A. PROJECT IDENTIFICATION		
PROJECT ID AND UNIT ID: Baker Creek - #32	LAND OR TENURE HOLDER: Crown	Date: January 18, 2024
UTM (Z10): FTU BC-1 E 529,000 N 5,868,100 FTU BC-2 E 528,950 N 5,867,650	GEOGRAPHIC DESCRIPTION: West Quesnel (West Fraser) – Peterbrook Rd	
HIGHER-LEVEL PLAN(s): Cariboo-Chilcotin Regional Land Use Plan (CCLUP) Quesnel Sustained Resource Management Plan (SRMP)	MAP REFERENCE NUMBER: 093B098 GROSS AREA: 82.70 ha NET AREA: 82.70 ha	

B. FUEL TREATMENT PROJECT DESCRIPTION			
OBJECTIVE:	☒ Public Safety	☐ Range Improvement	☒ Ecosystem Restoration
	☒ Recreation	☒ Wildlife Habitat	☐ Other:

The Baker Creek area is approximately 3 km west of Quesnel, north of Marsh Road / Peterbrook road communities, directly south of Baker Creek. It is currently within the West Fraser Timber operating area, slated to become part of the City of Quesnel Community Forest. It is identified as FTU 32 in the Quesnel and Surrounding Area Community Wildfire Protection Plan.

The treatment area is densely forested, primarily mature Douglas-fir, spruce, aspen and significant patches of remnant dead and downed beetle killed lodgepole pine. The proposed treatments are designed to emulate the natural effect of a fire event on the landscape. This is accomplished by utilizing mechanical and hand treatments to reduce the current fuel load, and open the stand to a maximum of 6 metre crown spacing. The targeted stand condition will help to reduce potential ignition sources, reduce severity of potential fire behaviour, increasing fire suppression opportunities and fire crew safety.

Specific objectives for these fuel management treatments are:

- To help protect the communities around Marsh/Peterbrook roads, and the City of Quesnel.
- To maintain a forested ecosystem within the Fuel Treatment Unit (FTU).
- To improve forest stand resilience to wildfire impacts through by reducing the wildfire threat.
- To retain and enhance unique wildlife habitat features located in this area.
- To adhere to OGMA and Mule Deer Winter Range objectives for the project area.
- To protect other resource values.

The intent of this prescription is to modify and reduce the fuel structure to help create a fire resilient stand with reduced fire behaviour, if a wildfire occurs.

STRATEGIES:

The fuel management activities will be controlled by the following main principles:

1. Conducting fuel management activities that will reduce potential wildfire impacts and improve the overall health of the local forest ecosystems.
2. Retention of high-quality wildlife trees, where present and in safe locations, to maintain wildlife habitat and vertical structure, and future recruitment of large coarse woody debris.
3. Retention of primary old seral forest characteristics in the OGMA.
4. Retention and minimal disturbance of the forest duff layer, herbs, grasses and deciduous shrubs that provide the surface cover.
5. Retention of a portion of the healthy advanced regeneration of conifers.

METHODS:	The primary method to increase crown spacing / reduce crown bulk density is to remove standing trees, targeting less windfirm spruce, with Douglas-fir as a secondary target, if necessary to meet goals. Spruce is also more prone to throwing embers, making it a greater hazard during a crown fire. Trees can be retained in clumps with canopy spacing of up to 6 metres between clumps. To further reduce crown bulk density, ladder fuels will be reduced by pruning dominant trees, space immature stems away from the dripline of dominant trees, space stems in immature patches, remove standing dead fuels, brush dead woody vegetation. Danger trees will be assessed by a certified hand faller and/or properly documented with 'No Work Zone' areas. Heavy concentrations of large surface fuels will be targeted for removal from site. Remaining surface fuels, existing and created from treatment, will be piled and burned. In areas of thick coniferous regen, stems will be spaced and pruned to create a more open stand with fewer, more vigorous trees, and a higher crown base height. Surface fuels vary throughout the project area, ranging from low to moderate.

C. FUEL TREATMENT UNIT (FTU) SUMMARY

FTU	NET AREA (ha)	GROSS AREA (ha)	MFZ AREA (ha)	TREATMENT REGIME (PRU, THIN, Rx BURN, etc.)	TREATMENT METHOD		
					HAND	MACHINE	FIBRE REMOVAL
BC-1	71.2	71.2	0.5	Prune, Space, Piling, Pile Burning, (Fibre Removal).	☐ Preferred ☒ Acceptable ☐ Unsuitable	☒ Preferred ☐ Acceptable ☐ Unsuitable	☒ Obligated/Compulsory ☐ Acceptable ☐ Not applicable
BC-2	8.6	8.6	0.0	Prune, Space, Piling, Pile Burning.	☐ Preferred ☒ Acceptable ☐ Unsuitable	☐ Preferred ☒ Acceptable ☐ Unsuitable	☐ Obligated/Compulsory ☒ Acceptable ☐ Not applicable
BC-AMU	2.8	2.8	0.0	Monitor	Previously harvested; Free growing; Monitor for future implementation.		
TOTALS	82.6	82.6	0.0				

D. SITE CHARACTERISTICS

FTU	CFFBPS FUEL TYPE	TIMBER TYPE	BGC Classification (Zone/SZ, Site Series)	ELEVATION RANGE (m)	SLOPE POSITION	SLOPE RANGE (%)	ASPECT RANGE	RATE of SPREAD (m/min)
BC-1	C7	Fd_6Sx_3(PlEp)	SBSdw1 05_8 (32078) 03_2 (32076)	680-790	Upper	0-45	85-310	
BC-2	C7	$Pl_4Fd_3Sx_2$(At)	SBSdw1 04 (32077)	730-765	Mid	3-10	110-160	
BC-AMU	C4	Pl(Fd)	SBSdw1 05	770-785	Mid	5-20	Level	

FUEL TYPE DETERMINATION	Fuel type was determined based on the ground-truthing and sample plot stand measurement data, while also referencing the BC Wildfire Fuel Typing and Fuel Type Layer Descriptions. The 'Best Fit Scenario' is being utilized on a landscape level, due to assumptions and limitations of this fuel typing method.
REPRESENTATIVE WEATHER STATION	Hixon Wx (187)

E. SOIL CHARACTERISTICS							
FTU	SOIL TEXTURE	DUFF DEPTH (cm)	COARSE FRAGMENTS (%)	SOIL DISTURBANCE LIMIT (%)	SOIL HAZARD RATING		
					Compaction	Erosion	Displacement
BC-1	SL	5-12	15-35	5	Moderate	Moderate	Low
BC-2	SL	3-5	15-25	5	Moderate	Moderate	Moderate

F. VALUES – *FOREST AND RANGE PRACTICES ACT*				
***Note** – The following values were identified through a combination of field verification and iMap BC. All digital data was reviewed in June 2023. Field data was collected through May-August 2023.				
RIPARIAN & LAKESHORE AREAS - Forest Planning and Practices Regulation (FPPR) division 3, Government Action Regulation (GAR) section 6, Forest and Range Practices Act (FRPA) sections 180 and 181				
Is the proposed burning, cutting, modification or removal of trees, or site preparation, in an area that contains streams, lakes or wetlands?	Yes ☐ No ☒			No riparian features were found during field surveys within this treatment area.
RIPARIAN MANAGEMENT AREAS (RMAs) – FPPR sections 51 and 52				
STREAM, LAKE, WETLAND ID	CLASS	RRZ (m)	RMZ (m)	SPECIFICATIONS FOR RIPAIRAN OR LAKESHORE MANAGEMENT AREAS
Not Applicable				
TEMPERATURE SENSITIVE STREAMS - FPPR section 53, GAR section 15, FRPA sections 180 and 181				
Are there temperature sensitive streams or direct tributaries to temperature sensitive streams within or adjacent to the proposed treatment area?	Yes ☐ No ☒			There are no temperature sensitive streams.
ROAD CONSTRUCTION IN RIPARIAN MANAGEMENT AREAS - FPPR section 50				
Is road construction proposed in riparian management areas within the treatment area or an associated road permit (RP)?	Yes ☐ No ☒			N/A
STREAM CROSSINGS - FPPR section 55				
Will stream crossings be constructed within the proposed treatment area or a road permit road providing access to the treatment area?	Yes ☐ No ☒			N/A

MAINTAINING STREAM BANK AND CHANNEL STABILITY ON S4, S5, and S6 STREAMS - FPPR section 52 (2)		
Is the proposed treatment in the RMZ of an S4, S5 or S6 stream that is directly tributary to an S1, S2 or S3 stream and the activity is likely to contribute significantly to the destabilization of the stream bank or the stream channel?	Yes ☐ No ☒	There are no classed streams in this treatment unit.
DOMESTIC WATER LICENCES (inside or outside of community watershed) - FPPR section 59		
Does the proposed treatment area contain water sources that are diverted for human consumption by a licensed waterworks?	Yes ☐ No ☒	There are no diverted water sources.
LICENCED WATER WORKS (inside or outside of a community watershed) - FPPR section 60		
Does the proposed treatment include areas that are within 100m of a licensed waterworks?	Yes ☐ No ☒	There are no licensed waterworks within 100m. There is an active water works north of the prescription area – Line_ID 592771997. The associated point of diversion is PD40645.
FISHERIES SENSITIVE WATERSHED - GAR section 14, FPPR section 8.1		
Are any activities proposed within a fisheries sensitive watershed?	Yes ☐ No ☒	Not within a fisheries sensitive watershed.
COMMUNITY WATERSHED - GAR section 8, FPPR section 8.2, 61, 62 and 84		
Does the proposed treatment area include areas that are within a community watershed?	Yes ☐ No ☒	Not within a community watershed.
Will this project require road or guard construction or deactivation within a community watershed?	Yes ☐ No ☒	N/A
WATERSHED ASSESSMENT CONSIDERATIONS - FRPA section 180 areas with "significant watershed sensitivity".		
Does the proposed treatment area include areas that have watershed assessment considerations?	Yes ☐ No ☒	Using the following definition from the document Fisheries Sensitive Watershed: Default-objectives and Designation Procedure (Dec 2017): "Therefore, for the purposes of defining sensitivity under the GAR and EPMR, the term means susceptibility to an impact(s) or alteration(s) that potentially can cause an adverse effect to the fisheries values and fish habitat associated with the watershed." No Fisheries Sensitive Watersheds were identified in the project area. No other areas with watershed assessment considerations were found. Further, proposed treatment activities will not have a negative effect upon watershed integrity and will likely create a net benefit from protecting against the negative impacts of a wildfire.

SOIL DISTURBANCE AND PERMANENT ACCESS STRUCTURES - FPPR sections 35 and 36				
Fuel Treatment Unit	Proposed Max. Allowable Soil Disturbance (%) (5% or 10%)	Proposed Max. Soil Disturbance for Roadside Work Areas (%)	Proposed Max. Permanent Access Structures (%)	Comments:
BC1, BC2, BC3	5	25	0	No access structures will be constructed.
Do the proposed Permanent Access Structures exceed 7% of the total area?	Yes ☐ No ☒	N/A		
LANDSLIDES AND TERRAIN STABILITY - FPPR section 37				
Does the proposed treatment area include areas where terrain stability is a concern?	Yes ☐ No ☒	The treatment area does not include identified terrain stability polygons.		
SUITABLE SECONDARY STRUCTURE - FPPR section 43.1				
Does the proposed treatment area include a "targeted pine leading stand"?	Yes ☐ No ☒	The treatment area does not include a targeted pine leading stand.		
UNGULATE WINTER RANGE - GAR section 12, FRPA sections 180 and 181, FPPR section 69				
Does the proposed treatment area include areas within an Ungulate Winter Range?	Yes ☒ No ☐	There is minor overlap (2.2 ha) with a mule deer winter range polygon, # - dqu-8. Proposed treatments are consistent with the GAR Order #U-5-001 (Transition and Deep Snowpack). The treatment area occurs in the low habitat structure class in transition snowpack zone, in the SBS dw1 zone. The UWR order is a requirement for conventional harvest. The prescription is select tree harvest, for the purposes of wildfire risk reduction (WRR). While it is believed that the prescribed treatments will not be in conflict with mule deer winter range habitat retention, the measurables in the order are confusing and difficult to transcribe to measurables for stem removal within Wildfire Risk Reduction. Therefore, due to the small size of the overlap, treatment within the overlap area is restricted to hand treatment only - surface fuel cleanup, understory spacing (< 15cm dbh) and pruning to 3m.		
WILDLIFE HABITAT AREA - GAR section 10, FRPA sections 180 and 181, FPPR section 69				
Does the proposed treatment area include any wildlife habitat areas (WHA)?	Yes ☐ No ☒	Not within a wildlife habitat area.		

MIGRATORY BIRD CONVENTION ACT – 1994		
Does the proposed treatment have the potential to impact migratory bird habitat?	Yes ☒ No ☐	Based upon the Nest Density Matrix v1.3, this prescription area is designated Rank 3. The broad scale nesting period mapping has shown the project area to be in the A4 nesting zone; nesting period from May 8 to August 2. The primary recommendation is that treatment activities occur outside the nesting period: BMP SO1 – Block Scheduling.* If treatment activities cannot be completed outside the nesting period, then the following BMP should be used: LO2 – Riparian Protection.* LO3 – Unplanned/Unmarked Retention.* LO4 – Wildlife Tree, Snag and Stub Retention will be implemented.* PL1 – Partial Cut or High Retention Silviculture System* If during this period an active nest is discovered or a bird displaying behaviour indicative of a nearby nest, work will be stopped, the nest must remain undisturbed, and the occurrence immediately reported to the contract supervisor. * Guidance for Forest Sector Management of Nesting Migratory Birds in the Interior of BC.
OBJECTIVES SET BY GOVERNMENT FOR WILDLIFE - FPPR section 7		
Does the proposed treatment area include areas to which objectives for wildlife under FPPR section 7 apply?	Yes ☐ No ☒	No objectives were found for this treatment area.
OBJECTIVES SET BY GOVERNMENT FOR BIODIVERSITY OBJECTIVES (Landscape Level) - Section 9 and FPPR Part 4 Division 5		
Does the proposed treatment area include areas to which objectives for landscape level biodiversity under FPPR section 9 apply?	Yes ☐ No ☒	Not applicable. Sec 64(1) – N/A - Not to be reforested

OBJECTIVES SET BY GOVERNMENT FOR BIODIVERSITY OBJECTIVES (Stand Level) - Section 9.1 and FPPR Part 4 Division 5		

Are considerations for maintaining stand structure (wildlife trees, wildlife tree reserves, etc.), coarse woody debris, and maintaining tree and vegetation species composition incorporated into this prescription?	Yes ☒
	No ☐
		• Maximum cutblock size - not applicable – no reforestation - Sec 64(1)
		• No adjacency concerns (Sec 65) (no existing cutblocks)
		• Wildlife tree retention exceeds requirements (Sec 66)
		• Timber will not be harvested from known WTRAs (Sec 67)
		• Coarse woody debris targets will be met (Section H, for each TU).
		  ○ Sec 68 (1)
		  ○ Chief Forester's Guidance on Coarse Woody Debris Management

OGMA		
Is the proposed treatment area within an Old Growth Management Area?	Yes ☒ No ☐	This prescription overlaps 3 OGMA polygons: • CAR_RCA_1435 • CAR_RCA_1444 • CAR_RCA_1372 The overall intent is to increase crown spacing to a maximum of 6m, reduce significant surface fuels that present a wildfire hazard while preserving primary old seral forest characteristics: "Primary Old Seral Forest Characteristics" means, within an interface or primary fuel break, large (>37.5 cm dbh) and very large (>57.5 cm dbh) trees, large coarse woody debris, and dead and declining trees where they do not represent a significant safety hazard." The primary approach for achieving this will be as follows: • Increase crown spacing to a maximum of 6m • Removal of significant areas of dead and downed beetle killed Pl, that represents a significant wildfire hazard and cannot be treated on site. • Surface clean-up of materials added to the site Due to site specific species distribution, a variance to the above diameter limits is prescribed: Increasing crown spacing through ○ Remove dominant Sx ≤ 37.4 cm. ○ Remove additional Fd ≤ 37.4 cm, where necessary to achieve crown spacing to 6 m. (see H.5 Treatment Specification Rationale)
RECREATION FEATURES - FRPA section 56 and 149, FPPR section 70		
Does the proposed treatment area contain interpretive sites, recreation trails, recreation sites, recreation facilities that are of significant recreation value and are designated a resource feature?	Yes ☐ No ☒	No legal recreation resources occur within this prescription area.
VISUAL QUALITY OBJECTIVES - GAR section 7, FRPA sections 180 and 181, FPPR section 9.2		
Is the proposed treatment within a scenic area?	Yes ☐ No ☒	Not within VQO polygons.
ARCHAEOLOGICAL RESOURCES/CULTURAL HERITAGE RESOURCES - FPPR section 10		
Are there any known archaeological sites or cultural heritage resources that are important to First Nations within the proposed area?	Yes ☒ No ☐	An AOA was completed and areas of high archaeological were identified. A PFR was completed and two Areas of Potential (AOP) were found and ribboned in the field. Recommended measures to protect the AOPs will be followed - machine free and sediments kept intact.
No Referral to Land Manager is required if proposed TU is on the applicant's own First Nation Land.		

INVASIVE PLANTS - FRPA section 47 and FPPR section 17		
Is the introduction and spread of invasive plants likely as a result of the proposed treatment?	Yes ☐ No ☒	There are no known sites within the treatment area. There is a risk that crews could spread non-identified invasive plants within the treatment area. Care should be taken to avoid contact with invasive plants during treatment activities, with frequent inspection of clothing and equipment. Yearly monitoring for invasive activities should be employed, with the possibility of conducting transects to measure any potential increase.
NATURAL RANGE BARRIERS - FRPA section 48, FPPR section 18		
Are there natural range barriers within the proposed treatment area that are likely to be removed or rendered ineffective?	Yes ☐ No ☒	No natural range barriers exist within the treatment area.
SPECIES AT RISK – FPPA section 7		
Are there species at risk present within the boundaries of the prescribed treatment area?	Yes ☐ No ☒	Not within any critical habitat feature polygons.
LAND USE OBJECTIVES (Higher Level Plans and objectives set by Government under the *Land Act*)		
Are there land use objectives (higher level plans or objectives under the *Land Act*) that apply to the proposed treatment area or a Road Permit necessary to provide access to the treatment area?	Yes ☐ No ☒	The Cariboo-Chilcotin Regional Land Use Plan (CCLUP) and Quesnel Sustained Resource Management Plan (SRMP) covers this treatment area. No Road Permit is necessary.
Do the proposed activities conflict with land use objectives (higher level plans or objectives under the *Land Act*)?	Yes ☐ No ☒	There are no known conflicts with land use objectives.
Is there evidence the proposed activities could create a windthrow hazard. Has a hazard assessment been completed.	Yes ☐ No ☒	There were no observed evidences of windthrow. Proposed treatment activities like spacing and pruning should not create a significant windthrow hazard. Increasing canopy spacing through stem removal could result in windthrow, although there was no significant evidence of windthrow in areas that opened up when beetle killed pine fell out of the stand. Focus for removal will be on spruce, to leave the more windfirm Douglas-fir, where possible.

G. OTHER CONSIDERATIONS AND REQUIREMENTS		
ENGAGEMENT AND CONSULTATION – FIRST NATIONS		
FIRST NATION	SUMMARY OF ENGAGEMENT, INFORMATION SHARING, CONCERNS IDENTIFIED AND MEASURES TO ADDRESS	
Lhtako Dene Nation	Information Sharing Letter and map – July 2023 Request for more information / KML files – July 2023 AOA requested and initiated – Oct 2023 PFR Completed – Oct 2023 AOA and PFR sent to Lhatko Dene	
Nazko First Nation	Information Sharing Letter and map – July 2023	
Tsilqot'in National Government	Information Sharing Letter and map – July 2023	
?Esdilagh First Nation	Information Sharing Letter and map – July 2023	
Tl'etinqox Government	Information Sharing Letter and map – July 2023	
First Nations consultation complete?	Yes ☒ No ☐	The City of Quesnel sent referral letters to identified First Nations.
CONSULTATION – GENERAL		
N/A		
EXISTING TENURE HOLDERS (Forest, Range, Guide Outfitters, Trappers, etc.)		
Tenure Holder	Concerns?	Measures proposed to address licensee's assets / concerns
West Fraser Timber	Yes ☐ No ☒	n/a
TR0513T018	Yes ☒ No ☐	Based upon feedback from the trapper, the following direction is given regarding potentially detected traps and retention of fur-bearing habitat: 1) If any active traps are observed, the crews should stay away from them – suggest a buffer of 10 m. 2) Trapper has requested that some debris piles be left for habitat for fur-bearing mammals. In Section I DEBRIS PILING: SURFACE FUEL CLEANUP modified the prescription to retain small mammal habitat piles within thirty meters of the treatment unit boundary farthest from the private land. This habitat should be piles of mixed sized woody debris up to 3 meters by 1.5 meters and no more than one meter high. A target of two per hectare. These piles are not to be burned.

PRIVATE PROPERTY		
Does private property border the proposed treatment area?	Yes ☐ No ☒	Private property is not immediately adjacent to the prescription area.
SMOKE MANAGEMENT		
Does a smoke management plan beyond OBSCR exist for the proposed treatment area?	Yes ☐ No ☒	Burning must be done in compliance with OBSCR.
SAFETY		
Have any specific safety concerns been identified in or adjacent to the proposed treatment area?	Yes ☒ No ☐	Steep slopes exist on the edge of the Baker Creek canyon, adjacent to the northwestern portion of the treatment area. A machine free zone has been ribboned from station 17 to the east along the canyon edge. Steep canyon slopes also exist adjacent to the boundary between stations 23 and 26. See Sec I: SAFETY / OPERATIONAL
UTILITIES & INFRASTRUCTURE		
Are utilities or infrastructure located in or adjacent to the proposed treatment area? i.e. power lines, rail lines, etc.	Yes ☐ No ☒	There are no utility lines within the treatment area.
ACCESS CONTROL		
Are there any foreseen issues with access and access control during and post treatment?	Yes ☒ No ☐	Access control signage will be required at the end of Peterbrook Rd, and where active quad trails enter the treatment areas. When West Fraser road development is completed, and treatment of FTU BC1 commences, access control on the West Fraser road system will be required.
TRAFFIC CONTROL		
Is traffic control required at any point during operations?	Yes ☐ No ☒	n/a
OTHER (E.g. Public Notification)		

H. FUEL LOADING AND TREATMENT SPECIFICATIONS	
H.1 TREATMENT SPECIFICATIONS SUMMARY	
FUEL REMOVAL/RETENTION STRATEGY BY SIZE/SPECIES (Summarize specifications for surface, ladder and standing fuel removal and retention)	
FTU **BC-1**	L1 • ≥17.5 cm DBH o Target – 41% (140 sph {All Species}); Merchantable removal ▪ ≤6 metre crown spacing ▪ Trees may be retained in groups (ie. 4-10 trees), as long as the maximum crown spacing between groups is met ▪ Retention stems diameter limit • Fd ≥ 37.5 cm DBH • Sx ≥ 37.5 cm DBH • 15.1 – 17.4cm DBH o Target – 66% (29sph {All Species}); Potential for fibre removal ▪ Danger trees felled for safety will be limbed, ensured > 80% lying flat, cut lengths as per Chief Forester's Guidance and left on site. • 12.5 – 15cm DBH o Target – 53% (29sph {All Species}); Potential fibre removal ▪ Additional <10% removal allowance for pile burning, damaged stems, or safety issues; all cut stems will be piled and burned. L2-L4 • <1.3m – 12.4cm DBH o Target – 62% (433sph {All Species}); Potential for fibre removal ▪ Interstem spacing 2-3 metres ▪ Additional <10% removal allowance for pile burning, damaged stems, or safety issues; all cut stems will be piled and burned. Fall all unsafe dead stems < 20 cm dbh, except for designated wildlife trees (Sec I – Safety/Wildlife Danger Trees). Space by targeting the suppressed and poor form stems < 15 cm dbh. Retain live stems up to 0.5 meters in height (L4), in clumps, where possible.
FTU **BC-2**	L1 • >15cm DBH o Target – No measurable stem removal (0sph {All Species}); ▪ Danger trees felled for safety will be limbed, ensured > 80% lying flat, cut lengths as per Chief Forester's Guidance and left on site. • 12.5 – 15cm DBH o Target – No measurable stem removal (0sph {All Species}); ▪ Additional <10% removal allowance for pile burning, damaged stems, or safety issues; all cut stems will be piled and burned. L2-L4 • <1.3m – 12.4cm DBH o Target – 50% (868sph {All Species}); Potential for fibre removal ▪ Interstem spacing 2-3 metres ▪ Additional <10% removal allowance for pile burning, damaged stems, or safety issues; all cut stems will be piled and burned. Fall all unsafe dead stems < 20 cm dbh, except for designated wildlife trees (Sec I – Safety/Wildlife Danger Trees). Retain healthy live trees ≥ 15 cm dbh. Space by targeting the suppressed and poor form stems < 15 cm dbh. Retain live stems up to 0.5 meters in height (L4), in clumps, where possible.

H.2 STAND FUEL LOADING

Complete a STAND and STOCK TABLE (SST) appendix for each FTU. The SST(s) must be attached to this document. A professional volume estimate is required when merchantable tree cutting is prescribed and a timber cruise should be considered when cutting >50 m^3/ha or >500 m^3 in total.

Is the cutting of merchantable trees prescribed? ☒ Yes ☐ No

Comments:

- Merchantable harvest is prescribed, to increase crown spacing in order to facilitate more effective aerial attack and reduce crown fire intensity.

- **Crews must work within the constraints of the diametre limits on stem removal, while trying to achieve the prescribed crown spacing. Of primary importance is the preservation of Primary Old Seral Forest Characteristics, as described in SECTION F: OGMA. The "Cut" and "Leave" numbers below are a guide only and on the ground conditions will supersede these guides, where necessary to primarily protect OGMA values and secondarily attain crown spacing goals.**

STAND AND STOCK TABLE
SUMMARY
(All data here in is from Appendix (ie; H.2.i))

FTU – BC-1

		STEMS PER HECTARE (sph)			VOLUME PER HECTARE (m^3/ha)		
		Existing	Cut	Leave	Existing	Cut	Leave
Total – All Species	Layer 1	441	198	243	209.7	42.6	167.1
	Layer 2	145	44	101			
	Layer 3	256	189	67			
	Layer 4	300	200	100			
TOTAL - ALL LAYERS		1142	631	511			

FTU – BC-2

		STEMS PER HECTARE (sph)			VOLUME PER HECTARE (m^3/ha)		
		Existing	Cut	Leave	Existing	Cut	Leave
Total – All Species	Layer 1	535	0	535			
	Layer 2	334	201	133			
	Layer 3	467	200	267			
	Layer 4	934	467	467			
TOTAL - ALL LAYERS		2270	868	1402			

H.3 SURFACE FUEL LOADING (T/ha)					
Size Class (cm)	Existing Volume	Existing Distribution	Target Volume	Target Distribution	Methodology Used
Fine Woody Debris (≤7cm)					
BC-1	4.2	Even	5	Light and discontinuous	FRDA 001
BC-2	8.1	Even	10	Light and discontinuous	FRDA 001
Large Woody Debris (>7cm – 20cm)					
BC-1	12.7	Concentrated	10	Light and discontinuous	FRDA 001
BC-2	1.3	Even	5	Light and discontinuous	FRDA 001
Coarse Woody Debris (CWD) (>20cm)					
BC-1	17.3	Concentrated	5-25	Light and discontinuous	FRDA 001
BC-2	No Data	n/a	n/a	Light and discontinuous	FRDA 001

H.4 CROWN CLOSURE and CANOPY BULK DENSITY			
Crown Closure (%)	All: BC-1 – 28 BC-2 – 30	Existing: (dead/live - deciduous) BC-1 – 5.5/8.5 BC-2 – 0/0	Target: All FTUs – 25-30%
Canopy Bulk Density (description including fuel stratum gap)	All: Existing crown closure is not a direct representation of canopy spacing.	Existing: (Dead / Live) Existing dead and live deciduous does not significantly contribute to crown bulk density, however dead stems will be felled where they constitute a safety hazard.	Target: Reduce crown bulk density through a combination of spacing of smaller stems, pruning lower branches, and primarily through increasing crown spacing to a maximum 6m between crowns. Crown spacing is defined as the distance between the widest portion of each trees crown.

H.5 TREATMENT SPECIFICATION RATIONALE

Retention Stems Diameter Limits

The primary goal of merchantable stem removal is to increase crown spacing to a maximum of 6 metres. Trees may be retained in groups (ie. 4-10 trees), as long as the same maximum crown spacing is achieved between groups. The removal ("Cut") targets in the Stand and Stock tables should be used as a guide, and may be varied from, as dictated by on the ground species composition, in order to meet species and crown spacing priorities.

- Sx - primary species for removal
    - Preferred due to being less windfirm and more prone to throwing embers, making it a greater hazard during a crown fire (compared to Fd)
    - Target 95% removal of – 17.5 to 37.4 dbh
    - sampling did not record representation of smaller diameters
- Fd - secondary species for removal
    - Remove Fd, only where needed to achieve crown spacing targets
    - Target ≤ 50% removal of – 17.5 to 37.4 dbh

Wildfire Fuel Reduction Quantification

The BCWS has set targets for wildfire threat reduction work that include either a surface fire intensity of under 2000 kW/m or a critical surface fire intensity below the crown fire threshold. To meet the intent of the BCWS guidance, the following data was used to calculate the post-treatment Surface Fire Intensity.

Critical Surface Fire Intensity

- Wx Station – Hixon
- BCWS supplied Rate of Spread (RoS) – 2.0 m/min
- Live Crown Base Height: ≥ 3 m
- Fuel Load (T/ha)
    - Current:
        - BC-1: 4.2
        - BC-2: 8.1
    - Target:
        - BC-1: 5
        - BC-2: 10
- Foliar Moisture – 95%
- Critical Surface Fire Intensity (CSI)
    - BCWS target: < 824.1 kW/m
    - Current:
        - BC-1: 252 kW/m
        - BC-2: 486 kW/m
- Post Treatment Surface Fire (Wildfire) Intensity (SFI) – N/A (as the current CSI is below target CSI)

The calculated SFI for the post-treatment stand is below the BCWS target CSI. This treatment as outlined will meet the intent of the BCWS guidance.

H.6 BIODIVERSITY AND FOREST HEALTH CONSIDERATIONS AND TARGETS (Pieces / ha)	
WOODY DEBRIS – GENERAL Retention Targets	Any surface fuel that are decayed (decay class 3, 4 and 5, bark loose and sapwood brown and crumbly) can be cut to lie flat on the ground and retained on site. No jackpots, crossed or elevated logs are to be left on site – all retained coarse woody debris is to be de-limbed and cut to lie flat to the ground. All woody debris cut to lie flat should be cut at ≥2 m lengths.
LARGE WOODY DEBRIS (LWD) Retention Targets	Existing LWD decay class 1 and 2 debris is to be redistributed. Treatment related LWD is to be piled for burning. **MEASUREABLE: 90% of debris from decay class 1 and 2. No remaining LWD should be crossing and should be cut flat and flush to the surface of the ground, wherever possible.**
COARSE WOODY DEBRIS (CWD) Retention Target	Distribution to be 5 meters between individual pieces, where feasible (decay class 1 and 2). CWD to be left in full length pieces whenever possible and lying flat. Excess debris is to be cut into firewood lengths and piled for burning. Chief Forester – minimum of 5 big CWD pieces / ha ○ >20 cm in diameter and >10 m in length **MEASUREABLE: No remaining CWD should be crossing and should be cut flat and flush to the surface of the ground, wherever possible.**
WILDLIFE TREE Retention Target	Retained live, healthy trees ≥ 15 cm dbh will contribute to future wildlife tree recruitment. All safe (Level of Disturbance 2) dead stems > 20 cm dbh will be retained. Unsafe dead stems > 20 cm dbh will be placed in No Work Zones (NWZ). **MEASUREABLE: All assessed dead stems (wildlife trees) are to be marked and unsafe dead stems placed in NWZs, before crew work begins in the area. NWZs are not to exceed 5% of the treatment area.**
FOREST HEALTH	The mature live stand appears healthy. There is remnant mortality from the previous mountain pine beetle infestation.

I. TREATMENT DESCRIPTION	
MERCHANTABLE HARVEST	
Is merchantable timber harvest being prescribed?	☒ Yes ☐ No
Are there any challenges to harvesting the timber? • Timber removal will need to coordinate with road access proposed by West Fraser Timber	☒ Yes ☐ No ☐ N/A
Is there opportunity to utilize post treatment fiber?	☒ Yes ☐ No
ROADS, LANDINGS AND TRAILS (e.g., will new road construction be required, is there existing roads that will be utilized?): • Yes – planned roads for West Fraser development are planned to be utilized.	
FELLING (e.g., is there special measures required for felling, hand falling areas, etc.): • Properly spaced (≤ 6m) group retention is preferred over single stem spacing, to limit damage to stems.	
YARDING/SKIDDING (e.g., is there specific yarding areas identified, is forwarding preferred over skidding due to sensitive soils in some areas etc.): • FTU-BC1 will have removal of spaced stems, as well as dead and downed trees (primarily historical pine beetle kill). Forwarding would be preferrable.	
PROCESSING, LOADING AND HAULING (e.g., are there specific areas identified regarding where these activities may occur?): • Would utilize future West Fraser road and landing development.	
SLASH DISPOSAL (e.g., is there a recommended slash disposal method?): • Removal or burning.	
SPECIAL MEASURES:	

SAFETY / WILDLIFE DANGER TREES
Tree Falling – hand falling of danger trees and trees 15 cm and greater are to be performed by a WorkSafeBC certified faller. Wildlife Danger Tree Assessments – to be conducted by a certified Wildlife Danger Tree Assessor, in good standing. Trees need to be assessed by a certified danger tree assessor during the year of treatment and placed in no work zones if required to eliminate worker exposure. The danger tree assessments and marking has not been completed as assessments are only good for one year. Up to 5% of the FTU can be retained in no work zones.

SAFETY / OPERATIONAL
Steep Slopes – steep slopes and rock outcrops may occur within the treatment areas When operating on steep slopes, operators should work within the scope of their training and experience. Various equipment will have different limitations based off worker skill sets/experience and equipment specifications. When exceeding recommended slope limitations, a safety briefing should be held to ensure adequate safety coverage is available and all onsite workers are informed and rationale is documented.

STAND MODIFICATION TREATMENTS
BRUSHING: Live deciduous shrubs are to be retained. Dead and dying deciduous brush will be cut and added to the burn piles.
PRUNING: Pruning will be conducted on all conifers over 3m in height. For conifers 3-6 meters in height, pruning will be to 50% of tree height (to maintain 50% live crown). For trees > 6m, pruning will be to a minimum of 3 meters to the lowest branch tip (droop or sweep). This may require higher stem pruning to account for branch droop or sweep on large conifers (especially in Sx). Pruning will include both dead and live branches with resulting branch stubs not to exceed 1 cm in length on stems <30 cm DBH and 2 cm on the stems >30cm DBH. This prescribed pruning height is designed to create a full 3-meter gap between surface and crown fuels, reducing the possibility of a crown fire, candling and spotting potential. Wildlife trees require no pruning. **MEASUREABLE: 95% of conifers over 3 meters in height are pruned. Over 90% of these meet the specification depending on tree height.**
SPACING (Understory): (see sec H.1 for mature tree removal). The trees targeted for removal include: - Trees < 15cm and within 1m of the dripline; - Conifers with less than 20% live crown, suppressed and/or inter-tree competition; - Unhealthy conifers with poor form, stem scars, snow press, root lift, mushroomed tops or no distinct leader; - Dead standing trees over 1.0 meter in height and < 20 cm at DBH; - Spacing to an average of 3 meters inter-stem distance. - Priority is to remove the smaller diameter trees (> 1.3 m in height) and retain the larger diameter trees with the best form. - Species selection for tree spacing should attempt to mimic current composition present in the existing young regeneration. (refer to Section D) Maximum stump height for spacing – 10 cm Maximum stumps angle – 15 degrees from horizontal Spaced trees to be cut below the lowest branch. No live conifers ≥ 15 cm at DBH will be removed during the understory spacing activities unless they are leaning more than 30 degrees from vertical, or are severely damaged and creating a difficulty for falling larger stems (dangerous for level of disturbance 2 activities). **MEASUREABLE: The above spacing parameters are to be met over 90% of the area.**

DEBRIS PILING:

Surface fuel cleanup will involve targeting all debris from spacing and at least 90% of the pruning, excluding designated coarse woody debris as described in each FTU CWD section. All of the spaced tree stems will be added to burn piles. Barkless debris more than 25% buried in the organic littler layer (Decay Class 3, 4 and 5 debris) can be retained regardless of size, to prevent site disturbance. Large (7-20 cm dbh) and coarse woody debris (>20 cm) in close proximity to the ground in advanced state of decay can be retained.

Piles should be in openings away from dominant tree driplines. The spacing regime can be altered to accommodate suitable burn pile openings. Any scorched stems ≤ 15cm will be added to the burn piles.

Restrictions to Piling:

- Size: 3 m wide ↔ and 2 m high ↕
- ≥ 10 m from all recreation structures, trails, access surfaces
- ≥ 20 m from private land boundaries
- No piling in natural depressions or gullies

Small Mammal Habitat Retention

Retain small mammal habitat piles within thirty meters of the treatment unit boundary. This habitat should be piles of mixed sized woody debris, up to 3 meters by 1.5 meters, and no more than one meter high. A target of two per hectare. These piles are not to be burned.

MEASUREABLE: Over 90% of debris from 1 to 20 cm in diameter, excluding the Decay Class 3, 4 and 5 debris, is collected and placed in burn piles. 100% of spaced conifer stems ≤ 15 cm, placed in debris piles. Larger pieces can be left for CWD targets.

NOTE: Debris piles in landings resulting from stem removal will be burned under appropriate licensing and industrial restrictions (Category 3 open fire).

Snow Conditions

Fuel management activities are best conducted under snow free conditions. Fuel work can be conducted with snow on the ground as long as the fine fuel targets can be met (as per current calculations).

PILE BURNING:

All piled debris is to be burned under proper venting and dryness conditions that will not allow fire spread more than two meters from the piles.

Use of the “Hot Fed” method of feeding existing burning piles is recommended to reduce the number of burn piles needed, and to facilitate hotter and therefore cleaner burning.

All burning is to follow the Open Burning and Smoke Control Regulation.

MEASUREABLE: Individual burn piles to be at least 95% consumed, with an obvious effort made to push in the perimeter debris, to be called completed.

MULCHING: N/A

MASTICATION: N/A

GRINDING: N/A

CULTURAL / PRESCRIBED FIRE:

Cultural / prescribed fire may be recommended for future maintenance treatments.

PLANTING: No planting is prescribed. This prescription has been developed to leave a stocked stand post-treatment.

FLAGGING: Project area perimeters are flagged with yellow WILDFIRE RISK REDUCTION (WRR) printed ribbon. FTU internal boundaries are flagged with yellow WILDFIRE RISK REDUCTION (WRR) printed ribbon. The perimeter stations are flagged with solid red and yellow WRR ribbon. The machine free zone in FTU-BC1 is flagged with yellow and MACHINE FREE ZONE ribbon. The marking scheme is to be provided to crews before work commences. No other flagging in the area is related to this project. All ribbon is winter weight.
OTHER:

AUTHORIZATION AND TIMBER TENURE REQUIREMENTS (To be populated in consultation with the land manager. E.g., BC Parks, Natural Resource District, Mountain Resorts Branch etc.)
FRPA Section 52: n/a
Forestry License to Cut (FLTC): Permit required from the Quesnel Natural Resource District.
Park Use Permit: n/a
Road Permit or Road Use Permit: n/a
Other (i.e., local government, utilities, etc.): n/a

J. POST TREATMENT

EXPECTED VEGETATION RESPONSE	Tree Layer	Crown and understory spacing will allow an increase for light and nutrient availability. Regen stems that are retained will have better vigor post-treatment.
	Shrub Layer	With increased light and nutrient availability, there will be an increase in this layer. Post-treatment areas where the shrub layer is more dominant will flush more easily.
	Herb/Grass Layer	This layer is expected to respond to the opening of regen patches along with the increased availability of light and nutrients.

MONITORING AND MAINTENANCE:

Fuels: Monitor and assess increased understory stem densities, ladder fuels and elevated dead fuels.

Invasives: Care should be taken to avoid contact with previously unidentified invasive plants during treatment activities, with frequent inspection of clothing and equipment. Yearly monitoring for invasive plant ingress should be employed, with the possibility of conducting transects to measure any potential increase.

Forest Health: No evidence of Douglas-fir bark beetle was observed in this project area. Care should be taken to limit damage to large Fd (ie; mechanical, fire damage).

Windthrow: There was no evidence of windthrow observed within the prescription area. Target species for removal will be spruce, with more windfirm Douglas-fir targeted for retention.

Planned / Scheduled Monitoring & Maintenance:

Time Post Treatment (months / years)	Activity / Treatment:	FTU(s):	Comments:
Yearly	Monitor	All	Monitor all trails and access structures for invasive plant activities. Visual assessment of new windfall and forest health issues.
5 Year	Assess Fuel Loading, windfall, forest health	All	Walk through to visually assess increases in sph and surface fuels, and potential new windfall and forest health issues
10 Year	Assess Fuel Loading, windfall, forest health	All	Plot sampling to assess increases in sph and surface fuels, and potential new windfall and forest health issues

Triggers For Maintenance Treatments:

- Increase in down surface debris
- Increase in sph of ladder fuels

- Increase in elevated dead fuels
- Significant windfall
- Presence of bark beetle attack

SILVICULTURE OBLIGATIONS: Do silvicultural obligations apply to the treatment area? ☐ Yes ☒ No

PLANTING: Is planting identified in this prescription or required as a legislative obligation? ☐ Yes ☒ No

STOCKING STANDARDS:

This wildfire prescription is not covered by the Forest Stewardship Plan or other upper level plans.

Wildfire Stocking Standards for Uneven-Aged Stand was created for this prescription using an adapted DQU – Single Tree Selection stocking [Result SID 1028277]. If the minimum stocking standards are not met in L1, then the "nested total" method will be used to meet minimum stocking standards within the remaining layers.

Layer	Target p&a	Min p&a	Min p
1	600	300	250
2	800	400	300
3	1000	500	400
4	1200	700	600

FTU	Stocking Standard ID	Pref. Spp.	Acc. Spp.	Well-Spaced Stem/ha				Minimum Height (m)			Regen Delay	Free Growing (years)
				TSS	MSS		MITD	Spp.	Others	RTH (%)		
					Pref. & Acc.	Pref.						
BC1	32078	Fd, Pl, Sx		1200	700	600	2	Fd – 1.4 Pl – 2.0	1.0	150	7	12
BC1	32076	Fd, Pl		1200	700	600	2	Pl – 2.0 Fd – 1.4	1.0	150	7	12
BC2	32118	Fd, Pl, Sx		1200	700	600	2	Fd – 1.4 Pl – 2.0	1.0	150	7	12

K. Outstanding Works

L. ADMINISTRATION	
PREPARATION	
QUALIFIED REGISTERED PROFESSIONAL NAME *(Printed)* David A Christie	QUALIFIED REGISTERED PROFESSIONAL SIGNATURE 
PROFESSIONAL ASSOCIATION & MEMBER NUMBER BCFP RPF 2715	DATE January 18, 2024

M. ATTACHMENTS			
MAPS:	Yes ☒ No ☐	FIELD DATA CARDS:	Yes ☒ No ☐
WUI WTA Plots and Photos:	Yes ☐ No ☒	CRUISE DATA:	Yes ☐ No ☒
AIR PHOTOS/IMAGERY:	Yes ☐ No ☒	BURN PLAN:	Yes ☐ No ☒
MODELING/DATA ANALYSIS:	Yes ☐ No ☒	STAND & STOCK TABLES:	Yes ☒ No ☐
SURFACE FUEL LOADING DATA:	Yes ☒ No ☐	OTHER:	
TERRAIN STABILITY ASSESSMENT Completed By: Date:	Yes ☐ No ☒	VISUAL IMPACT ASSESSMENT Completed By: Date:	Yes ☐ No ☒
ARCHAEOLOGY IMPACT ASSESSMENT Completed By: Date:	Yes ☐ No ☒	BIOLOGIST ASSESSMENT Completed By: Date:	Yes ☐ No ☒
ADDITIONAL COMMENTS:			