

Site Plan

Stocking Standards / Critical Factors

Licence:	K2D/AVCF	Cutting Permit:	002	Block:	B9	Timber Mark:	K2D002				
Total Area (ha):	18.48	NAR (ha):	13.94	WTRA (ha):	3.37	NP NAT (ha):	0.14	NP UNN (ha /%):	1.03 / 5.6%	P.A.S. Limit (%):	7

This SP is consistent with AVCF FSP #1, May 10, 2011. The entire area is second growth timber previously harvested in the 1950's. Block B9 is located within the Sproat Lake Community Watershed.

This block will be harvested and regenerated using a combination of clear-cut and retention silviculture systems with external wildlife tree retention. In SU-A, uniform dispersed retention of 18sph of dominant and co-dominant Fd, with an average inter-tree distance of 25m is prescribed. The purpose of the retention is to mitigate visual quality impact in the upper regions of the block, to provide vertical structure, and to provide for future CWD recruitment. A clear-cut system will be used in SU-B and SU-C.

Block B9 is designed for ground based harvesting as is shown on the harvest plan map. Road access is from road reactivation of Rd AW 21, and new road construction of Rd AW 21-8 and Rd AW 21-8b. An old grade exists between FC S1 & S2 and is suitable for access use or skidding.

STOCKING STANDARDS

SU	Standards ID	NAR (ha)	Biogeoclimatic Ecosystem Classification				Regeneration Method	Preferred Species	Acceptable Species
			Zone	Subzone	Variant	Site Series			
A	1037530	4.18	CWH	xm	2	01	Plant	Fd	Hw, Cw Pw ²²
B	1037530	5.86	CWH	xm	2	01	Plant	Fd	Hw Cw Pw ²²
C	1037534	3.92	CWH	xm	2	06 ₅ 01 ₄ 07 ₁	Plant	Fd Cw Hw	

Note SU A & B are the same EA and have the same stocking standards but are differentiated by the presence of uniform dispersed retention in SU A.

²² Risk of white pine blister rust. Use blister rust resistant Pw stock and follow blister rust pruning guidelines contained in the FSP.

SU	Regen. Date (yrs)	FG Date Late (yrs)	MITD (m)	TSS (sph)	MSSpa (sph)	MSSp (sph)	Min. FG Ht. by Species		Crop Tree to Brush Ratio (%)
							Species	Ht (m)	
A	3	11	2.0	900	500	400	Fd Hw Cw Pw	3.0 2.0 1.5 2.5	150
B	3	11	2.0	900	500	400	Fd Hw Cw Pw	3.0 2.0 1.5 2.5	150
C	6	11	2.0	900	500	400	Fd Cw Hw	3.0 1.5 2.0	150

SOIL DISTURBANCE

SU	Compaction	Displacement	Surface Erosion	Soil Disturbance Limit (%)
A	H	M	H	5
B	H	M	M	5
C	VH	M	H	5

COMMENTS The soil disturbance limit is 25% for roadside work areas.
Use puncheon or rubber matting in sensitive areas and **stop work if the following soil disturbances cannot be avoided:** >Wheel/Track Ruts, Compacted Areas, Gouges, Scalps<
Grass seed exposed mineral soil within 1 year of completion of harvest if it is likely that revegetation will reduce likelihood of erosion and/or sediment entering a stream, wetland, or lake.
SU C is a relatively flat water-receiving site with areas of perched water tables during wet season and therefore more sensitive soils – schedule harvest during dry season and do not operate during saturated soil conditions.

RIPARIAN MANAGEMENT

Riparian Class of Feature	S3/S4 S3/S4/NCD NCD S3	Designation on Map	Stream 9-1 Stream 9-2 Stream 9-2a Stream 9-3	Falling and/or Skidding or Yarding Across a Stream	No No/No/Yes No No
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Blk B9 is located within a community watershed. Default fish bearing stream classes have been assigned despite the fact that there are no fish bearing stream reaches within the cut block area. The lowest reaches of Bookhout and Clutesi creeks where they flow into Sproat Lake are assumed to be fish bearing.

Stream 9-1 flows from north to south along the western boundary of Blk B9, into Clutesi creek. The bench and upper slope reaches are classified as S4 while the lower reach (~175m) flowing into Clutesi Creek is classified as S3 based on width. A 5m barrier exists above the entrance into Clutesi Creek. A 20m RRZ is established between the block boundary and the S3 reach.

Stream 9-2 starts as an NCD in SU-B to the northwest of FC 5. It continues through SU-C as a default S4, growing into a default S3 below Rd AW 21-8b before draining over a 5m barrier into Clutesi creek. Fall and yard away from S3 and S4 stream reaches. Falling and yarding across the NCD reach of stream 9-2 is permitted. Limit machine crossings and use puncheon in the lower half of the NCD reach.

Stream 9-2a is an NCD and begins as the outlet of the small (.14ha) non-classified wetland below AW 21-8. It crosses AW21-8 and flows towards stream 9-2. Fall and yard away from this area as wet soils are prone to machine displacement (rutting).

Stream 9-3 flows from north to south outside the eastern block boundary of Blk B9, into Bookhout Creek. It is designated as S3 and a minimum 20m RRZ has been established between the block boundary and this reach although actual width varies between 20m and 50m according to topographical break.

Portions of the RMA's of these streams will be harvested as indicated by those portions of green shading within block boundaries. Prescribed activities are deemed to meet FPPR S.52(2).

Avoid debris accumulation at roadsides within the RMA of all streams (indicated in green shading on the attached map). Where permitted, cross-stream yarding (hoe chuck only) should be minimized and logs should be lifted not dragged across the channel as much as possible.

Retain all Cw, deciduous and non-merchantable stems and understory vegetation within the RMA (indicated in green shading on the attached map) for all S4, S3 and S2 streams where safe and operationally practical to do so.

CRITICAL FACTORS AND REGENERATION COMMENTS

Harvesting:

Block boundaries are established with orange flagging and painted, tagged, and double ribboned falling corners. Boundary trees may be harvested when they are adjacent to an existing road or block. All other boundary trees should not be felled or damaged.

The level of retention in SU-A will be 18 sph of healthy, dominant and co-dominant Fd or Pw, evenly dispersed throughout the block at an average inter-tree distance of 25m. Retained trees may have defects such as sweep, forks, or crooks but should have a healthy live crown.

Also retain understory and non-merchantable Cw to the greatest extent possible.

An old grade exists between FC S1 & S2 and is suitable for access use or skidding.

Windthrow:

Moderate windthrow potential exists on the western falling boundary of Blk B9 near FC 13 due to localized wet areas with shallow rooting depth. Existing pockets of wind throw exist below FC S2 and this risk is the primary reason why more retention is not prescribed along stream 9-2. Otherwise windthrow risk has been assessed as low along all boundaries and no wind firming treatments are prescribed.

Root Rot:

No significant root rot infection centers were identified in this block during fieldwork. Endemic spot infections may exist but no treatment is prescribed.

Wildlife Trees:

Retain high value wildlife trees (active nests, dens, extensive cavities, etc) if identified during harvesting and safe to do so. No high value wildlife trees were identified during engineering or SP fieldwork. Dispersed retention will fulfill a wildlife tree recruitment role.

Coarse Woody Debris:

Retain a minimum of 4 logs/ha each being at least 5m in length and 30 cm in diameter at one end.

Visual Quality Objective:

The block falls within an area with a VQO of partial retention (PR). While a portion of the block will be visible from Sproat Lake, a Visual Impact Assessment (VIA) has been completed and shows that this block along with blocks F2 & F3 meets this objective. Dispersed retention within SU and the application of commercial thinning within Block 10 is being used as a strategy to reduce visual impact of the upper portions of the block. Block B9 will not be visible from the campground in Taylor Arm Provincial Park.

Recreation:

The only recreational activity observed in the vicinity of Block B9 during fieldwork was motorized off-road vehicle use (quad and motorbike) on road AW21. Adequate signage will be required at all potential access points during active harvesting and road building operations to ensure the safety of recreational users. Harvesting and road construction will not interfere with motorized recreation opportunities outside of active operations.

Block B9 is located within 10m of the boundary of the east parcel of the Taylor Arm Provincial Park. Recreational facilities in this area of the park include a campground on the north side of the Highway and trail under the highway to a day use area on Sproat Lake. There were no evident signs of recent use in the upper portions of the Park next to the block. An old system of road grades extends through the east side of the park eventually entering Block B9 near FC 8 but these do not appear to be actively used beyond their departure from Bookhout Creek, judging by the old windthrow and debris on them. The north boundary of the Park and block B9 are well removed (300 – 400m) and separated by terrain from the camping areas below. There should be no noticeable impacts from these areas. Operations may be audible from the campground and coordination with BC Parks and scheduling harvesting and road building outside of the highest park use periods is recommended.

Revegetation and Invasive Plants:

Invasive species are present on the Hwy 4 corridor and along AW21. Follow FSP measures for invasive plants. Monitor, and if present treat broom and other invasive species during early establishment. Grass seed exposed mineral soil within 50m of all stream crossings and all contiguous areas of exposed mineral soil greater than 0.1 ha (approximately 30m x 30m)

The existing old grade between FC S1 and FC S2, if used for temporary access is to be seeded with legumes following harvest.

Brush Competition:

Minimal brush competition is expected in SU-A and SU-B. Monitor for ingress of bracken and red alder, and brush mechanically if needed to achieve free growing.

Moderate to heavy brush competition from bracken, salmonberry, and red alder is expected in SU-B. Monitor annually and use mechanical treatment as needed to achieve free growing.

Reforestation: Plant promptly following harvesting to minimize the potential need for future brushing treatments.

Plant Cw within and for 10m around root rot centers if no stumping is carried out.

Browse protection (sinocast cones) is recommended for all planted cedar trees.

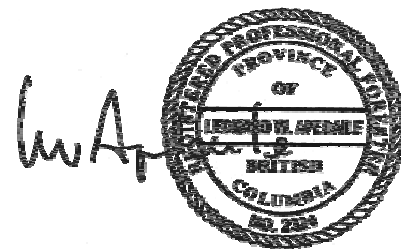
Recommended Planting Prescription:

SU	NAR (ha)	Species	Percent (%)	Stock Type	Stems/ha	Total Stems
A	4.18	Fd	100	410A or Larger	1200	5016
					Total	Total
					1200	5016
B	5.86	Fd	90	410A or Larger	1080	6329
		Cw	10		120	703
		Total	Total			
1200	7032					
C	3.92	Fd	70	410A or Larger	900	3528
		Cw	30		300	1176
		Total	Total			
1200	4704					

Cultural Heritage Resources:

If, during road construction or harvesting, any evidence of traditional use, cultural heritage values, or archaeological features are found notify the AVCF Manager and stop work within a 30m radius of the area.

RPF SIGNATURE AND SEAL



Date (2012/04/03)

I certify that the work described herein fulfills the standards expected of a member of the Association of British Columbia Forest Professionals and that I did personally supervise the work.

Licensee: Alberni Valley Community Forest Corporation
 Forest Region: Coast
 Forest District: South Island
 Reference Map: 92F024, 025, 026 F035, 036
 Datum: NAD 83
 Projection: BC Albers
 TSA: 38 Arrowsmith
 TSB: A
 FIZ: B
 P.S.Y.U.: 471
 Inv. Reg.: 5
 Comp.: 4B (Sproat), 4C (Taylor)
 Drafted: April 1, 2012

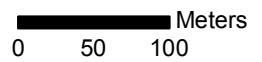
Alberni Valley Community Forest K2D

Sproat FDU

Site Plan Block B9



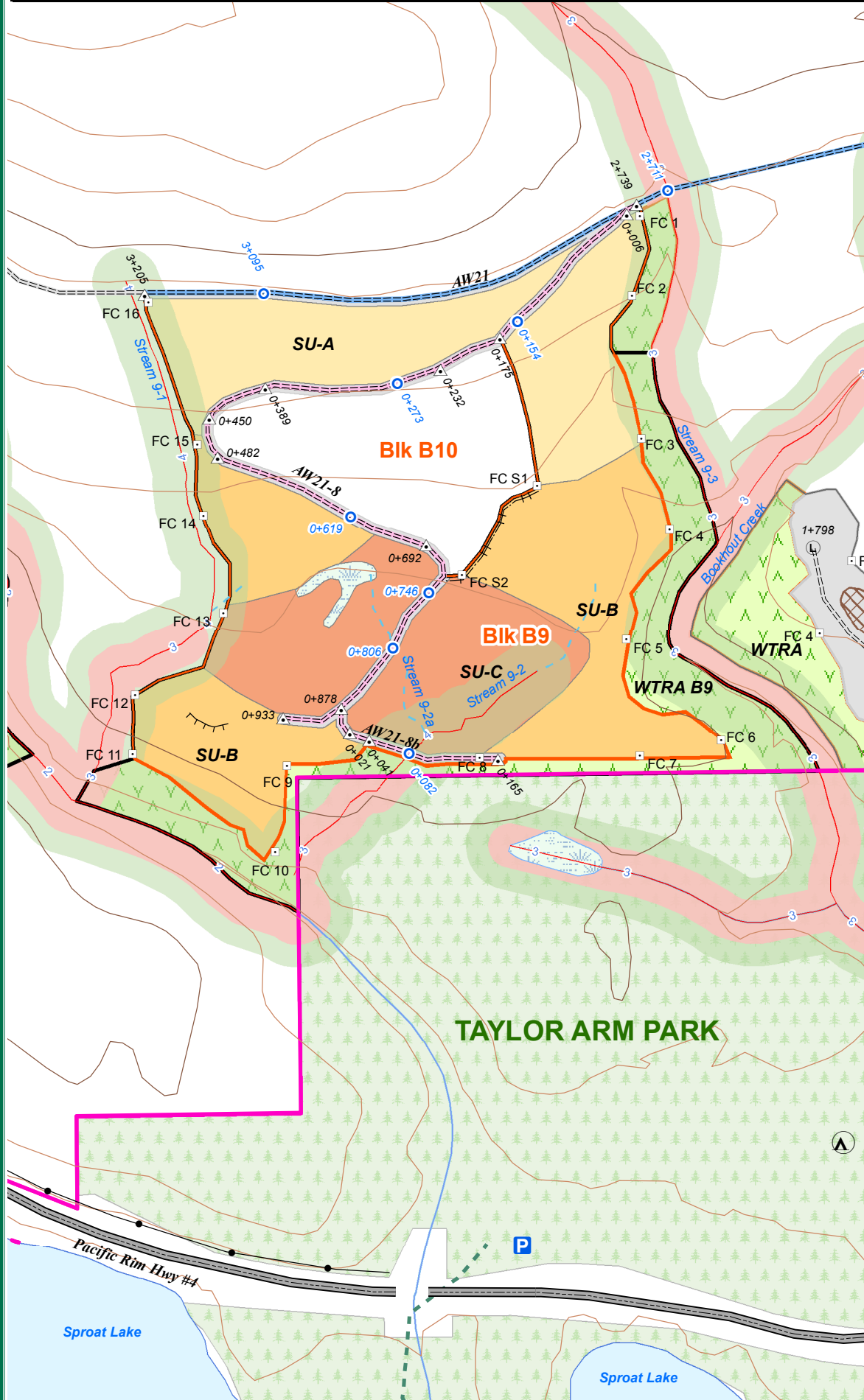
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By:



Block ID	SU	NAR (ha)	ECO Site CWH xm	SS ID	TSS	MSS	MSS (P)	Preferred (Min Hgt)	Acceptable (Min Hgt)	MITD	
B9	A	4.18	01	1037530	900	500	400	Fd(3.0m)	Hw(2.0m), Cw(1.5m), Pw ²² (2.5m)	2.0m	
	B	5.85	01	1037530	900	500	400	Fd(3.0m)	Hw(2.0m), Cw(1.5m), Pw ²² (2.5m)	2.0m	
	C	3.91	06,01,07 ₁	1037534	900	500	400	Fd(3.0m), Cw(2.0m), Hw(2.0m)	Hw(2.0m), Cw(1.5m), Pw ²² (2.5m)	2.0m	
	Net	13.94	Risk of White Pine blister rust. Free growing Pw must be pruned as per the FSP guidelines.								
	PAS	1.03									
	NPS	0.14									
WTRA	3.37										
TAUP	18.48	Note: SU A and B have the same stocking standard but are differentiated by the presence of uniform dispersed retention in SU A.									



- Falling Corner
 - Ⓛ Permanent Landing
 - ⊙ Temporary Landing
 - △ Station
 - ⊙ Culvert
 - Ⓟ Bridge
 - ⓧ Bridge, out
 - Ⓚ Quarry
 - ⓧ Designated Crossing
 - Ⓢ Spoil Site
 - Ⓜ Swamp
 - 🌲 Wildlife Tree
- Roads & Trails**
- Highway
 - == Road, existing
 - - - Road, engineered
 - Road, to be re-activated
 - - - Trail, temp
 - - - Old Grade
 - - - Hiking Trail
 - ⊔ Rock Bluff
 - Hydro Line
- Stream Classification**
- S1-S4 Stream
 - S5-S6 Stream
 - - - NCD
 - Stream, Not Classified
- Other Features**
- ▭ Riparian Management Zone
 - ▭ Riparian Reserve Zone
 - 🌲 Wildlife Tree Retention Area
 - 🌲 Timber Leave Area
 - ⊔ Karst
 - ⊔ Non Productive, Rock
 - ⊔ Non Productive, Wetland
 - 🌲 Park
- Standard Unit**
- ▭ SU-A
 - ▭ SU-B
 - ▭ SU-C
 - ⊔ TAUP
 - ⊔ Block
 - ▭ Community Forest
- Treatment**
- ▭ Windthrow Management Area
 - ⊔ Root Rot Management Area