| **A. PROJECT IDENTIFICATION** | |
|---|---|
| PROJECT ID AND UNIT ID:<br>**K4R/FESBC Wildfire Risk Reduction – Prescription #6**<br>Keefe's Landing Road, 8.2 km<br>Original WRR Shapes #14 | LAND OR TENURE HOLDER:<br>Chinook Community Forest Tenure K4R (CFA:K4R) |
| LATITUDE/LONGITUDE:<br>53$^{O}$ 52' 24" N, 125$^{O}$ 57' 29" W | GEOGRAPHIC DESCRIPTION:<br>Keefe's Landing Road, 8.2 km |
| HIGHER-LEVEL PLAN(s):<br>Lakes District Land and Resource Management Plan – 2000<br>Lakes South Sustainable Resource Management Plan – 2003 | MAP REFERENCE NUMBER:<br>93F 081 |

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

Prescription Area #6 – Wildfire Risk Reduction (WRR) treatment area is at 8.2 km on the Keefe's Landing Road on the south side of François Lake. This unit is entirely within the Chinook Community Forest (CFA:K4R) tenure area, and has been identified as a high priority corridor by the British Columbia Wildfire Service (BCWS) Wildfire Risk Reduction (WRR) Tactical Plan.

The unit is within the François Lake Wildland Urban Interface (WUI) Risk Class (RC) polygon which has been assigned a risk class rating of 2 due to the prevalence of High Value Resources and Assets (HVRAs) namely the infrastructure and community values along the Eakin Settlement Road. The Provincial Strategic Threat Analysis (PSTA) has classified stands within the unit as having a Final Threat Rating (FTR) of high (7) to extreme (9). This rating considers the anticipated head fire intensities and spotting impacts for the fuel types present as well as historical fire densities. Initial spread index (ISI) roses generated by the Grassy Plains Hub (161) fire weather station indicate that prevailing winds during the core fire season are typically from the southwest.

The objectives of this Prescription are to:

- reduce the risk of wildfire to public safety by modifying forest fuels within wildland urban interface (WUI) areas – specifically the properties, residences, and infrastructure near Keefe's Landing Road.
- reduce the risk of wildfire to public safety by modifying fuels adjacent to critical evacuation corridors – specifically those along the Eakin Settlement Road network.
- reduce the risk of wildfire to critical infrastructure and property by modifying forest fuels adjacent to, or likely to influence forest fuels adjacent to, identified values at risk.
- develop ecologically appropriate and effective wildfire risk reduction solutions that give due regard to overlapping land management objectives and tenure obligations.
- develop ecologically appropriate and effective wildfire risk reduction solutions that give due regard to site and stand conditions to maintain forest health and site productivity.
- create defensible space for wildland fire fighters to anchor suppression strategies and tactics from during incident response by removing or modifying hazardous forest fuels in a way that improves firefighter safety and reduces fire behaviour potential.

| | |
|---|---|
| STRATEGIES: | Wildfire risk reduction objectives will be achieved through the application of treatment regimes designed to address site and stand specific conditions. Treatments will reduce fire behaviour potential through the modification or removal of hazardous forest fuels as well as through reductions to surface fuel load contributions from downed woody material and treatment residues. Stand modifications are intended to reduce fire intensities and reduce continuity between forest fuels, and therefore reduce the potential for the propagation and persistence of crown fire as well as the potential for spotting. Treatment intensities increase with the level of hazard identified as well as in response to anticipated operational limitations.<br>The prescribed treatment activities balance WRR objectives with established land use objectives and existing tenure obligations to reduce the risk of wildfire to public safety, promote natural processes and maintain ecosystem function, as well as to reduce open burning requirements through the utilization of biomass. |
| METHODS: | The proposed operational treatment for this Prescription area will be a Clearcut with reserves Silviculture System since these proposed areas requires significant stand modification to address the hazardous stand conditions. The stand condition is poor in this area due to the impacts of historical insect infestations and subsequent wind events. This area will provide moderate to marginal commercial fibre recovery opportunities. Initial stand entries require an overstory removal phase utilizing conventional ground-based harvest methods. Final treatment phases require surface fuel load reductions to dead and down material and treatment residues by mechanical and potentially manual surface fuel reductions to existing downed woody materials and treatment residues to ensure surface fuel load targets are achieved.<br>Surface fuel reduction targets are intended to reduce surface fire intensities to a level below critical surface fire intensity thresholds (<2000 kW/m) under 90th percentile fire weather conditions as well as to comply with provincial fuel hazard abatement requirements.<br>Treatment area design and specifications have been developed with consideration of the influence of topography. |

**C. TREATMENT UNIT (TU) SUMMARY**

| TU | NET AREA (ha) | GROSS AREA (ha) | LEAVE AREAS (ha) | NP (ha) | NAR (ha) | SILVICULTURE SYSTEM AND TREATMENT REGIME (i.e. PRUNE THIN, PILE BURN, BROAD, CHAUL, ETC.) |
|---|---|---|---|---|---|---|
| 1 | 0.8 | 1.8 | 1.0 | 0 | 0.8 | CCRES / HARV / SFR / Mechanical Debris Pile & Burn |
| TOTALS | **0.8** | **1.8** | **1.0** | **0** | **0.8** | |

**D. SITE CHARACTERISTICS**

| TU | CFFBPS FUEL TYPE | TIMBER TYPE | BGC SUBZONE, VARIANT & SITE ASSOC. | ELEVATION RANGE (m) | SLOPE POSITION | SLOPE RANGE (%) | ASPECT |
|---|---|---|---|---|---|---|---|
| 1 | C2 | MATURE Coniferous | SBS dk 06 | 895 – 898 | Middle | 1 - 4 | South |
| FUEL TYPE DETERMINATION | | C2 – Boreal Black and White Spruce *(the C2 fuel type is used for representing mountain pine beetle (MPB) affected stands). | | | | | |

**E. SOIL CHARACTERISTICS**

| TU | SOIL TEXTURE | DUFF DEPTH (cm) | COARSE FRAGMENTS (%) | SOIL DISTURBANCE LIMIT (%) | SOIL HARZARD RATING | | |
|---|---|---|---|---|---|---|---|
| | | | | | Compaction | Erosion | Displacement |
| 1 | SL | 5 | 45 | 10 | M | M | L |

| **F. VALUES – *FOREST AND RANGE PRACTICES ACT*** | | |
|---|---|---|
| **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 cutting, modification or removal of trees, or site preparation, in an area that contains streams, lakes or wetlands? | Yes ☒ No ☐ | There is a W3 Wetland the east of the block.<br>Riparian features that occur within the Chinook Community Forest Agreement (CFA) tenure area have been managed in accordance with section 6.5.2 of the approved Chinook CFA Forest Stewardship Plan (FSP) 2016 and are otherwise compliant with the requirements of section 47 to 51, 52(2), and 53 of the FPPR. |

**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 |
|---|---|---|---|---|
| Wetland #2 | W3 | 0 | 30 | The block is within the RMZ of the W3 wetland by 5m, mainly due to an existing trail into block, which will be re-used with the salvaging of this permit. |

| | | |
|---|---|---|
| **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 ☒ | Treatment activities have not been prescribed in areas that contain, are adjacent to, or are a direct tributary to an identified temperature sensitive stream. |
| **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 ☒ | Road construction activities have not been proposed within the RMA of any identified riparian feature. |
| **STREAM CROSSING**S - 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 ☒ | There are no stream crossings associated with this prescription. |
| **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 ☒ | Treatment activities have not been prescribed within the RMZ of an S4, S5, or S6 stream that is a direct tributary to an S1, S2, or S3 stream, and therefore the basal area retention requirements for maintaining stream bank and channel stability provided by section 52 of the FPPR do not apply. |
| **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 ☒ | The treatment area does not include water sources that are diverted for human consumption by a licensed waterworks. |

| | | |
|---|---|---|
| **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 ☒ | Treatment and road construction activities have not been proposed within 100 m of a licensed waterworks that is within a community watershed. |
| **FISHERIES SENSITIVE WATERSHED** - GAR section 14, FPPR section 8.1 | | |
| Are any activities proposed within a fisheries sensitive watershed? | Yes ☐ No ☒ | Treatment activities have not been proposed 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 ☒ | Treatment activities have not been proposed within a community watershed. |
| Will this project require road construction or deactivation within a community watershed? | Yes ☐ No ☒ | Treatment and road construction activities have not been proposed within a community watershed. |
| **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 ☒ | Treatment activities have not been proposed in areas identified as having significant watershed sensitivity or other watershed assessment considerations. |

**SOIL DISTURBANCE AND PERMANENT ACCESS STRUCTURES** - FPPR sections 35 and 36

| Treatment Unit (TU) | Proposed Max. Allowable Soil Disturbance (5% or 10%) | Proposed Max. Soil Disturbance for Roadside Work Areas | Proposed Max. Permanent Access Structures | Comments |
|---|---|---|---|---|
| 1 | 10% | 25% | 5% | The proposed access road is within the R/W of an existing trail and not within the block. |

| | | |
|---|---|---|
| Do the proposed Permanent Access Structures exceed 7% of the total area? | Yes ☐ No ☒ | Permanent access structures will not exceed 7%. |
| **LANDSLIDES AND TERRAIN STABILITY** - FPPR section 37 | | |
| Does the proposed treatment area include areas where terrain stability is a concern? | Yes ☐ No ☒ | Indicators of slope instability or landslides were not noted within the treatment area. |
| **SUITABLE SECONDARY STRUCTURE** - FPPR section 43.1 | | |
| Does the proposed treatment area include a "targeted pine leading stand"? | Yes ☐ No ☒ | Treatment activities have not been proposed in a "targeted pine leading stand" as defined by section 1 of the FPPR.<br>Additionally, the treatment activities proposed will occur entirely within a community forest agreement (CFA) license for the purpose of wildfire risk reduction and therefore, as per section 43.1(4) and 43.1(2) of the FPPR, the secondary stand structure retention specifications set out by section 43.1(1) of the FPPR do not apply. |
| **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 ☐ | Treatment activities overlap by about 40% into a Special Resource Management Sub-Zone 4 with identified M2 ungulate winter habitat for Moose. Prior to the commencement of treatment activities the Agreement Holder, will ensure that the habitat requirements for the winter survival of ungulate species specified by s.6.4.2 of the FSP are maintained. |

| | | |
|---|---|---|
| **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 ☒ | The treatment area does not overlap any mapped or otherwise identified wildlife habitat areas. |
| **MIGRATORY BIRD CONVENTION ACT** – 1994 | | |
| Does the proposed treatment have the potential to impact migratory bird habitat? | Yes ☐ No ☒ | The nest density ranking for this Prescription area is 2 and therefore is not likely to impact Migratory Bird Habitat. |
| **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 ☐ | A legal order establishing objectives set by government for wildlife has not been enacted in the Lakes district and objectives are not specified in the Lakes LRMP or the Lakes South SRMP.<br>Two notices, enabled under section 7(2) of the FPPR, specifying indicators of the amount, distribution and attributes of wildlife habitat required for the winter survival of ungulate species as well as for the survival of species at risk exist for the Lakes and Nadina districts, respectively. |
| **OBJECTIVES SET BY GOVERNMENT FOR BIODIVERSITY OBJECTIVES (Landscape Level)** - 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 ☐ | The design of the proposed Wildfire Risk Reduction areas will resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape. |
| **OBJECTIVES SET BY GOVERNMENT FOR BIODIVERSITY OBJECTIVES (Stand Level)** - 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 ☐ | Two external Wildlife Tree Patch areas amounting to 1.0ha (55.6%) has been identified with this plan. |
| **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 ☒ | The treatment area does not contain known interpretive sites, recreation trails, recreation sites, recreation facilities that are considered to be of significant recreation value and are designated a resource feature. |
| **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 ☒ | WRR-14 is not within a Scenic area, nor a VQO – Retention polygon. |

| | | |
|---|---|---|
| **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?<br><br>No Referral to Land Manager is required if proposed TU is on the applicant's own First Nation Land. | Yes ☐ No ☒ | The proposed block does not overlap into CHR High Archeological Polygon, and no archaeological sites or cultural heritage resources that were identified within the proposed treatment areas.<br>In the event that additional CHR features are identified or otherwise made known during First Nation information sharing and consultation, measures to protect the CHR or address First Nation concerns must be communicated by an addendum to, or an amendment of, this prescription.<br>In the event that previously unidentified CHR features are encountered while carrying out treatment activities, work in the area must stop, and an authorized treatment supervisor must be notified. The Agreement Holder will complete a cultural heritage resource evaluation (CHR) and provide management direction to protect or otherwise manage for the identified feature(s). |
| **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 ☐ | Review of the Invasive Alien Plant Program (IAPP) database indicated the presence of invasive plant species adjacent to the FTU along the Eakin Settlement Road. IAPP sites include Orange Hawkweed (OH), Meadow Buttercup (MB), Oxeye Daisy (OD), Scentless Chamomile (SH), Common Tansy (TC), and Yellow Hawkweed (YH). |
| **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 ☒ | A fenceline is already in place along the northwest boundary of this block. In the event that fencelines are damaged, they will be repaired to the pre-damaged condition. |
| **SPECIES AT RISK** – FPPA section 7 | | |
| Are there species at risk present within the boundaries of the prescribed treatment area? | Yes ☐ No ☒ | No known occurrences of a species at risk were noted during field assessments or through review of BC Conservation Data Centre spatial data. |
| **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 ☐ | WRR-14 overlaps into the Landscape Corridor (LC) identified within the Lakes South Sustainable Management Plan by 5%. Overlaps into LC do not exceed the documented limits and prescribed activities are not expected to conflict with other land use objectives not specifically addressed by this prescription. |
| Do the proposed activities conflict with land use objectives (higher level plans or objectives under the *Land Act*)? | Yes ☐ No ☒ | Prescribed activities are not expected to conflict with other land use objectives not specifically addressed by this prescription. |
| Known and potential species at risk, windthrow hazard, old growth management areas (OGMA)? | Yes ☐ No ☒ | Treatment activities do not overlap into any OGMAs established by the Lakes South SRMP. |
| Do the proposed activities conflict with Provincial Priority Deferral Areas (PROV. DEF) identified by the Old Growth Strategic Review? | Yes ☐ No ☒ | Proposed harvest area WRR-14 overlaps by 100% into the newly designated PROV. DEF. |

## G. OTHER CONSIDERATIONS AND REQUIREMENTS

**CONSULTATION** – FIRST NATIONS: Info-share was initiated on April 22, 2022 and Adequacy Letter is called: 10455-50/22 K4R WRR IS1 and is dated July 04, 2022

| FIRST NATION | CONCERNS IDENTIFIED AND MEASURES TO ADDRESS |
|---|---|
| Nee Tahi Buhn Band | No concerns brought forward. |
| Skin Tyee Nation | No concerns brought forward. |
| Stellat'en First Nation | No concerns brought forward. |
| Wet'suwet'en First Nation | No concerns brought forward. |
| Office of the Wet'sewet'en | No concerns brought forward. |
| First Nations consultation complete? | Yes ☒ No ☐ |

**CONSULTATION** – GENERAL, EXISTING TENURE HOLDERS (Forest, Range, Guide Outfitters, Trappers): Info-share was initiated for existing Tenure Holders on April 22, 2022.

| Tenure Holder | Concerns? | Measures proposed to address licensee's concerns |
|---|---|---|
| Range: George Amendt | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Carl Doglione | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Sharon Robertson | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Ootsa Lake Cattle Company | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Victor Bateson | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Jonathan Solecki | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Jack Burt | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Clint Lambert | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Elizabeth McEntire | Yes ☐ No ☒ | No concerns brought forward. |
| Range: Harold Moroski | Yes ☐ No ☒ | No concerns brought forward. |
| Trapline: TR0604T014 | Yes ☐ No ☒ | No concerns brought forward. |
| Trapline: TR0604T017 | Yes ☐ No ☒ | No concerns brought forward. |
| Trapline: TR0604T018 | Yes ☐ No ☒ | No concerns brought forward. |
| Trapline: TR0604T019 | Yes ☐ No ☒ | No concerns brought forward. |
| Trapline: TR0604T020 | Yes ☐ No ☒ | No concerns brought forward. |
| Guide Outfitter: James Lancaster | Yes ☐ No ☒ | No concerns brought forward. |
| Guide Outfitter: Brett Hall | Yes ☐ No ☒ | No concerns brought forward. |
| Guide Outfitter: Gary Blackwell | Yes ☐ No ☒ | No concerns brought forward. |

| | | |
|---|---|---|
| PRIVATE PROPERTY | | |
| Does private property border the proposed treatment area? | Yes ☐ No ☒ | There is no private land immediately adjacent to WRR-14. |
| SMOKE MANAGEMENT | | |
| Does a smoke management plan beyond OBSCR exist for the proposed treatment area? | Yes ☐ No ☒ | The treatment area is within a Medium Smoke Sensitivity Zone and therefore the *August 2021 Community Wildfire Risk Reduction Open Burning Smoke Control Regulations* will be followed for the burning of debris piles. |
| SAFETY | | |
| Have any specific safety concerns been identified in or adjacent to the proposed treatment area? | Yes ☒ No ☐ | The level of blowdown within these proposed treatment areas are very high. Cattle are no longer able to use this area as it is completely impassable. |

| | | |
|---|---|---|
| UTILITIES | | |
| Are utilities located in or adjacent to the proposed treatment area? i.e. power lines, gas lines, etc. | Yes ☒ No ☐ | The proposed shape is adjacent to utility lines which are along the Keefe's Landing Road. |
| ACCESS CONTROL | | |
| Are there any foreseen issues with access and access control during and post treatment? | Yes ☐ No ☒ | There are no foreseen access issues for access to the proposed Wildfire Risk Reduction shape in this Prescription. |
| TRAFFIC CONTROL | | |
| Is traffic control required at any point during operations? | Yes ☐ No ☒ | There is no need for traffic control on this shape because timber will be felled into the block, and there is a minimum of a tree length right of way cleared between the blocks and the Keefe's Landing Road. |
| OTHER (E.g Public Notification) | | |
| Notification of commencement of harvesting activities should be posted on Chinook Community Forest's Facebook Page. | | |

**H. STAND AND STOCK TABLE**

Is merchantable timber cutting prescribed? If yes, please provide details below.

☒ Yes ☐ No

About 56.4% percent of the treatment unit contains merchantable timber. The intent of this project is to recover as much fibre as possible from these proposed areas. The appropriate tenure authorization method will be applied for once timber purchase agreements have been arranged.

Are there any challenges to utilizing merchantable material? If yes, please provide details below.

☒ Yes ☐ No

There is extensive blowdown, dead standing and ladder fuels throughout the Prescription area. Much of the volume that is down on the ground and overlapping has been dead and down for many years now. The hope is that the merchantable stems can be separated out efficiently and effectively from the stems that cannot to aid in a seamless flow of merchantable timber from the Prescription area. Because this is a very small block, debris may be left on site for a small period of time so that community members may come and load out the material for firewood. Any debris that remains after that period of time ends will be burnt.

| TREATMENT SPECIFICATIONS SUMMARY | |
|---|---|
| **TU 1** | **TREE REMOVAL/RETENTION STRATEGY BY SIZE/SPECIES** (Summarize specifications identified in table above) |
| 1 | ***Silviculture Systems:*** Clearcut with Reserve (CCRES)<br>***Treatment Regimes:*** Conventional Harvest (HARV), Hazard Tree Removal (HTR), Surface Fuel Reduction (SFR), Mechanical Pile and Burn (PILE BURN) |

TREATMENT SPECIFICATION RATIONALE

Treatment activities will utilize a clearcut with reserve silviculture system and primarily requires the use of mechanical treatment methods. Initial treatment phases will remove remnant hazardous overstory fuels consisting of 197.6 m3/ha lodgepole pine, of which 100% of this volume is dead potential lodgepole pine. Secondary treatment phases will require surface fuel reductions to the specified targets by means of mainly mechanical methods, with the possibility of manual treatment methods. Treatment activities are expected to transition stands from a C-2 fuel type (Boreal Spruce *with MPB affected stands) to a C-6 (Conifer Plantation) and reduce surface fire intensities significantly. Post treatment fire intensities will be dependant on the availability of an appropriate fire management stocking standard and subsequent stand tending activities.

To reduce predicted fire behaviour the following treatment specifications have been applied:

- Retain all live deciduous trees except where their removal is necessary to address a safety concern.
- Remove all live and dead overstory and understory coniferous trees unless the tree is to be retained to achieve biodiversity objectives or the tree has been identified as a wildlife habitat or cultural heritage feature.
- Reduce <7.0 cm surface fuel loads to 0.5 kg/m$^2$ (+/- 0.25 kg/m$^2$).
- Reduce >7.0 cm surface fuel loads to 2.5 kg/m2 (+/- 0.5 kg/m2).

**TU 1: STAND AND STOCK TABLE DATA**

| Species and Diameter Class[1] | Crown Base Height Range (m) | Average Tree Height (m) | STEMS PER HECTARE (sph) | | | VOLUME PER HECTARE (m$^3$/ha)[2] | | | Basal Area (m$^2$) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Existing | Cut | Leave | Existing | Cut | Leave | Existing |
| **Layer 1 (≥ 22.5 cm - 27.5 cm dbh)** | | | | | | | | | |
| Pl | - | 24 | 491 | 491 | 0 | 197.6 | 197.6 | 0 | 35 |
| | | | | | | | | | |
| Total Dead Potential | | | 491 | 491 | 0 | 197.6 | 197.6 | 0 | 35 |
| Total Live | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total All Species | | 24 | 491 | 491 | 0 | 197.6 | 197.6 | 0 | 35 |
| Total Conifers | | 24 | 491 | 491 | 0 | 197.6 | 197.6 | 0 | 35 |
| **TOTALS: Layer 1** | | | | | | | | | |
| **Total Layer 1 - All Species** | - | **24** | **491** | **491** | **0** | **197.6** | **197.6** | **0** | **35** |
| Total Layer - Conifers Only | - | 24 | 491 | 491 | 0 | 197.6 | 197.6 | 0 | 35 |

[1] Modify diameter classes as required to suite treatment.

[2] A professional estimate is required for any merchantable cutting

| SURFACE FUEL LOADING (kg/m$^2$) | | | | | |
|---|---|---|---|---|---|
| Size Class (cm) | Existing (kg/m$^2$) | Existing Distribution | Target (kg/m$^2$) | Target Distribution | Methodology Used |
| Fine Woody Debris (</=7cm) | 1.24 | Moderately continuous distribution with accumulations associated with suspended and jackpotted lodgepole pine. | 0.5 kg/m2 (+/- 0.25 kg/m2) | Reduce to target levels with an acceptable range of ±0.25 kg/m2. Maintain poor continuity between residual pieces and avoid creating aggregations. | Line Intersect Sampling Method |
| Large Diameter Woody Debris (>7cm – 20cm) | 3.35 | Continuous distribution of lodgepole pine damaged by mountain pine beetle as well as some hybrid spruce damaged by wind. Pieces typically have a decay class of 2 to 3. | 2.5 kg/m2 (+/- 0.5 kg/m2) | Reduce below target levels with an acceptable range of ±0.5 kg/m2. Ensure poor continuity between retained pieces and avoid creating aggregations. | |
| Coarse Woody Debris (CWD) (20cm+) | 5.59 | | | | |
| Crown Closure (%): 20 | Existing Total: 10.17 kg/m$^2$ | | Target: 3.0 kg/m2 (+/- 0.75 kg/m2) | | |

| BIODIVERSITY AND FOREST HEALTH CONSIDERATIONS AND TARGETS | |
|---|---|
| COARSE WOODY DEBRIS (CWD) RETENTION TARGET – Distribution | Using the *May 2022 Chief Forester's Guidance on Coarse Woody Debris Management on Wildfire Mitigation Treatments*, the recommendation is to leave 5 CWD pieces per hectare in the SBS dk. |
| WILDLIFE TREE RETENTION TARGET | Retain up to 10 sph of large diameter (>30 cm dbh) dead potential stems as wildlife snags.<br>Retain one (1) patch (20 x 20 m) of suitable secondary stand structure per hectare for wildlife habitat. Retention patches must be allocated so as to maintain discontinuity to adjacent stands, be anchored around deciduous and dead potential tree retention where practicable, and contain 400-600 sph of healthy poles and/or saplings (where they exist) with good form and vigour.<br>Retain three (3) to five (5) high stumps (>1.0 m) per hectare adjacent to retention patches to ensure they do not incur damage as a result of skidding/yarding activities. |
| FOREST HEALTH- Should include sections such as agent, affected species, incidence rating, mortality, and targets | Stands have been assessed to be in poor condition due to the impacts of forest health factors.<br>Lodgepole pine overstory trees exhibited total mortality (100%) as a result of historical mountain pine beetle infestation. Significant wind damage has occurred where dead lodgepole pine have succumb to wind and snow loads and have transitioned to the forest floor. Additionally, windthrow contributions from residual stand components are anticipated to increase as stand condition continues to decline and stand density decreases. Evidence of incipient mountain pine beetle infestation was not noted.<br>WINDTHROW RISK EVALUATION<br>Windthrow assessments indicate the proposed treatment activities will result in a moderate potential for future windthrow risk due to topographic location due to prevailing wind directions. Wind damage is common in stands that have been impacted insect occurrences mainly from historical mountain pine beetle infestations, yet also due to root rot. |

## I. TREATMENT DESCRIPTION

### MERCHANTABLE TIMBER CUTTING

ROADS, LANDINGS AND TRAILS:

Access to the unit will be gained by using the Moss FSR at 8.2km on the Keefe's Landing Road. There is an existing old trail at 0+450m on the Moss FSR which will be the main access point, which will include one (1) new road permit section.

**All additional access structure required to accommodate the prescribed treatment activities, or otherwise necessitated by site conditions or to address a safety concern, must be approved by an authorized treatment supervisor.**

FELLING:

Felling activities will employ mechanical falling equipment (i.e. feller-bunchers, harvesters).

If or where any hand felling activities are used, they must be carried out by Fallers certified to the BC Faller Training Standard (BCFTS) with the skills and experience to achieve the treatment specifications without damaging residual stand components.

YARDING/SKIDDING:

Conventional ground-based primary transport equipment (i.e. rubber-tired skidders, forwarders, etc.) will be utilized to carry out skidding/yarding activities. If rubber-tired skidders are utilized, retain high stumps (<1.0 m in height) adjacent to retained trees to prevent retention from incurring damage as a result of yarding and skidding activities.

LOADING AND HAULING:

Loading activities will be carried out within the right of way of proposed access structures and any required landings. Hauling activities will be carried out using an appropriate logging truck configuration for the harvest systems employed and processing facility requirements.

SLASH DISPOSAL:

Treatment residues and existing downed woody material in excess of prescribed >7.0 cm targets will be brought to road right of ways to facilitate biomass utilization where practicable. Material should be marketed to local processing facilities where a biomass fibre recovery opportunity exists. Where a biomass recovery opportunity does not exist alternative markets/users should be explored, or the material should be piled and burned on site.

The quantity and distribution of biomass resulting from initial mechanical treatment phases will vary with the harvest systems used. Roadside processing may improve biomass recovery opportunities relative to processing at the stump, especially where selection systems have been proposed. Processing at the stump, while improving other objectives, will result in increased dispersed fuel loads and increase the requirement for fire hazard abatement activities.

STRATEGIES TO IMPROVE BIOMASS UTILIZATION:

- Aggregate treatment residues, unutilized dead and down material, and bucking waste within utilization requirements for biomass facilities within road right of ways.
- Avoid incorporating mineral soil and other contaminants into piles.

### STAND MODIFICATION TREATMENTS

BRUSHING: Manual brushing treatments have not been prescribed.

PRUNING: Pruning treatments have not been prescribed.

THINNING: Thinning treatments have not been prescribed.

DEBRIS PILING:

Un-utilized biomass – including treatment residues and residual downed woody material – in excess of prescribed surface fuel load reduction targets outside of right of ways will be aggregated into debris piles. Debris piles must be a minimum of ½ the height of the pile's base width with taller piles being preferred. Surface fuels with a decay class of 4 or 5 do not contribute to surface fuel load calculations and may be retained on site.

STRATEGIES FOR DEBRIS PILING:

- Carry out debris piling activities in snow free conditions.
- Construct piles in locations that prevent retention from incurring heat damage and crown scorching during pile burning activities (i.e. within natural openings).
- Ensure piles contain a mix of material sizes and decay classes to facilitate effective ignition and complete combustion.
- Avoid incorporating mineral soil and other non-combustible debris into piles.

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| PILE BURNING:<br>Burning activities must be carried out in compliance with the Wildfire Act and its Regulation as well as the Environmental Management Act (EMA); namely the Open Burning and Smoke Control Regulation (OBSCR).<br>The treatment area is within a Medium Smoke Sensitivity Zone (SSZ) as indicated by Smoke Sensitivity Zone map #38 – Nechako River (93F). All open burning activities within the Eakin Settlement area are subject to the requirements of section 9, 10, 11, 13, 14, and 15 of OBSCR. However, the FTU falls under a plan for community wildfire risk reduction – the Nadina South Side Wildfire Risk Reduction Tactical Plan – and therefore may be carried out in accordance with section 23 of OBSCR where open burning activities are anticipated to last less than one (1) day, or under the conditions outlined in an approval issued under section 15 of the EMA.<br>No private residences or business buildings have been identified <150 m of the treatment area.<br>If pile burning activities will be carried out in a manner that meets the definition of a Category 3 Open Fire, as defined by the Wildfire Regulation, a Burn Registration Number (BRN) will be required. A BRN can be obtained from BCWS by calling 1-888-797-1717 or emailing hpr.1800@gov.bc.ca.<br>STRATEGIES FOR PILE BURNING:<br>- Ensure all piled debris is dry and seasoned as per the definition provided by the OBSCR.<br>- Obtain custom venting forecasts to identify optimal burning opportunities.<br>- Consider the utilization of an Air Curtain Burner. |
| MULCHING: Mulching treatments have not been prescribed. |
| MASTICATION: Mastication treatments have not been prescribed. |
| GRINDING:<br>In the event that debris can sold to a biomass facility, it is likely that a grinding unit will come directly to the site to prepare the debris into the exact specifications to be shipped via a chip transport truck. If this phase is planned to occur, ensure that road access is maintained to all debris pile locations. |
| PRESCRIBED FIRE: Prescribe Fire treatments have not been prescribed. |
| PLANTING:<br>Fire Management Stocking Standards are not provided in the Agreement Holders current approved FSP and therefore an amendment to the Chinook CFA FSP 2016 stocking standards is being proposed as is shown in the Stocking Standard Table below. It is recommended that the Wildfire Risk Reduction stocking standard be requested for all Chinook CFA Wildfire Risk Reduction project areas as these standards are in line with the *BCWS Fuel Management Prescription Guidance 2022*. |
| OTHER: N/A |
| AUTHORIZATION AND TIMBER TENURE |
| FRPA Section 52 (1) (b):<br>The Agreement Holder (CFA:K4R) maintains the timber rights for all merchantable timber harvested as a result of treatment implementation unless relinquished by the CFA holder and authorized by FPRA Section 52 (1) (b). |
| Forestry License to Cut (FLTC): Not anticipated. |
| Park Use Permit: N/A |
| Road Permit or Road Use Permit: One new Section for R21201 will be applied for with this Prescription area. |
| Other (i.e. local government, utilities, etc.): n/a |

## J. POST TREATMENT

EXPECTED VEGETATION RESPONSE:

Treatment activities are anticipated to result in a moderate vegetative response. Increases to shrub and herbaceous cover and the ingress of various grasses is expected throughout the treatment areas. The establishment of coniferous regeneration is expected to be variable, although site disturbance associated with treatment activities has the potential to promote root suckering where trembling aspen stand components exist.

ADDITIONAL TREATMENTS OR MAINTENANCE:

Where clearcut systems have been employed, carry out stand monitoring at an interval that aligns with the required silvicultural assessments. The results of silviculture assessments will inform the mid to long term requirement for maintenance.

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

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

In SU 1 an even-aged stocking standard has been applied using the table below.

## STOCKING STANDARDS:

APPLICABLE EVEN-AGED STOCKING STANDARDS:

| TU | SU | Stocking Standard ID | Species (Pref.) | Species (Accep.) | Well-Spaced Stem/ha | | | | Minimum Height (m) | | | Regen Delay | Free Growing (years) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | TSS | MSS | | MITD | PI | Others | RTH (%) | | |
| | | | | | | Pref. & Acc. | Pref. | | | | | | |
| 1 | 1 | TBD | PLI<br>SX<br>FDI<br>LW<br>AT<br>EP<br>AC | - | 1200 | 700 | 600 | 2.0 | 2.0 | 1.0 | - | 4 | 20 |

| **K. Outstanding Works** |
|---|
| 1.) Obtain the appropriate authorizations for the FRPA Section 52(1)(b) and for the new section required to R21201 road permit. |
| 2.) Obtain District Manager approval for the proposed alternative stocking standards, or upon the approval of the Chinook CFA:K4R FSP adopt the applicable fire management stocking standards if appropriate. |
| 3.) If required, obtain the appropriate approval(s) – under section 15 of the EMA – to exempt pile burning activities from the requirements of sections 9, 10, 11, 13, 14 and 15 and Part 3 of OBSCR. |
| 4.) Obtain the appropriate authorizations or exemptions for those portions of the treatment area that are within a Priority Deferral Area identified by the Old Growth Strategic Review and the Old Growth Technical Advisory Panel. |

| **L. ADMINISTRATION** | |
|---|---|
| **PREPARATION** | |
| FOREST PROFESSIONAL NAME *(Printed):*<br>Jennifer Hill, RPF | FOREST PROFESSIONAL SIGNATURE:<br>  |
| MEMBER NUMBER:<br>3889 | DATE:<br>2023-02-03 |

| **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 ☐ | OTHER: | Yes ☐ No ☐ |
| SURFACE FUEL LOADING DATA: | Yes ☒ No ☐ | | |
| TERRAIN STABILITY ASSESSMENT<br>Completed By:<br>Date: | Yes ☐ No ☒ | VISUAL IMPACT ASSESSMENT<br>Completed By:<br>Date: | Yes ☐ No ☒ |
| ARCHAEOLOGY IMPACT ASSESSMENT Yes ☐ No ☒<br>Completed By:<br>Date: | | BIOLOGIST ASSESSMENT Yes ☐ No ☒<br>Completed By:<br>Date: | |

ADDITIONAL COMMENTS:

MAPS: The following maps have been provided to support the prescribed activities:

- Prescription Map
- Ortho Treatment Map
- Location Map