community Forest Corporation (AVCFC). Formerly a part of TFL 44, 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 6378 ha and an annual allowable cut of 18,156m³.

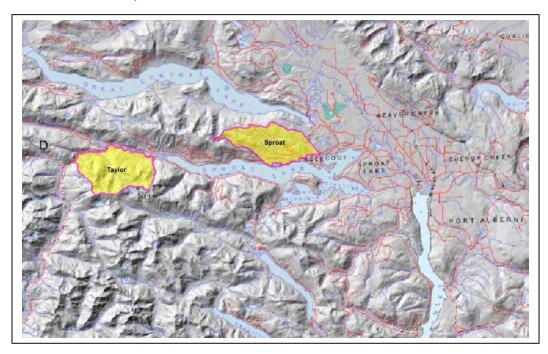


Figure 1: Location of Alberni Valley Community Forest

The Forest Stewardship Plan (FSP) is a requirement of the *Forest Range and Practices Act (2004)*. The 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). The 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. This results based plan is 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.

The 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 forest practices. The FSP has also considered the objectives, results and strategies stated within the Management Plan (which includes reference to the Hupacasath First Nation Land Use Plan) and incorporated 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 following website:

http://www.bclaws.ca/EPLibraries/bclaws new/document/ID/freeside/12 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 following website:

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

The FSP is the primary referral process, along with the Community Forest Management Plan, for increasing community awareness and providing a consultation process for notifying 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.
"AVCFC"	means the Alberni Valley Community Forest Corporation.
"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.
"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.

"SINRD" means the South Island Natural Resource District.

"VILUP" means Vancouver Island Land Use Plan Higher Level Plan

Order

"VQO" means visual quality objective.

2.0 DATE OF SUBMISSION

The date of submission of this Forest Stewardship Plan (FSP) is March 25, 2011.

3.0 TERM OF THE FSP AND COMMENCEMENT

The term of this plan will be 5 years from the date specified in the approval.

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 1:20,000 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 Taylor FDU is located within the Strathcona-Taylor Special Management Zone (SMZ # 17).

Table 1: Forest Development Units

FDU		Area (ha)
A (Sproat)		3000
A (Sproat) B (Taylor)		3378
	Total	6378

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:

Table 2: FPPR 14(3) Designations in effect for AVCF FSP

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).

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 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.

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

Category of Objective or Measure	Relevance to AVCF	FSP Table		
Cutegory or objective or incubate	Ticlevance to Aver	(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)			
a) Creating or maintaining stand structures and forest attributes associated with mature and old forests	Taylor FDU	5.1.2a		
b) Retaining within cutblocks structural forest attributes and elements with important biodiversity functions	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	5.2.1d		
Order by Government Action Regulation				
Visual Quality Objectives for established scenic areas	Sproat + Taylor FDU	5.3.1		

Table 4: FPPR objectives and their relevance to the AVCF

Category of Objective or Measure	Legislation	Relevance to AVCF	FDU	FSP Table (section)
Objectives from Forest	Planning and Pr	ractices 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	-	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.	All	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	N A
Cultural Heritage Resources	FPPR s.10	Strategies and results developed	All	5.2.7

Objectives, strategies and results have been developed for the AVCF. They are organised in 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	Maintenance or recruitment of old growth forests.				
	mana Lake	tain or recruit old growth forests in established old growth agement areas (OGMAs), as shown on the attached Sproat Landscape Unit map dated June 30, 2005, subject to ection 2 below.			
	2. Permissible	e Activities.			
	a) Minor (OGMA boundary adjustme	ents for operational reasons:		
	and re	oad or bridge construction, or greater in size may be the boundary adjustmen	t does not affect more than 10 per		
	ii)	cent of the area of the OGMA ii) road or bridge construction is required to access resource values beyond or adjacent to the OGMA and no other practicable option for road or bridge location exists, and			
	iii)	suitable OGMA replacement forest of at least equivalent quantity is identified either (in order or priority) directly adjacent to, or in the same variant and landscape unit as the adjusted OGMA.			
	In the case of ii) above, as an alternative to finding replacement area the licensee may permanently deactivate and rehabilitate a temporary road or bridge site within four years after construction.				
	b) Other 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 that retains as many old growth ible.		
	iii)	brushing and clearing or	on, removal of danger trees, or n existing roads under active i-way for safety purposes.		
	iv)	danger trees (except hig cutblock boundaries or w road/bridge alignments t	nce, tailhold anchor trees, or h value wildlife trees) along vithin the right of way on new o meet safety requirements		
	v)	Construction of rock qua	rries 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.

vi) Intrusions, other than those specified that affect an OGMA by less than 0.5 hectares in total.

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 variant and landscape unit as the existing OGMA.

Result or Strategy

- In this result or strategy, "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.
- 2. The AVCFC will not carry out road construction or timber harvesting within Old Growth Management Areas (OGMAs) delineated as part of the Sproat Lake Landscape Unit Plan established July 18, 2005 except under the following circumstances:
 - a. to accommodate operational requirements for timber harvesting and road or bridge construction, boundaries of OGMAs that are 10 ha or greater in size may be adjusted provided that:
 - i. a boundary adjustment does not affect more than 10% of the area of the OGMA.
 - ii. road or bridge construction is required to access resource values beyond or adjacent to the OGMA and no other practicable option exists, and
 - iii. suitable replacement OGMA is identified.
 - timber harvesting to prevent the spread of insect infestations or diseases that pose a significant threat to forested areas outside of OGMAs,
 - c. salvage provided that it is done in a manner that retains as many old growth forest attributes as practicable.
 - d. removal of danger trees, or brushing and clearing within the rightof-way on existing roads for safety purposes,
 - e. felling of trees for guyline clearance, tailhold anchor trees, (except high value wildlife trees) or danger trees along cutblock boundaries or within the right-of-way on new road/bridge alignments to meet safety requirements,
 - f. construction of rock quarries and gravel pits where development will be located immediately adjacent to existing roads and will affect the OGMA by less than 0.5 ha in total, or
 - g. intrusions that affect an OGMA by less than 0.5 ha in total.
- 3. The AVCFC may carry out boundary pruning of trees to improve wind

firmness within an OGMA

4. Suitable OGMA replacement forest will be identified as a result of activities under S. 2 b), c), d), or e), of this strategy where the total net change to an OGMA exceeds 0.5 ha in size.

Objectives, Strategies and Results apply to these Forest Development Units

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, by retaining wildlife tree patches (WTPs).

The holder of an agreement under the Forest Act, except a woodlot licence agreement, who completes harvesting in one or more cutblocks, except minor salvage cutblocks, located within the LU during any 60 month period beginning on January 1 of any calendar year following the establishment of this objective, must ensure that, at the end of the 60 month period, the total area covered by wildlife tree retention areas that relate to the cutblocks, meets or exceeds the percent of the total area of the cutblocks by subzone presented in Table 1.

In addition:

- 1. WTPs must be well distributed across the BEC subzone
- 2. When designated at the operational site plan level, WTPs must be located within or immediately adjacent to a cutblock.
- 3. No timber harvesting, including singletree selection is to occur within WTPs, except as noted in 4 below.
- 4. Salvage of windthrown timber is permitted within WTPs where windthrow impacts 25% to 50% of the dominant or co-dominant stems. Salvage of windthrown timber and harvesting of remaining standing stems is permitted within WTPs where windthrow exceeds 50% of the dominant or co-dominant stems; or where forest health issues pose a significant threat to areas outside the WTP. Where salvage/harvesting is planned and authorized, suitable replacement WTP of at least equivalent quantity must be identified concurrently to achieve the retention target.
- 5. WTPs should include, if present, remnant old-growth patches and live or dead veteran trees (except danger trees).
- 6. WTPs must include representative larger trees for the stand (dbh>average operational cruise) and any moderate to high value wildlife trees if available (excluding danger trees).
- 7. BEC subzones and variants will be determined by operational site

plan information.

8. In WTPs with a likelihood of windthrow, pruning and/or topping may be carried out to maintain the integrity of the WTP.

Table 1. Wildlife Tree Retention by BEC subzone in the Sproat Lake Landscape Unit.

Biogeoclimatic Subzone	% WTP requirement
CWH mm (Coastal Western Hemlock, moist maritime)	7
CWH vm (Coastal Western Hemlock, very wet maritime)	5
CWH xm (Coastal Western Hemlock, very dry maritime)	12
MH mm (Mountain Hemlock, moist maritime)	0

Result or Strategy

- 1. In this result or strategy "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, a forest practice carried out in the cutblock.
- 2. When harvesting is completed in one or more cutblocks, except 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.
- 3. The AVCF will ensure that:
 - a. WTPs are distributed across the BEC subzone;
 - b. WTPs are located within or immediately adjacent to a cutblock when designated at the operational site plan level;
 - c. no timber harvesting, including single tree selection, is allowed to occur within a WTP except:
 - i. salvage of windthrown timber within WTPs where windthrow impacts 25% to 50% of the dominant or co-dominant stems,
 - ii. salvage of windthrown timber and harvesting of remaining standing stems within WTPs where windthrow exceeds 50% of the dominant or co-dominant stems, or
 - iii. where forest health issues pose a significant threat to areas outside the WTP;
 - d. Further to c (ii),(iii) where salvage/harvesting is planned, a suitable replacement WTP of at least equivalent quality will be identified concurrently to achieve the retention target.

Objectives, Strategies and Results apply to these Forest Sproat √ Development Units: Taylor √				
	 h. WTPs with a high likelihood of windthrow may be pruned or topped to maintain the integrity of the WTP. 			
	g.	 g. BEC subzones and variants will be determined by operational site plan information; 		
	f.	 f. WTPs include representative larger trees (dbh > average operational cruise) for the stand and any moderate to high value wildlife trees if available (except danger trees); 		
	e.	 e. WTPs include, if present, remnant old-growth patches and live or dead veteran trees (except danger trees); 		

5.1.1c Sproat Lake Landscape Unit Objective 3

5.1.1c	Order Establishing Sproat Lake Landscape Unit and Objectives Objective 3: Special Management Zone 17				
Objective	Sustain forest ecosystem structure and function within the portion of Special Management Zone 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. The AVCFC is responsible only for the portions of the SMZ within the FSP.				
Result or	1. In this result or strategy:				
Strategy	"areas" means the net area to be reforested plus the area occupied by Permanent Access Structures;				
	"non-contributing landbase" means the non-contributing landbase identified in the Regional Land Use Planning database (RLUPS version 3.2 August 15, 2005, (scrub out)).				
	"spatially defined areas" are areas of mature or older forest that can be mapped at a 1:20 000 scale.				
	"mature and old" is forest > 80 years of age.				
	"old forest" is forest > 250 years of age.				
	The AVCFC will participate in landscape unit planning processes for SMZ 17.				
	3. During the term of this plan, if at least 25% of the forested landbase within the portion of Special Management Zone 17 within the Sproat Lake Landscape Unit is not spatially defined as being mature or old, the AVCFC, will not carry out or authorize timber harvesting or road construction in:				
	a. old forest within the non-contributing landbase of that special				

management zone, and

- b. mature forest structure in the non-contributing landbase, and
- 4. Within the portion of SMZ 17 within the Sproat 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 to drop below 25%.

Objectives, Strategies and Results apply to these Forest Development Units:

Taylor √

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 17 – Strathcona-Taylor	1, 2	Taylor

5.1.2a VILUP HLP II A Objective 1a

5.1.2a	Vancouver Island Land Use Plan Section II A Objective 1a Higher Level Plan Order
Objective	 Sustain forest ecosystem structure and function in SMZs, by: Creating or maintaining stand structures and forest attributes associated with mature¹ and old² forests subject to the following: The target for mature seral forest should range from one quarter to one third of the forested area of each SMZ³; and 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.

¹ 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.

² 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.

³ Mature seral targets will be established through landscape unit planning. See transition provisions under III.

Result or Strategy	 Sustaining forest ecosystem structure and function in SMZ 17 as per VILUP Section II A Objective 1a) will be managed as per the strategy for Objective 3 of the Sproat Lake Landscape Unit Order, included in section 5.1.1 of this FSP. 	
Objectives, St Units	rategies and Results apply to these Forest Development	Taylor √

5.1.2b VILUP HLP II A Objective 1b

5.1.2b	Vancouver Island Land Use Plan Section II A Objective 1 b Higher Level Plan Order		
Objective	1. Sustain forest ecosystem structure and function in SMZs by:		
	b. Retaining, within cutblocks ⁴ , structural forest attributes and elements with important biodiversity functions ⁵ .		
Result or Strategy	In this result or strategy, 'structural forest attributes with important biodiversity functions' includes but is not limited to snags, wildlife trees and downed logs.		
	2. Within areas designated as SMZ 17, the AVCFC will:		
	 a. design cutblocks in a manner that is consistent with retaining structural forest attributes and elements with important biodiversity functions that exist in each of the following: 		
	i. wildlife tree patches;		
	ii. no-work zones;		
	iii. riparian management areas;		
	iv. other potential leave areas,		
	that are generally within cutblock boundaries, and		
	 carry out forest practices only if the forest practices are consistent with the design for the cutblock referred to in paragraph (a), and 		
	c. enter into a cutting permit only if the permit is consistent with the design for the cutblock referred to in paragraph (a)		
Objectives, St Units	trategies and Results apply to these Forest Development Taylor $\sqrt{}$		

Within cutblocks: generally means non-contiguous with cutblock boundaries.
 This includes, but is not limited to snags, wildlife trees, downed logs.

5.1.2c VILUP HLP IIA Objective 1c

5.1.2c	Vancouver Island Land Use Plan Section IIA Objective 1 c Higher Level Plan Order		
Objective	 Sustain forest ecosystem structure and function in SMZs by: 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 applied⁶. 		
Result or Strategy	2. Within areas designated as SMZ 17, the AVCFC will:		
Strategy	a. design cutblocks in a manner that is consistent with:		
	 i. establishing a variety of silvicultural systems and patch sizes and shapes across the SMZ, and 		
	ii. for shelterwood, selection, or retention silvicultural systems:		
	 A. maintaining varying levels of retention within the cutblock based on a consideration of the site-specific site conditions and the forest values, and B. limiting the Net Area to be Reforested (NAR) to 40 hectares except as provided in the result or strategy for HLP Objective 2, and iii. for clear-cut, clear-cut with reserves or seed tree silvicultural systems, limiting the NAR to 5 hectares except as provided in the result or strategy for HLP Objective 2, and b. carry out forest practices only if the forest practices are consistent with the design for the cutblock referred to in paragraph a), and c. enter into a cutting permit only if the permit is consistent with the design for the cutblock referred to in paragraph a). 		
Objectives, S Units	trategies and Results apply to these Forest Development Taylor $\sqrt{}$		

⁶ Maximum cutblock sizes refer to net are to be reforested.

5.1.2d VILUP HLP Objective 2

5.1.2d	Vancouver Island Land Use Plan Higher Level Plan Order	HLP Objective 2
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.	
Result or Strategy	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	
	 a. 40 hectares for shelterwood, selection, or retention silvicultural systems, and 	
	 5 hectares for clear-cut, clear-cut with reserves or seed tree silvicultural systems 	
	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 Fore	est 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, without unduly reducing the supply of timber from British Columbia's forests, to conserve the productivity and the hydrologic function of soils.		
Result or Strategy	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	The AVCFC will undertake to comply with FPPR S.35 (soil disturbance limits) and s.36 (permanent access structure limits).		
Objectives, Strategies and Results apply to these Forest Development $$ Sproat $$			
Units		Taylor √	

5.2.2 Wildlife

5.2.2	Objectives set by government for wildlife [FPPR S.7] Wildlife		
Objective	The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for		
	a. the survival of species at risk,		
	b. the survival of regionally important wildlife, and		
	c. the winter survival of specified ungulate species.		
	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		
	 b. indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1). 		
	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 NOTICE: INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE SOUTH ISLAND FOREST DISTRICT specifies the amount, distribution and attributes of wildlife habitat required for "Queen Charlotte" Goshawk, Marbled Murrelet, 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 specifies the amount, distribution and attributes of wildlife habitat required for Marbled Murrelet and consequently a result or strategy is required and is described below.		
	At the time this plan was prepared there were no designated ungulate winter ranges (UWR) or wildlife habitat areas (WHA) within the CFA FDU`s.		
Species	Marbled Murrelet Brachyramphus marmoratus		
Result or	In these results or strategies:		
Strategy	"Marbled Murrelet notice" means the notice entitled "Indicators of the amount, distribution and attributes of wildlife habitat required for the		

survival of species at risk in the South Island Forest District for Marbled Murrelet' dated December 21, 2004;

- "non-contributing land base" means the non-contributing land base described in the Tree Farm License (TFL) 44 Management Plan No. 4, dated September 2002.
- "detailed survey" references Standard Methods for Identifying and Ranking Nesting Habitat of Marbled Murrelets (*Brachyramphus marmoratus*) in British Columbia using air photo Interpretation and Low-level Aerial Surveys, Burger, A. ed 2004.
- 2. A detailed survey has been previously conducted within the areas to which this FSP applies. The AVCFC will carry out or authorize timber harvesting or road construction in a manner that retains the habitat specified in the Marbled Murrelet notice, where the habitat is described as the following forest types:
 - Amount: Class 1, 2 or 3 Marbled Murrelet habitat within the noncontributing land base in each FDU at the time the Marbled Murrelet Notice was issued; and
 - ii. Distribution: Where the habitat occurs on the land base in each FDU; and
 - iii. Attributes: Class 1, 2 or 3 Marbled Murrelet habitat, as described in *Standard Methods for Identifying Marbled Murrelet Habitat in British Columbia Using Air Photo Interpretation and Low-level Aerial Surveys.*
- 3. For the purposes of subsection (2), the amount of habitat specified in the marbled murrelet notice will be:
 - a. first, identified on the non-contributing land base, or areas that are otherwise constrained with respect to timber harvesting, and if there is insufficient habitat on that land base, then identified on the contributing landbase; and
 - b. reduced by the amount of area of suitable habitat within any wildlife habitat area, or ungulate winter range established in the South Island Forest District subsequent to the date of the Marbled Murrelet Notice, except where:
 - a wildlife habitat area is established specifically for marbled murrelet, then the amount will be reduced by the entire amount of area in the wildlife habitat area

Objectives, Strategies and Results apply to these Forest Development Units Sproat $\sqrt{}$

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, without unduly reducing the supply of timber from British Columbia's forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.	
Strategies and Results	 In respect of FPPR Section 8, the AVCFC will adopt as a result/strategy FPPR Section, 47 (4) to (6), 48(3) to (5), 49(2) to (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. 	
	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:	
	i. As specified in FPPR Sections 47(4) to (6), 48(3) to (5) and 49(2) to (3), or	
	ii. An equivalent amount of each riparian management area, riparian reserve zone and riparian management zone by class within the cutblock gross area or cutting permit gross area as would have been achieved under section 1a)(i) of this result/strategy provided that:	
	I. Any increase or decrease in width from section 1a)(i) of this result/strategy considers the factors in FPPR Schedule 1, Section 2 and is specified in a written rationale signed by a qualified professional, prior to commencement of the primary forest activity, and	
	 II. An alternative width specified in section 1a)(ii) of this result/strategy would be as effective and/or functional as the width specified in section 1a)(i) of this result/strategy, based on one or more of the following circumstances: A. windthrow hazard and consequence, B. natural disturbance patterns, C. sensitive stream protection, 	
	D. water quality protection,	
	E. environmental sensitivity such as terrain stability class 4 or 5,	
	F. topography, orG. worker safety.	
	b. In respect of FPPR Section 51 (restrictions in a riparian zone), all roads outside of cutblocks will have riparian reserve zones in	

accordance with FPPR Sections 47(4), 48(3) and 49(2).

- c. In respect of **FPPR Section 50** (restrictions in a riparian management area), for construction of roads through a stream, wetland or lakeshore Riparian Management Area, the Riparian Management Area will be as specified in **FPPR Section 47(4)**, **48(3)** and **49(2)**.
- 2. In respect of **FPPR Section 12(3)**, if the AVCFC carries out a primary forest activity in a riparian management zone in a cutblock, the retention of trees will:
 - a. be based upon the factors in FPPR Schedule 1 Section 2, and
 - b. be specified and prescribed in a written rationale signed by a qualified professional, prior to commencement of the primary forest activity.
- 3. The AVCFC will consult and cooperate with local groups promoting improved fish habitat.

Objectives, Strategies and Results apply to these Forest Development Units Sproat $\sqrt{}$ Taylor $\sqrt{}$

5.2.4 Community Watersheds

5.2.4	Objectives set by government for water in community watersheds (FPPR S. 8.2)		
Description	The entire FSP area is within the Sproat Lake Community Watershed.		
Objective	In this section, "community watershed" means a community watershed		
	a. That is continued under section 180(e) of the Act, and		
	b. for which a water quality objective has not been		
	i. continued under section 181 of the Act, or		
	ii. established under the Government actions Regulation.		
	2. The objective set by government for water being diverted for human consumption though a licensed waterworks in a community watershed is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities within the community watershed from resulting in		
	 a. a material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or 		
	b. the water from the waterworks having a material adverse impact on human health that cannot be addressed by water treatment required under		
	i. an enactment, or		
	ii. the licence pertaining to the waterworks.		
	3. The objective set by government under subsection (2) applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests.		
	4. If satisfied that the objective set out in subsection (2) is not required to provide special management the minister responsible for the Wildlife Act must exempt a person from the requirement to specify a result or strategy in relation to the objective.		
	5. If satisfied that the objective set out in subsection (2) is addressed, in whole or in part, by an enactment, the minister responsible for the Wildlife Act must exempt a person from the requirement to specify a result or strategy in relation to the objective set out in subsection (2) to the extent that the objective is already addressed.		
Strategies and Results	1. In respect of FPPR S. 8, the AVCFC will adopt as a result/strategy FPPR S. 59 (protecting water quality), 60 (licensed water works) and 61(excavated or bladed trails).		
	2. Before carrying out a primary forest activity within the area designated as the Sproat Community Watershed area, the AVCFC,		

will:

- a. monitor the following environmental indicators for cumulative hydrological effects on Crown land:
 - i. the percent of the watershed and/or sub-basin harvested, by important elevation bands, corrected for Equivalent Clearcut Area (ECA)%,
 - ii. the road density (km/km²),
 - iii. the mass wasting potential; and
- b. determine scores for each indicator under Subsection 1(a) of this result/strategy (as per the procedure and cumulative risk table included in section 5.2.4 of the supporting document) and;
- c. carry out forest practices to a cumulative low to moderate risk threshold for adverse hydrological effects, in accordance with the resulting indicator scores under Subsection 1b) of this result/strategy.
- 3. Subsection 1 applies where:
 - Equivalent Clearcut Area (ECA) is within 5 percentage points leading up to the ECA threshold of the most recent previously established Coastal Watershed Assessment for the community watershed portion of the FDU; or,
 - b. ECA is within 5 percentage points leading up to a 20% ECA threshold where there is no established ECA threshold, or
 - c. the AVCFC estimates that primary forest activities will result in cumulative hydrological effects resulting in material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or the water from the waterworks having a material adverse impact on human health that cannot be addressed by water treatment.
- 4. In addition to Subsection 1, where the qualified professional who completed or updated the Sproat CWAP provides additional recommendations that are applicable to AVCF forest practices, the AVCFC will consider incorporating the recommendations into forest practices and document any decisions related to this consideration.
- 5. In respect of community watersheds, the AVCFC will
 - a. work with other tenure holders operating within the FDU to not exceed the ECA threshold limits as per Section 2 of this result/strategy,
 - design cutblocks and roads in a manner that is consistent with a cumulative low to moderate risk threshold for material adverse hydrological effects, in accordance with the resulting CWAP indicator scores,
 - c. with regards to roads and harvesting:
 - i. Plan to minimize road requirements

- ii. Plan for temporary rather than permanent roads where there is a high likelihood of erosion into streams
- iii. Carry out frequent road inspections and minimize delays in road repairs
- iv. Minimize soil disturbance during harvesting
- v. Install adequate culverts to ensure natural water drainage is maintained.
- vi. Revegetate right-of-ways, cut slopes, road surfaces, and landings where revegetation will reduce soil erosion into watercourses.
- vii. Implement only those silvicultural practices that have negligible impacts on water quality,
- viii. Plan partial cut or retention silvicultural systems to focus retention in riparian areas.
- ix. Consult and cooperate with local groups promoting water quality.
- carry out a primary forest activity only if the activity is consistent with the design for the cutblock or road referred to in section 4b) of this result/strategy and
- e. enter into a cutting permit, or road permit only if the permit is consistent with the design for the cutblock or road referred to in section 4b) of this result/strategy.
- 6. Where required, and effective, to prevent the cumulative hydrological effects of primary forest activities of the AVCFC, in the Community Watershed where water is being diverted for human consumption through a licensed waterworks resulting in the effects described in Section 8.2 (a) and (b) of the FPPR, the following will apply:
 - a. <u>Ditch Cleaning</u>: where needed, ditches are to be cleaned when conditions are dry. Ditchspoil is not to be windrowed along the road shoulder. On moderate slopes, the ditchspoil 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 ditchspoil should be endhauled 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, are to be armoured to prevent erosion or sloughing into the creek.
 - c. Rock Ballasting of road surface: For new road construction, where the road is close to a stream channel, the road surface is to be ballasted with clean rock. The road surface is also to be rock ballasted for 30 metres

either side of stream culverts.d. Road grading practices: grading is to be avoided during heavy rain.

e. <u>Shutdown or harvest completion:</u> In preparation for a shutdown for a period longer than 30 days or at a harvest completion, the following measures will be taken:

 No excavated or endhauled 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.

ii. Ditches and culverts will be left clear and functional, with adequate inlet basins to minimize the potential for plugging.

iii. On sections of steep grades, cross ditches and back-up swales will be constructed where needed to minimize ditch erosion.

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.

v. Where exposed silty soils could erode and enter surface streams or ditches connected to streams, silt fences, hay bales or erosion blankets will be applied as needed for temporary protection.

Objectives Strategies and Results apply to these Forest Development Units:

Sproat √ Taylor √

5.2.5 Wildlife and Biodiversity – Landscape Level

5.2.5	Objectives set by government for wildlife and biodiversity – landscape level [FPPR S. 9] Wildlife and Biodiversity – landscape level	
Objective	The objective set by government for wildlife and biodiversity at the landscape level is, without unduly reducing the supply of timber from British Columbia's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape.	
Strategies and Results	 The AVCFC will adopt FPPR Sections 64 (<i>cutblock size</i>) and 65 (<i>cutblock adjacency</i>), as results or strategies under this FSP. 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.		
	Objectives Strategies and Results apply to these Forest Development $$ Sproat $$		
Units:		Taylor √	

5.2.6 Wildlife and Biodiversity – Stand Level

5.2.6		ildlife and Biodiversity stand level
Objective	The objective set by government for wildlife and biodiversity at the stand level is, without unduly reducing the supply of timber from British Columbia's forests, to retain wildlife trees.	
Strategies and Results	 Subject to subsections 2 and 3 of this result/strategy, the AVCFC adopts, as a result or strategy, section 66 (wildlife tree retention) and 67 (restriction on harvesting) of the FPPR. 	
	2. Where wildlife tree retention targets are specified in approved Landscape Unit Plans, wildlife tree retention will meet or exceed targets specified in approved Landscape Unit Plans.	
	3. Buffer and protect active or recently used bear dens where they are located during cutblock layout.	
	ategies and Results apply to these Forest D	Development Sproat √
Units:		Taylor √

5.2.7 Cultural Heritage Resources

5.2.7	Objectives set by government for cultural Heritage Resources cultural heritage resources [FPPR S. 10]	
Description	The AVCF lies within the asserted traditional territories of the Hupacasath and Tseshaht First Nations. The Hupacasath territory encompasses the entire community forest; while the Tseshaht have asserted that an area of west Klitsa Creek is in their traditional territory.	
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.	
Strategies and Results	In these results or strategies: "special cultural heritage resource" means a cultural heritage resource, other than a resource feature, that is	
	a. the focus of a traditional use by the Hupacasath or Tseshaht	

- peoples that is of continuing importance to those peoples, and
- b. not regulated under the Heritage Conservation Act.
- c. "monumental western redcedar or cypress" refers to western redcedar or cypress used for making paddles, masks, totems, canoes, and other traditional use items.
- d. identified in the Hupacasath Land Use Plan as important.

The following steps will be undertaken by the AVCFC:

- The AVCFC will refer to the Hupacasath and Tseshaht First Nations, on an ongoing basis, areas within their traditional territories, identified for potential timber harvesting and road construction:
 - a. to request information respecting special cultural heritage resources within the identified areas, and
 - b. with the intention of adhering to the overall cultural and forest management objectives contained in the Hupacasath First Nation's Land Use Plan.
- if the AVCFC identifies that adhering to one or more objectives 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 MFLNRO District Manager to review options and seek mutually acceptable solutions.
- 4. The AVCFC will evaluate the nature and extent of a possible site-specific special cultural heritage resource identified within areas of potential timber harvesting and road construction activities, including making reasonable efforts to share information or consult with the Hupacasath and Tseshaht First Nations in respect of the possible special cultural heritage resource.
- 5. The AVCFC, when designing a cutblock or road will, prior to harvest or construction, identify
 - a. the portion of the area occupied by a special cultural heritage resource,
 - b. the nature of the special cultural heritage resource,
 - c. whether the special cultural heritage resource is to be protected or conserved, and
 - d. if the special cultural heritage resource is to be conserved, what constraints, if any, are to apply to the forest practices carried out on the area and
 - e. where the Hupacasath or Tseshaht First Nation has provided comment on the special cultural heritage resource, notify the applicable First Nation in writing as to:
 - whether the special cultural heritage resource is to be protected or conserved, and

- ii. if the special cultural heritage resource is to be conserved, what constraints, if any, are to apply to the forest practices carried out on the area.
- 6. For each special cultural heritage resource that has been identified under subsection 4 for protection, the AVCFC will carry a forest practice only to the extent that the forest practice does not damage or render ineffective the special cultural heritage resource.
- 7. For each special cultural heritage resource that has been identified under subsection 4 for being conserved, the AVCFC will carry out a forest practice only to the extent that the forest practice is consistent with the constraints, if any, specified in the design for the cutblock or road.
- 8. If, within a cutblock or road where the AVCFC is carrying out harvesting or road construction, a previously unidentified special cultural heritage 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. determine:

- i. the nature of the special cultural heritage resource,
- ii. whether the special cultural heritage resource is to be protected or conserved, and
- iii. if the special cultural heritage resource is to be conserved, what constraints, if any, are to apply to the forest practices carried out on the area,
- c. modify the design of the cutblock or road to conform with subsection 7(b)(iii), and
- d. resume operations within the cutblock or road to the extent that the operations are consistent with the modified design.
- In addition to subsections 2 through 7, the AVCFC recognizes that
 mature western redcedar and cypress located within the identified
 FDU are special cultural heritage resources to the Hupacasath and
 Tseshaht First Nations and the AVCFC will ensure that, in addition
 to subsections 2 through 7,
 - a. western redcedar and cypress, where ecologically suited, will be planted on areas referred to in section 29 (1) of the Act in accordance with the stocking standards specified in this forest stewardship plan and
 - where requested by the Hupacasath or Tseshaht First Nation, the AVCFC will assist in developing a strategy for and in the identification of monumental western redcedar or cypress within their traditional territory and
 - c. where a strategy for monumental western redcedar or cypress as outlined in 8(c) has been developed and agreed upon by the

	AVCFC, the applicable First Nation and the Ministry Natural		
	Resource Operations, the AVCFC will assist in implementation of the strategy.		
	10. In addition to subsections 2 through 7, the AVCFC recognizes that deciduous species such as bitter cherry, yew and arbutus located within the identified FDU may be special cultural heritage resources to the Hupacasath and Tseshaht First Nations. The AVCFC will ensure that,		
	 a. where one or more of these species is identified to the AVCFC as a special cultural heritage resource by a First Nation, and 		
	b. where it is present in an area referred to in FRPA section 29(1) (free growing stands), a component of these species will be maintained within the free growing stand (section 29(1) area), provided that it can be done in accordance with the stocking standards specified in this forest stewardship plan		
	ategies and Results apply to these Forest Development $-\sqrt{2}$		
Units:	Taylor √		

5.2.8 Recreation

5.2.8	Interpretative forest sites, recreation Recreation Features sites and recreation trails [FRPA 56(1)]		
Description	AVCF 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. In addition the AVCF is also aware of a trail system in the Weiner Creek watershed (Weiner Falls) and connecting the Teodore and Sproat Lake Lookout trails that has not yet been mapped. It was also made known during the public open house that several popular camping sites exist along the south side of the Taylor River between the river and South Taylor Main. Existing recreation features are further described in the AVCF Management Plan section 13.3.4.		
Objective			
	The AVCF objective is that industrial activities will coexist and complement recreational opportunities within the community forest.		
Strategies and Results			
Objectives Strategies and Results apply to these Forest Development Units: Sproat $$			

5.3 Objectives Established under the GAR

5.3.1 Objectives set by Order to Establish Visual Quality Objectives for the South Island Forest District

5.3.1	Objectives Established under the Government Actions Regulation	ual Quality Objectives	
Objective	Pursuant to Section 7(2) of the Government Actions Regulation (GAR), I, Jack Dryburgh, District Manager for the South Island Forest District, establish Visual Quality Objectives (VQOs) for the South Island Forest District as shown on the (attached) map titled South Island Forest District, Visual Quality Objectives Established Under Section 7(2) GAR order, dated December 1, 2005. This order is effective on December 15, 2005.		
These VQOs apply to the scenic areas identified as known in the district manager's letter dated November 13, 1998 and grandpare under Section 180 of the Forest and Range Practices Act. These objectives apply to the crown land portions of the South Island For District, and to the private land within Woodlot Licenses and Tree Licences.			
Strategies and Results	 In these results or strategies: "applicable scenic area" means a scenic at known in the South Island Forest District by I 13, 1998, and "applicable visual quality objective" mean objective established for a scenic area in the District pursuant to Section 7(2) of the Gover Regulation. 	etter dated November s the visual quality South Island Forest	
	2. Within each applicable scenic area, the AVC	FC will:	
a. ensure that each cutblock or road within the a manner such that the altered forest landsc applicable scenic area will be consistent with visual quality objective, and		dscape for the	
	 carry out forest practices only if the forest consistent with the design for the cutblock paragraph (a), and 		
	c. enter into a cutting permit or road permit consistent with the design for the cutblock paragraph (a).		
Objectives Stra	ategies and Results apply to these Forest Deve	, ,	
Onito.		Taylor √	

5.3.2 Karst

5.3.2	Resource Feature Order (Dec 11, 2009) Karst		
Objective	The GAR order dated December 11, 2009 came into effect on January 15, 2010 and identifies the following surface or subsurface elements of a karst system as resource features wherever they are found within the South Island Forest District.		
	Karst caves,		
	Significant surface karst features, and		
	· · · · · · · · · · · · · · · · · · ·		
Strategies and Results			
	The AVCF will report any new discovered karst features within the community forest area to the provincial karst inventory system and will follow existing generally accepted best management practices for forest operations on karst terrain.		
	rategies and Results apply to these Forest Development Sproat √		
Units:	Taylor √		

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 a forest practice 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 the person's forest practices.

5.4.1 Measures to Prevent the Introduction and Spread of Invasive Plants Measures In these measures: "applicable area" means an area where a. it is likely that forest practices will result in introduction or spread of invasive plants, b. there is a moderate to high risk invasive plants, and any priority invasive plants are likely to germinate on soil exposed that is a result of a person's forest practices under this FSP. c. it is reasonably expected that grass would grow on these exposed sites, and d. it is reasonably foreseeable that revegetation with grass seed would materially reduce the likelihood of invasive plant germination: and e. the AVCFC has not deemed the area as an active surface "preferred seed" means seed with the following attributes: a. high sod-forming content, except in areas that are planted with tree seedlings; b. has been certified by the Canadian Seed Growers Association that the seed: i. meets Common #1 Forage Grade or better standards for varietal purity established by the Association for seed of that species (Seeds Act, Seeds Regulation S.2(1)), and ii. is of native origin. "Priority invasive plants" includes Gorse, Japanese Knotweed, Giant Knotweed, Scotch Broom, Purple Loosestrife, and Yellow Iris. 1. The AVCFC will: a. confirm known locations of priority invasive plants within the plan area using the most current recognized provincial database. b. distribute information to staff and contractors on priority invasive plants that exist or threaten to establish within the plan area, c. direct staff to monitor and report new incidences of priority invasive plants and enter them into most current recognized provincial database d. direct the persons carrying out timber harvesting and/or road building activities to inspect logging and road building equipment for invasive shrub vegetation, and remove from equipment prior to transporting equipment from an area of a known occurrence of the invasive plant to a remote location or

site where the invasive plant is currently not present.

- 2. If the AVCFC carries out a forest practice in an applicable area, the AVCFC will, within one year of completing the activity authorized in the cutting permit, will:
 - a. revegetate contiguous areas of exposed soil that exceed 0.1 ha giving preference to preferred seed that is:
 - i. readily available, and
 - ii. comparable in cost to agronomic mixtures, and
 - iii. comparable in effectiveness to agronomic mixtures and
 - b. revegetate temporary access structures within cutblocks with legumes.

These measures 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.		ring	
	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: Sproat			
		Taylor	

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

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.

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

If the AVCFC carries out harvesting of special forest products, intermediate cuts, commercial thinning or the removal of individual trees through single tree selection from an area within the area under this plan, the Uneven-aged Stocking Standards for single tree selection, as found in the MoF publication "Reference Guide for FDP Stocking Standards", are adopted and will be maintained on the area for twelve months following the completion of harvesting. For salvage of scattered windthrow or root rot mortality, openings of up to 0.1 ha in size are acceptable, not requiring regeneration. For openings larger that 0.1 ha even-aged stocking standards will apply.

One exception to the default standards will apply. In the case of deciduous stands established under this FSP where initial stocking densities will be 1000-1200 sph (see Appendix 3 'Alternative Stocking Standards'), and where these stands may be in the future subject to commercial thinning, the target stocking for standards will be as follows:

Table 6: Deciduous stocking targets for specified areas

Target Standard	Tree Layer	Target	Min pa	Min p
1200	1	400	200	200
	2	500	300	250
	3	700	400	300
	4	900	500	400

^{**} pa - preferred and acceptable species p - preferred species

Table 6 specifies a reduction in the targets and minimums for tree layer 1 as compared to the default standards. The reason for this is that the default standards have been developed for conifer stands, which have different crown characteristics from deciduous species. Under deciduous management regimes, while initial densities will be higher to promote self-pruning and encourage stem development, lower target thinning densities in managed stands may be applied during later stages of the rotation.

7.0 REVIEW AND COMMENT

This Forest Stewardship Plan was advertised on January 18, 2011 and made available for review and comment for a period 60 days ending on March 18, 2011. The review and comment process included direct referrals to two First Nations and a range of agencies and community organizations as well as a public open house. Comments were received from private individuals and community groups. All comments received were responded to. The comments received did not result in any changes to the FSP document. A full description and summary of the review and comment process and copies of all input received can be found in the companion document: **Review and Comment Information.**

8.0 REVISIONS

The following revisions were made to the draft plan (Jan 2011) to create the March 25, 2011 submission version. Page number references are to the draft plan (January 2011).

Cover page:

- update submission date
- update signing authority
- remove page number (start page numbering at TOC)

Table of Contents:

update to reflect page numbering and other changes

Page 5:

update ministry acronyms

Page 6

insert submission date

Page 7

change reference to appendix 2 to appendix 3

Page 9

- remove reference to support document
- change 5.2.1c to 5.1.2c

Page 20

• last paragraph: change reference to "holder of FSP to "AVCFC"

Page 21

• 3b "first, identified on the non-contributing land base, or areas that are otherwise constrained with respect to timber harvesting," added text in italics

Page 27

- correct heading 5.2.6 to read "Stand Level"
- deleted 5.2.5 strategy/result # 2 at suggestion of BCTS who indicated impracticality due to difficulty acquiring RLUP database and lower accuracy

Page 28

replace MNRO with MFLNRO

Page 31

add paragraph reference at end of clause 2 c

Page 35

• remove measure to mitigate the effect of removing or rendering ineffective natural range barriers as not applicable (no range agreements in place)

Page 36

- change title of section 9 to review and comment
- add reference to review and comment information document
- add list of revisions to the document

Page 37

add signatures to document

Page 38-40

 add submission standards ID (based on BCTS FSP # 526 standards) to stocking standards table

Page 40

- remove 04 site series from first stocking standard (alternative species root rot treatment) in column to read CWHxm 01/06
- remove shading from last three rows of table

FDU A - Sproat Operating Area Map & FDU B - Taylor Operating Area Map

- minor edits and improvements
- addition of recreation trail and road names
- add labels to Weiner Creek and misc lakes
- change line type for Sutton Creek Power access right of way from recreation trail

Further to these changes, the following changes were made to the March 25, 2011 version after review and comment by the South Island Natural Resource District and form the basis for this final consolidation version dated May 10,2011. Page number references are to the March 25 version:

Cover page:

- update final submission date from March 25, 2011 to May 10, 2011.
- update signatures

Table of Contents:

updated to reflect updated page numbering and other changes

List of Tables

• updated to reflect page numbering updates

Page 4,5:

- update South Island Natural Resource District name and acronym
- VILUP update acronym definition to full legal name

Page 6

Table 2: correct FPPR references in first and third table headings

Page 8

- Update section 5.0 title to "Results, Strategies and Measures"
- Table 3: edits to include accurate legal terminology to HLP Order & Objectives references.

Page 13

- Result or Strategy # 1: add (Part1.1) after FPPR (end of second line)
- 3b: change "WTPs area" to "WTPs are"
- 3cii: change "harvesting or remaining" to "harvesting of remaining"
- 3d: change "planned, suitable" to "planned, a suitable"

Page 15

• Table 5.1.2a headers: add "II A" reference after HLP in title and above Objective 1a in header.

Page 16,17

- Table 5.1.2, Result or Strategy: 1. add Section IIA after VILUP in second line and correct reference to Sproat lake Landscape Unit Order (not plan) in third line.
- 5.1.2b: add "IIA" reference after HLP in title and above Objective 1b in header.
- 5.1.2c: add "IIA" reference after HLP in title and above Objective 1b in header.

Page 18

• Table 5.2.1 – reverse presentation order of "Result or Strategy" and "Practice Requirements" fields.

Page 19

Table 5.2.2: change "Description" category term to "Context"; add full legal name
of SIFD Notice; add sentence at end of second paragraph referring to no results
or strategies required for two species; add reference at end of third paragraph.

Page 20

 Strategies and Results: 1. add reference to FPPR 47(4) to (6) and descriptive text.

Page 21 Strategies and Results

- 1.a,ii,I: add reference to consideration of FPPR Schedule 1 Section 2 factors
- 2. change "cutblock, retention" to "cutblock, the retention"

Page 23

- 2b: add reference to cumulative risk table
- 4. add "and document any decisions related to this consideration." To end of paragraph.

Page 24

 remove section ix: "Adopt Western Forest Product's terrain management code of practice". The reason for this is that the code of practice is no longer readily available and this commitments remains a part of the management plan.

Page 28

 remove clause 9a (reference to providing FN with a copy of most recent publically available WRC inventory). The reason is that this information is normally provided by the Ministry and these inventories are in flux and usually pertain only to specific areas.

Page 29

- 10b edit text to provide more specific reference to legislation
- add new table 5.2.8: Recreation including strategies and results (now found on page 30)

Page 30

 add new table 5.3.2 Karst including strategies and results (now found on page 32)

Page 31

• section 6.3: update section to include uneven aged stocking standards

Page 32-34

 relocate and renumber sections 7.0 & 8.0 related to Measures – now becomes section 5.4

Page 34,36:

- renumber sections 9,10,11 to 7,8,9 to reflect integration of former sections 7&8 into section 5.
- Update AVCFC signature & date on signature page

Page 37,38,39 Appendix 1, Table A

 update table with correct standards ID (based on BCTS FSP # 526 standards) to stocking standards table

9.0 SIGNATURES

Alberni Valley Community Forest Corporation



RPF Signature: _

Name:

Leonard W Apedaile RPF

Position:

Consulting Forester, Econ Consulting

Date:

May 9, 2011

AVCFC Signature:

Name:

Jim Sears

Position:

Chair, Alberni Valley Community Forest Corporation

Date:

June 16, 2011

APPENDIX 1: STOCKING STANDARDS

Table: A

ADMINISTRATION				
Vancouver Forest Region	South Island Forest District	Alberni Valley Community Forest	CF# KD2	January, 2011

Standards ID	ID #	BEC				Prefe	rred Spec	cies				A	cceptable	Species			Stocking (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)		
1037503	1	CWHmm1	01	Fd	3.0	Cw	1.5				Hw ¹¹	2.0					900	500	400	2.0	6	11	150	
1037504	2	CWHmm1	02	Pl	1.25	Fd	2.0				Cw	1.0					800	400	400	2.0	6	11	150	
1037505	3	CWHmm1	03	Fd	2.0	Cw ³	1.0				Hw*	1.75					800	400	400	2.0	3	11	150	
1037506	4	CWHmm1	04	Fd	2.0	Cw ²⁹	1.0				Pw ²²	2.5	Hw*	1.75			900	500	400	2.0	3	11	150	
1037507	5	CWHmm1	05	Fd	3.0	Cw	1.5				Pw ²²	2.5	Hw*	2.0	Ba*	0.75	900	500	400	2.0	3	11	150	
1037508	6	CWHmm1	06	Cw	1.5	Hw	2.0				Fd ⁸	3.0	Ba*	0.75			900	500	400	2.0	6	11	150	
1037509	7	CWHmm1	07	Cw	2.0	Fd	4.0				Ba*25	1.0	Hw*	2.5			900	500	400	2.0	3	11	150	
1037510	8	CWHmm1	12	Cw^4	1.0						Hw ⁴	1.5	Ss^4	2.0			800	400	400	2.0	3	11	150	
1037546	A	CWHmm1	05,07	Dr	4.0	Mb	4.0				Act	4.0					1200	1000	800	1.5	3	11	150	Deciduous management
1037511	9	CWHmm2	01	Hm ¹² /Hw	1.0/1.25	Cw	1.0	Fd ¹⁰	2.25 Yo	1.0	Ba	1.75					900	500	400	2.0	6	11	150	
1037512	10	CWHmm2	02	Pl	1.25	Fd	1.5				Cw	0.75					800	400	400	2.0	6	11	150	
1037513	11	CWHmm2	03	Fd	1.5	Hw	1.0	Cw^{29}	0.75		Hm ¹²	0.75	Yc	0.75			800	400	400	2.0	3	11	150	
1037514	12	CWHmm2	04	Fd	1.5	Cw ²⁹	0.75				Pw^{22}	2.5	Yc	0.75	Hw*	1.0	900	500	400	2.0	3	11	150	
1037515	13	CWHmm2	05	Ba	0.75	Cw	1.0	Yc	1.0 Fd ¹	2.25	Pw ²²	2.5	Hw*	1.25			900	500	400	2.0	6	11	150	
1037516	14	CWHmm2	06	Hw	1.25	Cw	1.0	Yc	1.0		Ba	0.75	Hm ¹²	1.25	Fd ¹³	2.25	900	500	400	2.0	6	11	150	

Standards ID	ID #	BEC				Prefe	rred Spe	cies					A	cceptable	Species			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)		
1037517	15	CWHmm2	07	Cw^4	0.75	Hw	1.0	Ba	0.75			Hm ¹²	0.75	Yc ⁴	0.75			800	400	400	2.0	3	11	150	
1037518	16	CWHmm2	08	Cw	1.25	Yc	1.25	Ba	1.0			Hw ⁵	1.75	Fd ¹⁰	3.0			900	500	400	2.0	3	11	150	
1037519	17	CWHmm2	10	Cw ⁴	0.75							Pw^{22}	2.5	Yc ⁴	0.75	Hw*4	1.0	800	400	400	2.0	3	11	150	
1037520	26	CWHvm2	01	Fd ^{8,4,10,18}	2.25	Hw	2.5	Cw/Yc ²⁸	1.5	Ba	1.75	Hm*12	1.0					900	500	400	2.0	6	11	150	
1037521	27	CWHvm2	03	Cw	1.0	Hw	1.75	Fd ^{10,15}	1.5	Yc ²⁸	1.0	Pw ^{15,22}	Hm*12	0.75	Pl*26	1.25		800	400	400	2.0	6	11	150	
1037522	28	CWHvm2	04	Cw	1.0	Hw	1.75	Fd ^{10,15}	1.5	Yc ²⁸	1.0	Ba	1.5	Pw ¹⁵	2.5	Hm*12	0.75	900	500	400	2.0	6	11	150	Also acceptable: Ss* ²³ with a height of 2.0m
1037523	29	CWHvm2	05	Cw	1.5	Hw	2.5	Yc^{28}	1.5	Ba	1.75	Fd ^{4,9,,10,18}	2.25	Hm*12	1.0			900	500	400	2.0	3	11	150	
1037524	30	CWHvm2	06	Cw	1.5	Hw	2.5	Yc^{28}	1.5	Ba	1.75	Hm*12	1.0	Ss*8	3.0			900	500	400	2.0	6	11	150	
1037525	31	CWHvm2	07	Cw	2.0	Hw ⁵	3.5	Yc ²⁸	2.0	Ba	2.25	Hm*12	1.0					900	500	400	2.0	3	11	150	
1037526	32	CWHvm2	08	Cw ¹³	2.0	Hw ⁵	3.5	Yc ²⁸	2.0	Ba	2.25	Ss ²³	4.0	Hm*12	1.0			900	500	400	2.0	3	11	150	
1037528	33	CWHvm2	09	Cw ⁴	1.0	Hw^4	1.75	Yc ^{4,28}	1.0	Hm ¹²	1.75	Ba	1.5	Pl* ⁴	1.25			800	400	400	2.0	3	11	150	
1037529	34	CWHvm2	11	Cw ⁴	1.0	Yc ^{4,28}	1.0					Hw ⁴	1.75	Hm* ^{12,26}	0.75	Ss ^{4,14,23}	2.0	800	400	400	2.0	3	11	150	
1037530	35	CWHxm	01	Fd	3.0							Hw	2.0	Cw	1.5	Pw ²²	2.5	900	500	400	2.0	3	11	150	
1037531	36	CWHxm	03	Fd	2.0	Pl	1.25					Cw	1.0	Hw*	1.25	Pw ²	2.5	800	400	400	2.0	8	11	150	
1037532	37	CWHxm	04	Fd	3.0							Cw	1.5	Pw ²²	2.5			900	500	400	2.0	3	11	150	
1037533	38	CWHxm	05	Cw	2.0	Fd	4.0					Pw ²²	2.5	Bg* ²⁶	3.5	Hw*	1.75	900	500	400	2.0	3	11	150	
1037534	39	CWHxm	06	Cw	1.50	Hw	2.0	Fd ¹⁷	3.0			Bg*8	3.00	Pw ²	2.5			900	500	400	2.0	6	11	150	
1037535	40	CWHxm	07	Cw	2.0	Fd	4.0	Bg	3.5			Hw*	1.75					900	500	400	2.0	3	11	150	
1037536	41	CWHxm	12	Cw ⁴	1.0							Hw**	1.5	Pw ²²	2.5	Ss*23	1.5	800	400	400	2.0	3	11	150	
1037546	C	CWHxm	05,07	Dr	4.0	Mb	4.0					Act	4.0					1200	1000	800	1.5	3	11	150	Deciduous Management

Standards ID	ID #	ВЕС				Preferred Species				A	.cceptable	Species			Stocking (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 (r	Ht nin)	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)		
1037547	D	CWHxm	01/06	Cw	1.5	Pw^{22}	2.5					Fd ³⁰	3.0	Hw ³⁰	2.0			900	500	400	2.0	3	11	150	Alternate species root rot treatment
1037548	Е	CWHxm	03	Cw	1.0	Pw ²²	2.5					Fd ³⁰	2.0	Pl	1.25			800	400	400	2.0	3	11	150	Alternate species root rot treatment
1037549	F	CWHxm	04	Cw	1.5	Pw ²²	2.5					Fd ³⁰	3.0					900	500	400	2.0	3	11	150	Alternate species root rot treatment
1037550	G	CWHxm	05/07	Cw	2.0	Pw ²²	2.5					Fd ³⁰	4.0	Bg^{30}	3.5			900	500	400	2.0	3	11	150	Alternate species root rot treatment
1037537	42	MHmm1	01	Ba	0.6	Hm	1.0	Yc	1.0			Hw*13,26	1.0					900	500	400	2.0	7	11	125	
1037538	43	MHmm1	02	Hm	0.75	Yc	0.75					Ba	0.6					800	400	400	2.0	4	11	125	
1037539	44	MHmm1	03	Ba	0.6	Hm	1.0	Yc	1.0			Hw*13,26	1.0					900	500	400	2.0	4	11	125	
1037540	45	MHmm1	04	Ba	0.6	Hm	1.0					Hw*13,26	1.0					900	500	400	2.0	7	11	125	
1037541	46	MHmm1	05	Ba	0.6	Yc	1.0					Hm	1.0	Hw*13,26	1.0			900	500	400	2.0	4	11	125	
1037542	47	MHmm1	06	Hm ⁴	0.75	Yc4	0.75					Ba^{4}	0.6					800	400	400	2.0	7	11	125	
1037543	48	MHmm1	07	Ba ⁴	0.6	Yc ⁴	0.75					Hm ⁴	0.75					900	500	400	2.0	4	11	125	
1037544	49	MHmm1	09	Yc ⁴	0.75	Hm ⁴	0.75	_										800	400	400	2.0	4	11	125	

Reference Notes for stocking standards

Tree Species

'Ba' is amabilis fir

'Bg' is grand fir

'Cw' is western red cedar

'Fd is coastal Douglas fir

'Hm' is mountain hemlock

'Hw' is western hemlock

'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

- 2 Pw is considered an acceptable species where root rot is prevalent, up to 20% of stand
- 4 Elevated microsites are preferred
- 5 Suitable on thick forest floors
- 8 Restricted to nutrient-medium sites
- 9 Restricted to steep slopes
- 10 Restricted to southerly aspects
- 12 Restricted to upper elevations of biogeoclimatic unit
- 13 Restricted to lower elevations of biogeoclimatic unit
- 15 Restricted to southern portion of biogeoclimatic unit in region
- 17 Restricted to eastern portion of biogeoclimatic unit in region
- 18 Restricted to trial use
- 22 Risk of white pine blister rust
- 23 Risk of weevil damage
- 25 Risk of balsam woolly adelgid
- 26 Minor component
- 28 Species is restricted to upper elevations when used in the southern portion of the biogeoclimatic unit
- Will be preferred in wetter portions of the site series
- 30 Not acceptable within 10m of a root rot infected stump
- * 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 volume in the pre-harvest stand. The percentage of the free-growing stand that may be comprised of the species will be on a sliding scale within 5 percentage points leading up to the 20%. For example, if a cruise report showed 15% Hw merchantable volume in the pre-harvest stand, within 5 percentage points leading up to the 15% of the free-growing stand could be Hw.
- ** Hw is listed as an acceptable species in the VFR stocking standards but no height was given 1.5m used as the minimum height

In addition to the notes regarding species in the VFR stocking standards, the following apply:

• On CWH vm2 site series 01, Fd is restricted to steep slopes.

This table is based on the Vancouver Forest Region *Reference Guide for FDP Stocking Standards* dated November 12, 2010. 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 provided that the tree species are suitable in all site series contained within the SU.

Reduction of inter-tree spacing to 1.5m is acceptable for site-specific conditions involving bedrock, large blocky colluvium or hygric sites on disturbed roadside areas. Roadside areas generally contain high percentages of mineral and morainal type soils.

A risk of balsam wooly adelgid exists throughout Vancouver Island and applies to all Abies species (http://www.al.gov.bc.ca/cropprot/balsamwa.htm).

Pruning regime for western white pine

If white pine is to be counted in a free-growing survey as one of the well-spaced stems, it will have been pruned in accordance with the following regime:

First Lift -

- 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

<u>Definitions of terms used in reference:</u>

1. *Disturbed roadside area* – area within the road right-of-way that has been disturbed due to road construction, where logs have been landed and log processing occurs. It would

be a maximum of 10 m. from the traveled portion of the road (i.e. the length of a log).

- 5. *Thick forest floor* forest floor >20 cm.
- 6. Coarse-textured soils sand and loamy sand; or sandy loam, loam, sandy clay loam with >70% coarse fragments
- 9. Steep slopes >50% slope
- 10. Southerly aspect- SSE to WSW with slopes >35%
- 11. Northerly aspect NW to ENE with slopes >50

APPENDIX 2: RATIONALE IN SUPPORT OF PROPOSED ALTERNATIVE PERFORMANCE REQUIREMENTS

STOCKING STANDARDS

Alternative deciduous 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.

Site plans will be prepared for each cutblock as per Section 10 of FRPA. At this stage the fundamental decision will be made as to what stocking standard will apply and the Standard Unit ID will be assigned.

Forest health concerns raise additional issues as to the appropriateness of the defaults in areas where root rot (e.g. Phellinus weirii) impacts the regeneration and long-term health and productivity of the preferred species. The proposed alternative stocking standards for root rot promote healthy stands that protect adjacent resources and values. For example on infected zonal sites (01) adjacent to an S4 creek or recreational trail where stumping is not appropriate to control sediment or to maintain visual appearance. In these cases the establishment of Douglas fir (preferred) may prove difficult and unsuited in the long-term due to re-infection.

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 22nd, 2000 and May 1st, 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. There are currently only a small number of deciduous leading stands within the tenure area. While deciduous management was not specifically considered in the AVCF Management Plan, it is expected that it will have an overall positive impact on the AAC. If deciduous management becomes a more important aspect of woodlot management it will be accounted for the in next AAC determination.

The broadleaf standards are also supported by the following research 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).

The minimum height criterion for deciduous 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.

Damage criteria for broadleaf species have not been established. No significant insect or disease outbreaks have been recorded for existing alder trials to date. General free-growing criteria will be adopted and damage assessed by the survey technician at the time of the survey. Well-spaced stems will be of good form, health and vigour. Species-specific damage criteria will be used upon development.

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 deciduous densities only 1 deciduous tree per 4 sample plots will be allowed.

Stocking Standards – Specified Areas (amendment May 29, 2014)

Specified areas include areas subject to commercial thinning, the removal of individual trees, areas subject to single/group tree selection or other types of intermediate cutting, and areas subject to the harvest of special forest products.

Application of these stocking standards applies to single layer stands. Retained trees should have suitable silvical characteristics as well as 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 pre-commercial thinning prescriptions. They provide minimum stocking standards that ensure adequate site occupancy and stocking such that a free growing stand is maintained and subsequent regeneration is not required.

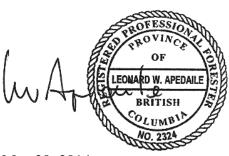
For salvage of timber resulting from windthrow, root rot mortality, or other similar events, openings of up to 0.1 ha in size are acceptable and do not require a site plan or associated requirements for regeneration and establishment of a free growing stand. No long-term impact on timber yield is expected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

Table B: Stocking Information for Specified Areas

Target from	Layer		Stocking**	
Table A standards		Target pa	MIN pa	MIN p
(stems/ha)			(well-spaced/ha)	
1200	Single	400	200	200
900	Single	400	200	200
800	Single	300	150	150

^{**} pa - preferred and acceptable species p - preferred species

This is considered a minor amendment consistent with FRPA S 20.1 and replaces the last page in APPENDIX 1: Stocking Standards



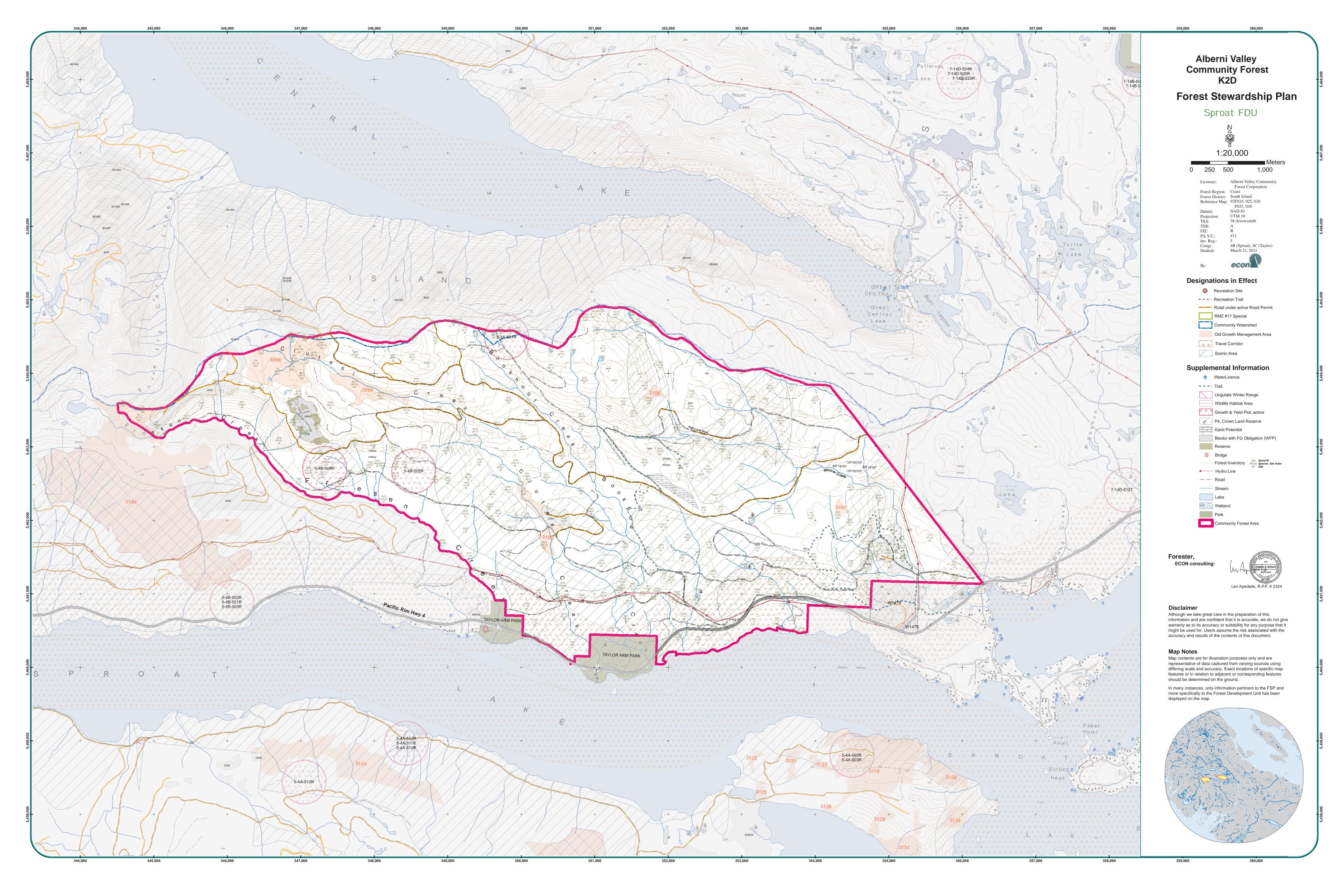
May 29, 2014

[&]quot;Target from Table A standards' are as specified in Table A by biogeoclimatic ecosystem classification (BEC) site series.

APPENDIX 3 - FSP MAPS

Overview Map

OU A – Sproat Operating Area	a	



J B – Taylor Operating Area		

