



BCTS

BC Timber Sales

Kamloops

SITE PLAN

KAMLOOPS

BC TIMBER SALES

Report Date 2017/12/20

TENURE IDENTIFICATION

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A93331	-	J18R6	BE8R6	92P067-0072		Bowers Lake	51 40 27 / 120 45 14

AREA UNDER THE PLAN

GROSS AREA (TAUP)	PAS	NP	WTRA / WTP	RESERVES	OTHER	NAR
26.2	0.9	0.0	5.6	0.0	0.0	19.7

ADDITIONAL COMMENTS

DEFINITIONS (ADD DEFINITIONS AS REQUIRED)
This Site Plan is consistent with the approved BCTS Kamloops Business Area 100 Mile House TSA Forest Stewardship Plan Extension dated March 31, 2012 and subsequent amendments to April 1, 2014.

SOIL DISTURBANCE

SU	Max. Allowable Soil Disturbance (%)	Max. Amount TAS May Exceed MASD Prior To Rehab (%)	Max. Allowable Soil Disturbance For Roadside Work Areas (%)	Maximum Permanent Access Structures (%)
1	10.0	1.1	25.0	3.4
SU	CRITICAL SITE CONDITIONS THAT AFFECT THE TIMING OF OPERATIONS, AND HOW THEY AFFECT THE TIMING			
1	The regional BEC mapping indicates that the north end of this block is within the SBSdw1. However, there is consistent balsam in the overstory, the understory is dominated by balsam, there is no wild sarsaparilla and there is only patchy distribution of pine grass. Therefore the entire block has been classified as the SBSmc1. It is expected that the SBSmc1 ecosystem is present on this site due to the northern aspect of the site. Harvest any season, avoid when soils are wet.			

RESULTS AND STRATEGIES

RESULT OR STRATEGY		HOW THE STRATEGY OR RESULT APPLIES TO THE SITE or RATIONALE (IF NOT APPLIED)
Cultural Heritage		Obj 1.15.1: This block exists within the Canim Lake Band, Neskonlith and Tsilhqot'in National Government areas of interest. Commitment has been made to retain 90% of the Douglas fir stems over 65cm, 90% of the aspen stems, 90% of the cottonwood stems and 90% of the birch stems. No referrals on this block were sent to the Neskonlith Indian Band or the Tsilhqot'in National Government as per 100 Mile House District direction and the Tsilhqot'in Framework agreement respectively. The values and themes presented in the Canim Lake Forest Stewardship Retention Plan for Snine Forest have been considered in the development of this block. No cultural heritage resources were found during any phase of development for this block. If any are found during harvest operations notify the TSM.
Invasive Plants		Obj 1.16.2.1: There are no known locations of invasive plants within 1km of this block but there are other known sites of invasive plants along the 8000Rd that provides access to this block. Ditch lines, cut or fill slopes and deactivated roads which are not reforested (except for active running surfaces) must be vegetated within 1 year of harvest completion using a seed or forage mixture that meets or exceeds Canada Common Number 1 Forage Mixture as defined by the Canada Seeds Act and Regulation.

Landscape Level Biodiversity		<p>This block is in the Interlakes (SRDZ) Forest Development Unit and the Bridge Lake Landscape Unit.</p> <p>Obj 1.11.1.1: This block is consistent with Section 64 and 65 of the FPPR. This block is less than 60ha and is not adjacent to any openings that are not greened-up. Timber harvesting is being carried out on the cutblock to recover timber damaged mountain pine beetle. The stand is 49% dead from all causes based on cruise gross merchantable basal area.</p> <p>Obj 1.11.1.2: The 2015 seral stage analysis for the SBSdw1 in the Bridge Lake Landscape unit indicated a surplus of 4800ha of Old + Mature seral and a surplus of 1572ha of Old seral. The 2015 seral stage analysis for the SBSmc1 in the Bridge Lake Landscape unit indicated a surplus of 844ha of Old + Mature seral and a surplus of 261ha of Old seral. Old targets throughout the area are deemed to have been met within spatially permanent OGMA's. The proposed harvest area is 20.5ha. This block does not overlap any OGMA's.</p> <p>The enhanced retention strategy has been considered for placement of stand level reserves.</p> <p>The most recent analysis of opening size for the Bridge Lake-NDT3-SBS unit is from 2007. Within age class 1 (0-20yrs), small size openings (0-80ha) represented 81% of the openings, moderate sized openings (81-250ha) represented 0% and large size openings (251+ha) represented 19%. The SRMP and Biodiversity update #4 indicated that the focus within this unit is on maintaining moderate or large sized Mature + Old or Old patches or recruiting for new moderate or large patches that may potentially become Mature + Old or Old patches in the future. A93331 Blocks JI8RO, JI8R3, JI8R4, JI8R5, JI8R6 and JI8R7 are within this unit. Blocks JI8RO, JI8R3 and JI8R6 will form independent small openings and will contribute to the small openings in the unit. Although the harvest pattern for these blocks does not contribute to moderate or large openings, there is no issues with connectivity or fragmentation currently within this landscape. Blocks JI8R4, JI8R5 and JI8R7 will combine with other openings that are less than 20 years old to form a single large opening (>250ha). The combined single opening is well over 250ha in size and will contribute to the large openings within the unit. The pattern of development has been determined by insect disturbance rather than patch size.</p> <p>Obj 1.11.1.3: Addressed by Obj 1.11.1.2</p> <p>Obj 1.11.1.4: Addressed by Objs 1.13.1 & 1.13.6.1</p> <p>Obj 1.11.1.5: Addressed by Obj 1.10.1.1, 1.11.1.2, 1.11.2.1, 1.12.2.2, 1.12.2.3, 1.12.2.4, 1.12.2.5, 1.12.2.6, 1.13.2.1, 1.13.3.1, 1.13.3.2 & 1.14.1 through 1.14.13.</p> <p>Obj 1.11.1.6: Applicable only in the Grasslands FDU</p> <p>Obj 1.11.1.7: This block is not within the grassland benchmark area.</p> <p>Obj 1.11.1.8: Addressed by Obj 1.10.1.1, Obj 1.12.2.7 is not applicable as the block is not in the Grasslands FDU</p>
Other Resources		<p>Obj 1.18.1: This stand has 49% mortality in an even aged stand based on the cruise gross merchantable basal area. The stand will be managed as an even aged plantation so it will be harvested as a clearcut with reserves. The harvesting will contribute to the conventional % targets for the Interlakes subunit.</p>
Range		<p>Obj 1.16.1.1: There are no range structures within the block.</p> <p>Obj 1.16.3.1: Addressed by Objs 1.16.1.1, 1.16.2.1 & 1.16.3.2. Range License: RAN073975 - Gun Granberg: No comments have been received from the tenure holder regarding this block.</p> <p>Obj 1.16.3.2: There are no range structures within the block.</p> <p>Obj 1.16.3.3: Addressed by Objs 1.16.1.1, 1.16.2.1 & 1.16.3.1</p>
Recreation		<p>Obj 1.12.1.1: There are no established recreation sites or trails impacted by this block.</p> <p>Obj 1.12.1.2: Addressed by Objs 1.12.1.1, 1.12.2.2, 1.12.2.3, 1.12.2.4, 1.12.2.5, 1.12.2.6, 1.12.2.7, 1.12.2.8, 1.12.2.9, 1.12.2.10, 1.12.2.11, 1.12.2.12, 1.13.3.1 & 1.17.1</p> <p>Obj 1.12.2.1: No input concerning noise in the backcountry was received for this block.</p> <p>Obj 1.12.2.2: Applicable only in the Boss/Deception FDU</p> <p>Obj 1.12.2.3: Applicable only in the Flat Lake FDU</p> <p>Obj 1.12.2.4: Addressed by Obj 1.13.3.1. There are no classifiable lakes impacted by this block. The in-block roads not required for silviculture access will be rehabilitated and planted following harvesting. The remaining in-block roads required for silviculture activities will be deactivated upon completion of harvesting activities.</p> <p>Obj 1.12.2.5: Applicable only in the Lang Lake/Schoolhouse FDU</p> <p>Obj 1.12.2.6: Applicable only in the Marble Range FDU</p> <p>Obj 1.12.2.7: Applicable only in the Grasslands FDU</p> <p>Obj 1.12.2.8: Applicable only in the Canim FDU</p> <p>Obj 1.12.2.9: Applicable only in the Rail FDU</p> <p>Obj 1.12.2.10: Applicable only in the Gustafson FDU</p> <p>Obj 1.12.2.11: Applicable only in the Loon FDU</p> <p>Obj 1.12.2.12: Applicable only in the Bonaparte FDU</p>

Riparian Management		<p>Obj 1.10.1.1: There is one classifiable riparian feature associated with this block. No road crossings are proposed on the stream.</p> <p>S6 stream (ID#7): There will not be harvesting in the RMA. The boundary is located 23-50m from the feature, providing 100% retention of the RMZ, which meets the FSP minimum target of 0-30%.</p> <p>Obj 1.10.1.2: There are no lakeshore management zones associated with this block.</p> <p>Obj 1.10.1.3: Addressed by Obj 1.10.1.1</p> <p>Obj 1.10.1.4: Applicable only in the Boss/Deception, Lang Lake/Schoolhouse & Rail FDU</p> <p>Obj 1.10.1.5: Applicable only in the Flat Lake FDU</p> <p>Obj 1.10.1.6: Addressed by Objs 1.10.1.1, 1.10.1.2, 1.11.1.2, 1.12.1.1, 1.13.1, 1.13.5.1, 1.13.6.1 & 1.13.8.1</p> <p>Obj 1.10.1.7: Applicable only in the Marble Range FDU</p> <p>Obj 1.10.1.8: Applicable only in the Canim FDU</p> <p>Obj 1.10.1.9: Addressed by Obj 1.10.1.1</p> <p>Obj 1.10.1.10: Addressed by Obj 1.10.1.1. There are no road crossings of wetlands proposed for the block or access road servicing this block.</p> <p>Obj 1.10.1.11: Addressed by Obj 1.10.1.1</p> <p>Obj 1.10.1.12: Applicable only in the Canim, Rail, Gustafson, Loon & Bonaparte FDU</p> <p>Obj 1.10.1.13: Applicable only in the Grasslands & Clinton FDU</p> <p>Obj 1.10.1.14: Addressed by Obj 1.9.2.1, 1.9.2.2, 1.9.2.3, 1.9.2.4 & 1.10.1.1</p>
Soil Management		<p>Obj 1.8.1: Harvesting must occur in a manner that dispersed soil disturbance does not exceed 10%.</p> <p>In-block roads that are designated as temporary access structures will be rehabilitated when harvesting is complete. Roads and bladed trails that are rehabilitated following harvest will be done in a manner sufficient to allow the establishment of a stand that will achieve the approved stocking standards for the opening. The roads in the block that are required for silviculture access and will be deactivated upon completion of harvesting activities. Bladed trails may be required to facilitate harvesting operations.</p> <p>Permanent access %: 0.89/26.17ha = 3.4% Temporary access %: 0.3ha/26.17ha = 1.1%</p>
Stand Level Biodiversity		<p>Obj 1.11.2.1: This opening is in the SBSmc1 and the SBSdw1 (NDT 3) within the Bridge Lake Landscape unit. The Bridge Lake LU requires 8% WTRAs within both the SBSmc1 and the SBSdw1. The block contains approximately 9.6% retention in the SBSdw1 and 28.0% retention in the SBSmc1. WTRAs were created to provide corridors adjacent to and through the block on streams and drainages.</p> <p>Retain all Douglas fir greater than 65cm DBH and less than 20cm DBH as well as all deciduous stems where they exist outside the roadside work area and where operationally safe to do so. A maximum of 10% of these stems may be harvested for safety or operational reasons.</p> <p>Retention of understory is required within this block. The understory in the block is light to moderate with variable distribution ranging from 0-1800 (avg. approx. 800) stems per hectare and is composed primarily of balsam with a small amount of spruce and Douglas fir. The slopes within the block range from 0 to 40% with an average of 20%. Retain the understory greater than 1.3m in minimum 5m x 5m patches where safely possible. Target 5-10 patches per ha. Preferred species of retention in order are Fd, Sx and Bl. Leave understory patches associated with other retention features such as stubs, machine free zones, leave trees or retention areas. Retention of understory is not expected within roadside processing areas.</p> <p>Stub a minimum of 5 to 8 larger diameter snags or deciduous stems per hectare at 3-5 meters in height. Target stems that have visible external defects such as broken tops, large dead limbs, fungal conks, cracks or scars. Due to slope and safety considerations, stub trees in groups of 4-5. Stub all dead boundary trees at 3-5m in height.</p> <p>Retain large blowdown logs on site that do not meet the merchantability criteria. Following harvesting there must be a minimum of 4 logs per hectare on the site, each being a minimum of 2m in length and 7.5cm in diameter.</p> <p>Obj 1.11.2.2: Applicable only in the Marble Range FDU</p>
Trappers and Guides		<p>Trapper: TR0501T007: Comments have been received from the trapper requesting deactivation of access roads within the TSL where possible. Access for silviculture has been considered and roads that are not required for silviculture will be deactivated or rehabilitated.</p> <p>Guide: 500940: No comments have been received from the guide regarding this block.</p>
Ungulate Winter Range		<p>Obj 1.13.3.1: This block is not within a defined mule deer winter range.</p> <p>Obj 1.13.3.2: Addressed by Obj 1.13.3.1</p>

Visual Objectives		<p>Obj 1.14.1: The entire block is in a visual quality polygon with a retention visual quality objective. A visual impact assessment was completed by DWB Consulting Services Ltd in January 2016 for the entire TSL. This block meets the intent of the retention visual quality objective.</p> <p>Obj 1.14.2: Applicable only in the Boss/Deception FDU.</p> <p>Obj 1.14.3: Applicable only in the Flat Lake FDU</p> <p>Obj 1.14.4: Addressed by Obj 1.10.1.1. This block does not impact the viewshed of any key lakes.</p> <p>Obj 1.14.5: Applicable only in the Lang Lake/Schoolhouse FDU</p> <p>Obj 1.14.6: Applicable only in the Marble Range FDU</p> <p>Obj 1.14.7: Applicable only in the Grasslands FDU</p> <p>Obj 1.14.8: Applicable only in the Clinton FDU</p> <p>Obj 1.14.9: Applicable only in the Canim FDU</p> <p>Obj 1.14.10: Applicable only to the Rail FDU</p> <p>Obj 1.14.11: Applicable only to the Gustafson FDU</p> <p>Obj 1.14.12: Applicable only to the Loon FDU</p> <p>Obj 1.14.13: Applicable only to the Bonaparte FDU</p> <p>Obj 1.14.14: Addressed by Obj 1.14.1, 1.14.2, 1.14.3, 1.14.4, 1.14.5, 1.14.6, 1.14.7, 1.14.8, 1.14.9, 1.14.10, 1.14.11, 1.14.12 & 1.14.13.</p> <p>Obj 1.14.15: TSL A93331 was part of an operating plan referral to stakeholders for the period 2016-2018 calendar years, with the referral process concluding in October of 2015. The operating plan was not referred to any specific visually sensitive resource users as none were known. The Recreation Sites and Trails 100 Mile House representative received the operating plan referral and didn't have any visual specific comments.</p> <p>Obj 1.14.16: This block is within the high elevation viewscape from the viewpoint south of Sulphurous lake. Due to topography, the block is not visible from the viewpoint.</p> <p>Obj 1.14.17: This block is not within a CCLUP LUO scenic corridor.</p>
Watersheds/Hydro Assessments		<p>Obj 1.9.1.1: Applicable only in the Clinton, Gustafson & Marble Range FDUs</p> <p>Obj 1.9.1.2: Applicable only in the Marble Range FDU</p> <p>Obj 1.9.2.1: This block is in the Hathaway Creek sub-basin of Bridge Creek and Bridge creek is considered a key watershed under the FSP.</p> <p>An assessment of the Hathaway creek sub-basin was conducted in the fall of 2015 and the sub-basin has a current ECA of 11.1% with an expected future ECA of only 13.1% based on planned development. No further watershed analysis is required at this time.</p> <p>Ensure drainage patterns are maintained throughout road building and deactivation.</p> <p>Obj 1.9.2.2: Applicable only in the Boss/Deception FDU</p> <p>Obj 1.9.2.3: Addressed by objective 1.9.2.1</p> <p>Obj 1.9.2.4: Applicable only in the Clinton & Loon FDUs</p> <p>Obj 1.9.2.5: This block is not within the Horsefly or Bonaparte watersheds. Also addressed by Objs 1.9.2.1, 1.9.2.2 & 1.9.2.3</p>
Wildcraft and Access Management		<p>Obj 1.17.1: The percentage of the Interlakes FDU to maintain roaded access for Wildcraft activities is 70%. The in-block roads not required for silviculture access will be rehabilitated and planted following harvesting. The remaining in-block and access roads required for silviculture activities will be deactivated. The deactivated roads will provide access to this area for wildcraft along with the currently existing permanent roads.</p> <p>Obj 1.17.2: Applicable only in the Boss/Deception FDU</p> <p>Obj 1.17.3: Applicable only in the Flat Lake FDU</p> <p>Obj 1.17.4: Applicable only in the Boss/Deception FDU</p> <p>Obj 1.17.5: Applicable only in the Flat Lake FDU</p> <p>Obj 1.17.6: Applicable only in the Lang Lake/Schoolhouse FDU</p> <p>Obj 1.17.7: Applicable only in the Flat Lake FDU</p> <p>Obj 1.17.8: Applicable only in the Boss/Deception & Lang Lake/Schoolhouse FDUs</p>

Wildlife/Endangered Species		<p>Obj 1.13.1: All of the Results and Strategies under Riparian Management (1.10), Landscape Level Biodiversity (1.11.1) and Stand Level Biodiversity (1.11.2) will be applied to meet this objective.</p> <p>Obj 1.13.1.1: Addressed by Objs 1.10.1.1. & 1.9.2.1</p> <p>Obj 1.13.1.2: Addressed by objective 1.10.1.1. This block is not within the Bonaparte River watershed.</p> <p>Obj 1.13.1.3: Applicable only in the Grasslands, Clinton & Marble Range FDU</p> <p>Obj 1.13.1.4: Applicable only in the Boss/Deception FDU</p> <p>Obj 1.13.1.5: Addressed by objs 1.12.2.8 & 1.14.9. None of the lakes listed under the Result and Strategy are impacted by this block.</p> <p>Obj 1.13.1.6: Applicable only in the Lang Lake/Schoolhouse FDU</p> <p>Obj 1.13.1.7: Applicable only in the Canim FDU</p> <p>Obj 1.13.1.8: This block does not propose to harvest any areas defined as critical fish habitat.</p> <p>Obj 1.13.2.1: Applicable only in the Boss/Deception & Canim FDU</p> <p>Obj 1.13.2.2: Applicable only in the Boss/Deception & Canim FDU</p> <p>Obj 1.13.2.3: Applicable only in the Boss/Deception & Canim FDU</p> <p>Obj 1.13.4.1: Addressed by Obj 1.10.1.1 & 1.11.1.2</p> <p>Obj 1.13.4.2: Addressed by Obj 1.10.1.1, 1.11.1.2 & 1.11.1.5. There are no classifiable wetlands associated with this block.</p> <p>Obj 1.13.4.3: Addressed by Objs 1.10.1.1, 1.11.1.2, 1.13.4.2, 1.17.4, 1.17.6 & 1.17.7. The in-block roads not required for silviculture access will be rehabilitated and planted following harvesting. The remaining in-block roads required for silviculture activities will be deactivated upon completion of harvesting activities.</p> <p>Obj 1.13.4.4: Applicable only in the Canim FDU</p> <p>Obj 1.13.5.1: Addressed by Objs 1.10.1.1 & 1.11.1.2.</p> <p>Obj 1.13.6.1: Addressed by Objs 1.13.1, 1.13.3.1 & 1.13.4.3</p> <p>Based on a search of the BC Species and Ecosystems Explorer, there are 8 blue and red listed animal species that may be associated with this block including Great Blue Heron, Olive-sided Flycatcher, Wolverine, Barn Swallow, Jutta Arctic chermocki subspecies, Fisher, Grizzly Bear and whitebark pine. No species at risk were identified within this block during fieldwork. If species at risk are identified during operations, notify the TSM.</p> <p>Obj 1.13.7.1: Applicable only in the Marble Range FDU</p> <p>Obj 1.13.8.1: Addressed by Objs 1.10.1.1, 1.11.1.2, 1.11.1.4, 1.13.4.3, 1.17.4 & 1.17.5.</p> <p>Obj 1.13.8.2: The block is not classified as a Grizzly bear habitat area. No brush will be retained along the roadsides as all the proposed roads within the harvest area will be required for roadside decking areas.</p> <p>Obj 1.13.8.3: Objective is not applicable to this block as the block is not in a moderate, high or very high capability Grizzly bear habitat area.</p>
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STOCKING REQUIREMENTS

SU	NAR	STANDARDS ID #	OTHER PERFORMANCE STANDARDS
1	19.7	1021124	FDI - restricted to northern portion of biogeoclimatic unit in region. FDI - limited by growing-season frosts. SX, BL - limited by moisture deficit. MITD may be reduced to 1.6m where planting takes place on hydric, sub-hydric or mechanically site prepared sites. Max. density will be 25,000 stems per hectare where stands are greater than 80% pine by stem count, otherwise max. density will be 10,000 stems per hectare. Broadleaf species will be utilized in the stocking standards only in accordance with the Chief Forester's memorandum Re: silviculture prescription submissions that include broadleaf species dated August 22, 2000.

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL		NO

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
Kevin Bedford	
DATE SIGNED	
Dec 20, 2017	
I certify that the work described herein fulfils standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.	

Map attached forms an integral part of the site plan.

SUPPORT DOCUMENT

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A93331	-	JI8R6	BE8R6	92P067-0072		Bowers Lake	51 40 27 / 120 45 14

ASSESSMENTS

VISUAL IMPACT ASSESSMENT INFORMATION							
This block is in a visual quality polygon with a retention visual quality objective. A visual impact assessment was completed by DWB Consulting Services Ltd in January 2016 for the entire TSL. This block meets the intent of the retention visual quality objective.							
PEST INCIDENCE SURVEY INFORMATION							
Pest Specific Comments							
IBM mortality on the lodgepole pine is 96% (based on gross cruise basal area).							
Forest Health Comments							
The mature pine is dead due to mountain pine beetle but no active beetle was noted. Low pest incidence is expected in the post-harvest plantation.							
ARCHAEOLOGICAL IMPACT ASSESSMENT INFORMATION							
TERRAIN STABILITY FIELD AND GULLY ASSESSMENTS INFORMATION							
Terrain Stability Comments							
There is a mapped terrain class 5 polygon to the north and west of this block. No terrain stability indicators were noted during the fieldwork. Ensure drainage patterns are maintained throughout the block as this block may exist on flat over steep terrain.							
Gully Comments							
VEGETATION							

RIPARIAN ASSESSMENTS							
Management Strategies							
The harvest area of the block does not enter the RMA of any classifiable riparian features.							
Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)		
7 S6	RMZ		20.0		There will not be harvesting in the RMA. The boundary is located 23-50m from the feature, providing 100% retention of the RMZ, which meets the FSP minimum target of 0-30%.		
SOIL ASSESSMENT							
HAZARD RATINGS				SOIL CHARACTERISTICS			
SU	Soil Comp	Soil Erosion	Soil Disp	Depth To Unfavourable Subsoil		Type of Unfavourable Subsoil	Sediment Delivery Risk (Community Watersheds)
				Min(cm)	Max(cm)		
1	H	M	M				
COMMENTS							
Soils are medium textured throughout the block with low amounts of coarse fragments. Small areas of bedrock exist within the block that creates the potential for scalping. Harvest in any season, avoid when soils are wet. Avoid concentration of water with skidding and road building activities. Monitor disturbance throughout the block if harvesting is conducted under non-frozen soil conditions.							

RESERVE / RETENTION INFORMATION

WTRA / WTP (INSIDE OR ATTRIBUTED TO THE BLOCK)							
I.D.#	Area	Description					
WTRA	5.6						
GROUP WTRA / WTP AND SITE DEG. CALCULATION (to be retained on the first block of the Permit only)							
Block	Gross Cutblock Area	WTRA / WTP	%	BEC	Perm Access	%	
JI8QZ	8.4	0.8	9.9	SBS/dw/1	0.4	4.8	
JI8R1	8.6	1.5	17.8	SBS/mc/1	0.3	3.1	
JI8R3	3.9	0.0	0.0	SBS/dw/1	0.0	0.0	
JI8R4	34.2	5.6	16.4	SBS/dw/1	1.7	5.1	
JI8R5	9.2	1.3	14.5	SBS/dw/1	0.4	4.1	
JI8R6	26.2	5.6	21.5	SBS/mc/1	0.9	3.4	
JI8R7	62.2	8.3	13.3	SBS/mc/1	2.4	3.9	
JI8R8	103.0	23.0	22.3	SBS/mc/1	4.8	4.6	
JI8RO	2.3	0.7	28.6	SBS/dw/1	0.0	0.0	
Total # of Blocks: 9	258.1	46.9	18.2		10.9	4.2	

SUPPORTING INFORMATION

HLP/FSP CONSIDERATIONS
Wildlife/Endangered Species Comments
<p>This opening is in the SBSmc1 and the SBSdw1 (NDT 3) within the Bridge Lake Landscape unit. The Bridge Lake LU requires 8% WTRAs within both the SBSmc1 and the SBSdw1. The block contains approximately 9.6% retention in the SBSdw1 and 28.0% retention in the SBSmc1. The 2015 seral stage analysis for the SBSdw1 in the Bridge Lake Landscape unit indicated a surplus of 4800ha of Old + Mature seral and a surplus of 1572ha of Old seral. The 2015 seral stage analysis for the SBSmc1 in the Bridge Lake Landscape unit indicated a surplus of 844ha of Old + Mature seral and a surplus of 261ha of Old seral. Old targets throughout the area are deemed to have been met within spatially permanent OGMAs. The proposed harvest area is 20.5ha. This block does not overlap any OGMAs.</p> <p>The in-block roads not required for silviculture will be rehabilitated following harvesting. The remaining in-block roads required for silviculture activities will be permanently deactivated.</p> <p>There are no high value moose wetlands associated with this block.</p> <p>This block is not within a defined ungulate winter range and a 200m dash distance has been maintained.</p> <p>Based on a search of the BC Species and Ecosystems Explorer, there are 8 blue and red listed animal species that may be associated with this block including Great Blue Heron, Olive-sided Flycatcher, Wolverine, Barn Swallow, Jutta Arctic chermocki subspecies, Fisher, Grizzly Bear and whitebark pine. No species at risk were identified within this block during fieldwork. If species at risk are identified during operations, notify the TSM.</p> <p>The fisher spatial tool was applied to this blocks to assess or identify the status of fisher habitat (specifically, denning and resting at stand and landscape scales). Site recommendations for Type 1 stands (shown to be used 75% of the time by radio tagged fishers for the specified habitat need) were examined for landscape warnings. Polygon 190592 has a very small overlap into the WTRAs in this block. This polygon is a Type 1 with deficits of Rust Broom trees. Polygons 579/4995/4996 are all in Type 2 habitat and have no landscape warnings. Due to the very small overlap with the Type 1 habitat, no additional management is required.</p> <p>According to the BCTS Migratory Bird Strategy (2016) - Nest Density Risk Rating tool, this block is ranked in the mod-high (Rank 4) category. Based on the Forest Health guidance the block is less than 75% pine with good understory so it remains in the mod-high (Rank 4) category. Retention has been placed in strategic locations within the block on the higher ranked polygons as a best management practice. No further management has been applied during the pre-harvest development. If a previously unidentified migratory bird species or its nest is encountered during harvesting, road construction, or a silviculture activity associated with this Site Plan, the Timber Sales Manager (TSM), will require that the operations cease to the extent necessary to protect the affected migratory bird species or nest until alternative BMP's can be implemented to minimize or prevent the risk of incidental take.</p>
Range Comments
<p>There are no range structures within this opening.</p>
Fisheries Comments
<p>There are no fish bearing waters impacted by this block. An S6 stream (ID#7) exists along the eastern boundary of this block. The entire RMA of the feature has been retained to mitigate against any potential impacts.</p>
Watersheds/Hydro Assessments Comments
<p>This block is in the Hathaway Creek sub-basin of Bridge Creek and Bridge creek is considered a key watershed under the FSP.</p> <p>An assessment of the Hathaway creek sub-basin was conducted in the fall of 2015 and the sub-basin has a current ECA of 11.1% with an expected future ECA of only 13.1% based on planned development. No further watershed analysis is required at this time.</p> <p>Ensure drainage patterns are maintained throughout road building and deactivation.</p>
Sensitive Areas Comments
<p>None known for this block.</p>
Recreation Comments
<p>No recreational features are impacted by this block.</p>
Cultural Heritage Comments
<p>No cultural heritage features are known to exist within the block.</p>
Biodiversity Emphasis/L.U. Comments
<p>This opening is in the SBSmc1 and the SBSdw1 (NDT 3) within the Bridge Lake Landscape unit. The Bridge Lake LU requires 8% WTRAs within both the SBSmc1 and the SBSdw1. The block contains approximately 9.6% retention in the SBSdw1 and 28.0% retention in the SBSmc1.</p> <p>The 2015 seral stage analysis for the SBSdw1 in the Bridge Lake Landscape unit indicated a surplus of 4800ha of Old + Mature seral and a surplus of 1572ha of Old seral. The 2015 seral stage analysis for the SBSmc1 in the Bridge Lake Landscape unit indicated a surplus of 844ha of Old + Mature seral and a surplus of 261ha of Old seral. Old targets throughout the area are deemed to have been met within spatially permanent OGMAs. The proposed harvest area is 20.5ha. This block does not overlap any OGMAs.</p>
Other Resources Comments
ADDITIONAL COMMENTS:

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL		NO

SOIL MANAGEMENT COMMENTS
Soil Conservation
Soils are medium textured throughout the block with low amounts of coarse fragments. Small areas of bedrock exist within the block that creates the potential for scalping. Harvest in any season, avoid when soils are wet. Avoid concentration of water with skidding and road building activities. Monitor disturbance throughout the block if harvesting is conducted under non-frozen soil conditions.
Temporary Access
In-block roads that are designated as temporary access structures must be rehabilitated when harvesting is complete. Roads and bladed trails that are rehabilitated following harvest will be done in a manner sufficient to allow the establishment of a stand that will achieve the approved stocking standards for the opening. Bladed trails may be required to facilitate harvesting.
Slope Instability
There is a mapped terrain class 5 polygon to the north and west of this block. No terrain stability indicators were noted during the fieldwork. Ensure drainage patterns are maintained throughout the block as this block may exist on flat over steep terrain.

RIPARIAN ASSESSMENTS					
Management Strategies					
The harvest area of the block does not enter the RMA of any classifiable riparian features.					
Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
7 S6	RMZ		20.0		There will not be harvesting in the RMA. The boundary is located 23-50m from the feature, providing 100% retention of the RMZ, which meets the FSP minimum target of 0-30%.

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION		
<p>There is a low to moderate amount of coarse woody debris currently on the site due to the deterioration of the stand and blowdown of the dead pine on the site. Retention of all Douglas fir stems over 65cm DBH, all deciduous stems and stubs will provide a limited amount of long term coarse woody debris.</p> <p>CWD:</p> <p>1) Retain all Douglas fir greater than 65cm DBH and less than 20cm DBH as well as all deciduous stems where they exist outside the roadside work area and where operationally safe to do so. A maximum of 10% of these stems may be harvested for safety or operational reasons.</p> <p>2) Stub a minimum of 5 to 8 larger diameter snags or deciduous stems per hectare at 3-5 meters in height. Target stems that have visible external defects such as broken tops, large dead limbs, fungal conks, cracks or scars. Due to slope and safety considerations, stub trees in groups of 4-5. Stub all dead boundary trees at 3-5m in height.</p> <p>3) Retain large blowdown logs on site that do not meet the merchantability criteria. Following harvesting there must be a minimum of 4 logs per hectare on the site, each being a minimum of 2m in length and 7.5cm in diameter.</p>		
Performance Std. (%) :	Block Target (%) :	Coarse Woody Debris (m3/ha):

DEFINITIONS

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL		NO

Print off the PAS/TAS table located as an attachment on the Block Details Screen and attach to this prescription.

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
Kevin Bedford	
DATE SIGNED	
Dec 20, 2017	
I certify that the work described herein fulfils standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.	

SILVICULTURE PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A93331	-	Jl8R6	BE8R6	92P067-0072		Bowers Lake	51 40 27 / 120 45 14

ECOLOGICAL INFORMATION

SU	Ecology Unit	Area	Zone	Subzone	Variant / Phase	Site Series (series - %)	Elevation Avg (m)	Slope Avg (%)	Aspect	Slope Position	Rooting Depth (cm)	Soil Texture
1	1	19.7	SBS	mc	1	01-100	1,400	20	N	Middle Slope	40	L

STOCKING REQUIREMENTS				
ASSESSMENT DATES				
Standard Unit	Standards ID	Regen Delay (yrs)	Freegrow Early (yrs)	Freegrow Late (yrs)
1	1021124	7		20
Min/Max Elevation Regime: 1340 / 1460				

SU : 1 REGENERATION LAYER									
PREFERRED SPECIES			ACCEPTABLE SPECIES			POST SPACING DENSITY(sph)		MAX CONIFEROUS (sph)	
Species		Min Ht. (m)	Footnotes	Species		Min Ht. (m)	Footnotes	Min	Max
Fdi	Douglas Fir - Interior	1.0		BI	Subalpine Fir	0.8		WELL SPACED TREES (sph)	
Sx	Hybrid Spruce (SE x SW)	0.8						Target Pref/Acc	Minimum Pref/Acc
Pli	Lodgepole Pine - Interior	1.6						1200	700
								Minimum Pref	
								Min Horizontal Dist. Pref/Acc (m)	
								600	
								2.0	
								Height Relative to Competition (%)	
								150	

OTHER REQUIRED STOCKING INFORMATION

ACTIVITIES

SILVICULTURE ACTIVITY COMMENTS	
ACTIVITY	COMMENT

MANAGEMENT STRATEGY

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION
There is a low to moderate amount of coarse woody debris currently on the site due to the deterioration of the stand and blowdown of the dead pine on the site. Retention of all Douglas fir stems over 65cm DBH, all deciduous stems and stubs will provide a limited amount of long term coarse woody debris. CWD: 1) Retain all Douglas fir greater than 65cm DBH and less than 20cm DBH as well as all deciduous stems where they exist outside the roadside work area and where operationally safe to do so. A maximum of 10% of these stems may be harvested for safety or operational reasons. 2) Stub a minimum of 5 to 8 larger diameter snags or deciduous stems per hectare at 3-5 meters in height. Target stems that have visible external defects such as broken tops, large dead limbs, fungal conks, cracks or scars. Due to slope and safety considerations, stub trees in groups of 4-5. Stub all dead boundary trees at 3-5m in height. 3) Retain large blowdown logs on site that do not meet the merchantability criteria. Following harvesting there must be a minimum of 4 logs per hectare on the site, each being a minimum of 2m in length and 7.5cm in diameter.
Performance Std. (%): Block Target (%): Coarse Woody Debris (m3/ha):

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL		NO

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
Kevin Bedford	
DATE SIGNED	
Dec 20, 2017	
I certify that the work described herein fulfils standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.	