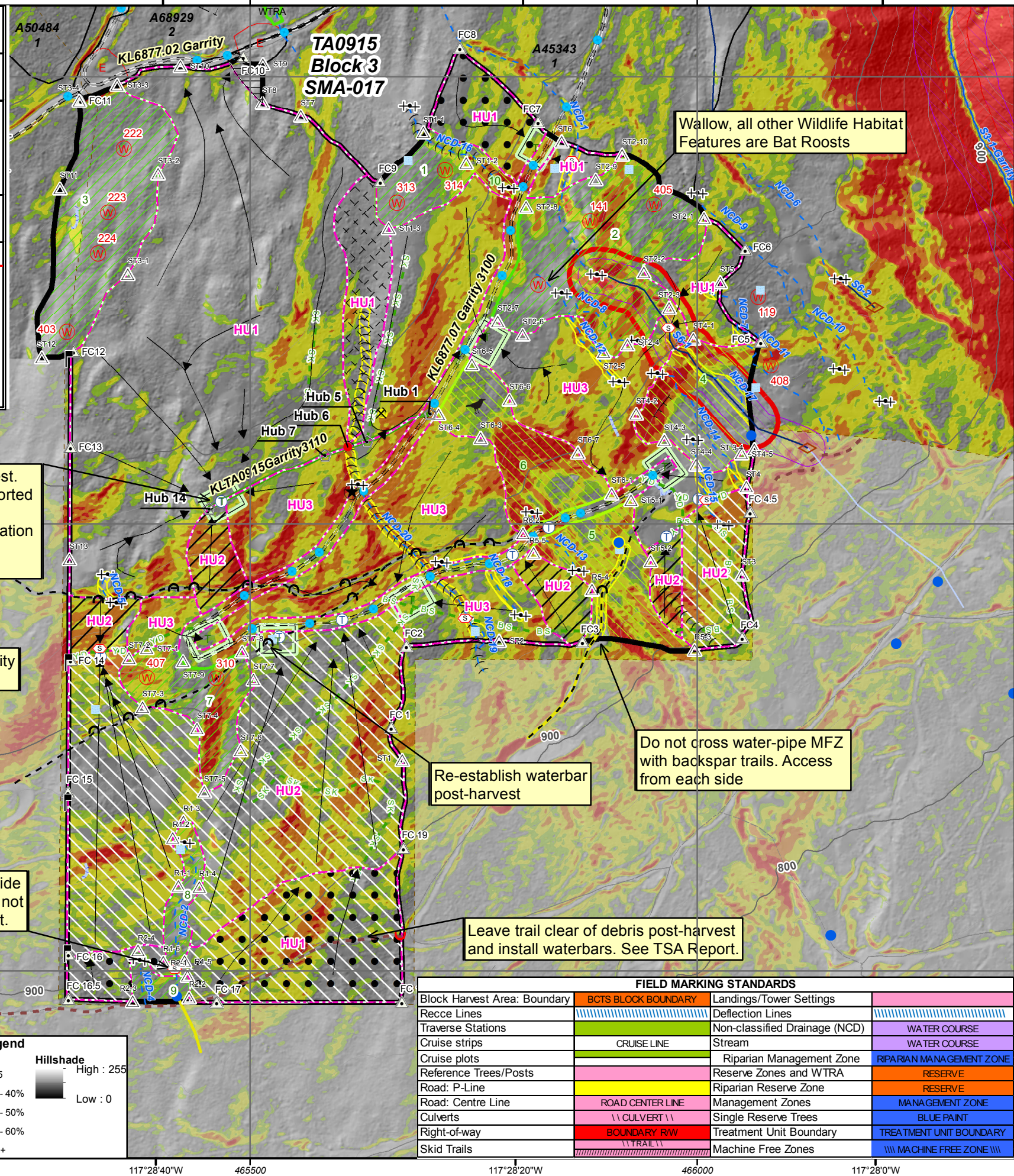


BLOCK AREA SUMMARY (ha)			
Harvest Method	Harvest Unit	Area	HU Area Summary
Ground	1	16.6	22.2
Ground + SMZ	1	1.2	
Ground + Hoe Chuck	1	1.0	
Skyline + Hoe Chuck	1	3.4	
Cable	2	1.8	12.7
Skyline	2	10.9	
Ground	3	9.3	9.3
Subtotal		44.2	44.2
WTRA		8.3	
Reserve		4.4	
Non Merch		0.1	
Roads		2.2	
TOTAL		59.2	



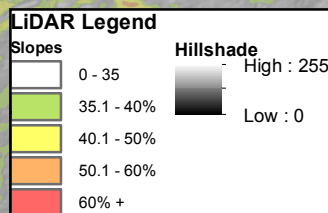
 BCTS BC Timber Sales	<h1>Harvest Plan Map</h1>	
TSL TA0915	Block ID 3	
Business Area Kootenay	UBI BF6GM	
Operating Area North Kootenay Lake	Location Smallwood	
Management Unit Kootenay Lake	FIZ G	
Gross Block Area (ha) 59.2	<div>Geographic Center</div> <div> <div>Latitude</div> <div>Longitude</div> </div> <div>49 29 24 117 28 29</div>	

CULVERT TABLE				Non-Merch	
HUB	Distance (m)	Size (mm)	Comments		Reserve
					WTRA
					Right of Way
					Other
KLTA0915Garritty3110 (Temporary, TEMP)					
1	0+000	-	POC Road		
6	0+098	450			
14	0+270	-	POT Road		

ALL Blocks

Block of Interest

RPF PRINTED NAME	RPF SIGNATURE & SEAL
Richard Cane, RPF	
DATE SIGNED	
Jul 27, 2020	
<p>I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to the standards expected of a member of the Association of British Columbia Forest Professionals.</p>	



FIELD MARKING STANDARDS			
Block Harvest Area: Boundary	BCTS BLOCK BOUNDARY	Landings/Tower Settings	
Recce Lines		Deflection Lines	
Traverse Stations		Non-classified Drainage (NCD)	WATER COURSE
Cruise strips	CRUISE LINE	Stream	WATER COURSE
Cruise plots		Riparian Management Zone	RIPARIAN MANAGEMENT ZONE
Reference Trees/Posts		Reserve Zones and WTRA	RESERVE
Road: P-Line		Riparian Reserve Zone	RESERVE
Road: Centre Line	ROAD CENTER LINE	Management Zones	MANAGEMENT ZONE
Culverts	\\ CULVERT \\	Single Reserve Trees	BLUE PAINT
Right-of-way	BOUNDARY R/W	Treatment Unit Boundary	TREATMENT UNIT BOUNDARY
Skid Trails	\\ TRAIL \\	Machine Free Zones	\\ \\ MACHINE FREE ZONE \\ \\

HARVEST PLAN: TA0915 - Block 3

Refer to the TSL Document, Site Plan, Support Document, Forest Stewardship Plan, Assessments, and Schedules for additional information.

HARVEST UNITS

HU	Harvest Method	Predominant Slope Range	Mean Slope	Slopes >35% but ≤ 60%	Slopes >60%
1	Ground and Skyline	15-55%	35%	About 1/2 of HU. Trails allowed except in SMZ. Two skid trails marked around SMZ.	Slopes are about 1% of HU. Trails possible. None planned. If trails are needed, an assessment re: soil conservation by a qualified professional is required beforehand.
2	Skyline and Cable	25-55%	40%	About 70% of HU. Trails allowed. One access trail marked in south. Backspar trails expected in SE. Yarder trail marked in W.	Slopes are about 5% of HU. Trails possible. None planned. If trails are needed, an assessment re: soil conservation by a qualified professional is required beforehand.
3	Ground	25-55%	40%	About 80% of HU. Trails allowed. Yarder trails marked in SE and W.	Slopes are about 5% of HU. Trails possible. None planned. If trails are needed, an assessment re: soil conservation by a qualified professional is required beforehand.

Steep Slopes: Limit machine use on slopes as per WorkSafe BC OHS Reg Part 26-16 (slope limitations). Refer to LiDAR slopes map. A safe work plan must be developed when working on steep slopes. Areas with shallow soils, rock outcrops and/or surficial rock may require hand falling.

Riparian Management Practices:

1.

Follow recommendations from the Terrain Stability Assessment and Soil Erosion Assessment Report (Section 5.0).

2.

Follow recommendations from the Hydrologic Assessment Report.

Reserves: Refer to Support Document Section “2(a). Reserves (Inside or attributed to the block)” for detailed operational requirements regarding extraction of IBD green-attack Fd stems.

LEAVE TREE SPECIFICATIONS

Table 1. - Layer 1 Reserved Timber ^{5,6}											
Merchantable											
Block	HU	Selection Priority ^{1, 5}	Species	Size	Stems per Hectare			Distribution ^{2, 3}			
				DBH Class(cm)	Target	Min	Max	S	G	I	R
3	1 Ground and Skyline	1 - All	Py	≥ 20	20 BA ⁷	17 BA	23 BA	Pref	Acc	Acc	Pref
		2	Fd	≥ 70							
			Lw								
			Pw								
			Cw								
			Bg								
			Hw								
			PI								
		3	Fd	≥ 35 but ≤ 65							
			Lw								
			Pw								
			Cw								
			Bg								
			Hw								
			PI								
		1 - All	At, Ep	≥ 20	95%	90%	100%	As Per Natural Distribution ⁹			
3	2 Skyline and Cable	1 - All	Py	≥ 20	35 st/ha	25 st/ha	45 st/ha	Acc As required for veteran or higher priority trees	Pref 2-10 groups/ha ⁸	Acc	Pref
		2	Fd	≥ 70							
			Lw								
			Pw								
			Cw								
			Bg								
			Hw								
			PI								
		3	Fd	≥ 35 but ≤ 65							
			Lw								
			Pw								
			Cw								
			Bg								
			Hw								
			PI								
		1 - All	At, Ep	≥ 20	90%	80%	100%	As Per Natural Distribution ¹⁰			

3	3 Ground	1 - All	Py	≥ 20	11 BA ⁷	7 BA	15 BA	Pref	Acc	Acc	Pref
		2	Fd	≥ 70							
			Lw								
			Pw								
			Cw								
			Bg								
			Hw								
			Pl								
		3	Fd	≥ 35 but ≤ 65							
			Lw								
			Pw								
			Cw								
			Bg								
			Hw								
Pl											
1 - All	At, Ep	≥ 20	95%	90%	100%	As Per Natural Distribution ⁹					

Table 2. - Other Reserved Timber ^{5,6}											
Non-Merchantable											
Block	HU	Location			Species	Layer	Stems per Hectare				
							Target		Min		
3	All	- Within 3m of all reserve trees - Within 5m of NCDs & streams			All	2, 3, 4	All existing		N/A		
Dead Trees to be Stubbed (where Mechanical Falling is utilized) ⁵											
Block	HU	Species	DBH Class (cm)	Stubbing Height	Stems per Hectare			Distribution ³			
					Target	Min	Max	S	G	I	R
3	All	Any	≥12.5	2-5m	4	0	6	X	X	X	X
Coarse Woody Debris											
Block	HU	Species	Size		Number per Ha		Distribution ³				
					Target	Min	S	G	I	R	
3	All	Any ¹²	Logs ≥2m in length & ≥7.5cm diameter at one end ¹¹		10 ⁴	4 ¹¹	X	X	X	X	

Table 1 & Table 2 Additional Requirements:

¹ Preference for leave trees must be given to larger diameter, fire resistant, more windfirm stems, free of obvious signs of health issues (bark beetle attack, thinning or yellowing crowns, mistletoe, or evidence of root rot). Preference for leave tree location adjacent to NCDs.

² Where groups of reserve trees are retained, lower-ranked and non-target species may be included, provided that the majority of trees retained are in accordance with the selection priority.

³ Distribution Types: S: Single Trees, G: Groups of Trees, I: Irregularly, R: Regularly.

⁴ Selection priority for larger diameter CWD to meet Chief Forester Guidance. Logs ≥10m in length & ≥20cm diameter at one end recommended. Refer to Silviculture Plan CWD Management Strategy Information.

⁵ Safety is a priority when conducting operations near reserved timber. Refer to TSL Schedule “A”, Section 2.00 regarding Dangerous Trees.

⁶ Refer to Schedule B Appendix I - 1.00 Table of Reserve Timber Abbreviations and Definitions.

⁷ Target stems have been marked in the field with blue paint. Except for skid trails, where removal is required for operational and safety requirements, marked trees should be exchanged for other leave trees meeting retention criteria on a 1:1 basis. Marking has been done to a slightly higher retention to accommodate for skid trails however minimum BA retention still needs to be met. Skid trail corridors should be kept to a minimum in terms of length, width, and placement.

⁸ Three examples of different group distribution, roughly achieving the Target of 35st/ha:
 2 groups/ha (with 17.5st/group) = Target approx. 70m between group centres.
 6 groups/ha (with 6st/group) = Target approx. 40m between group centres.
 10 groups/ha (with 3.5st/group) = Target approx. 30m between group centres.

⁹ The intent is to leave all (95%) of the trees meeting the specified criteria, except where precluded by operations or safety.

¹⁰ The intent is to leave nearly all (90%) of the trees meeting the specified criteria, except where precluded by operations or safety, acknowledging that cable yarding systems have more restrictive operating requirements than ground yarding systems.

¹¹ FPPR Section 68 requirements. Refer to Silviculture Plan CWD Management Strategy Information.

¹² Active IBD infestation in TSL. Do not retain green-attack Fd impacted stems as CWD. Avoid retaining larger green Fd stems as CWD to mitigate risk of perpetuating IBD infestation. Refer to Silviculture Plan CWD Management Strategy Information.