



2019 FFT Treatment Plan

| Area Description | | | |
|-------------------|------------------------|-------------------------------------|-----------------|
| Region | District | Location | |
| Northern Interior | DPC | Mt. McAllister Fire / Johnson Creek | |
| Licence No. | Opening No. | Opening ID | Date of Plan |
| A18151 | 93O 099-101 | 66649(1695017) | August 25, 2019 |
| Gross Block Area | Natural Non Productive | Unnatural Non-Productive | NAR |
| 7.4 | | - | 7.4 |
| WTP | History | Treatment | Treatment Area |
| N/A | | Site Prep/Plant | 7.4 |
| Latitude: | 55 54' 54" N | Longitude: | 122 12' 55" W |
| Elevation (min): | 840m | Elevation (max): | 890m |

| Management Objectives | |
|--|-----------------------------|
| Management Objectives and Strategies Stated in Land and Resource Management Plan (LRMP): | |
| Dawson Creek LRMP, South Peace RMZ - Enhanced Resource Management, RMZ Subzone 4G - Johnson Creek. Management Intent: Enhance timber harvesting and forest resource management to sustain long-term timber supply and where feasible increase the area and productivity of the operable forest land base without compromising other resource values. | |
| Wildlife: | |
| This plan is in accordance with Part 4, Division 6 (General Wildlife Measures and Resource Features), Forest Planning and Practices Regulation. The treatment area is not within an identified critical wildlife habitat area or identified ungulate winter range. No wildlife features were identified during field activities. Site preparation work is planned to occur outside of the bird breeding season. If a wildlife feature such as a bear or bird nest is encountered stop work in the area and notify the contract representative. | |
| Fisheries: | |
| A S4 stream identified as MT1 on the treatment plan map flows through the treatment polygons. Equipment is only permitted to cross the stream on built roads. | |
| Watersheds: | |
| The treatment area is not located within a community watershed. | |
| Recreation: | |
| Recreation activities in the vicinity of the opening could include hunting, ATV'ing, 4x4'ing, fishing. No other concerns identified. | |
| Biological Diversity: | |
| This plan is in accordance with Part 4, Division 5 (Biodiversity), Forest Planning and Practices Regulation. Within the treatment area, there is scattered unburned (green) coniferous and deciduous trees, these trees should be retained where practicable to do so. The area will be planted with Sx, Pl, Lw, and Fdi, natural ingress of Ac, At, Ep is expected. | |
| Research | |
| There are no known research installations within, or in close proximity to the treatment area. | |
| Visuals: | |
| The area is not within an established visually quality polygon objective. | |
| Cultural Heritage: | |
| Culture significant features were not identified during field activities. If a cultural significant feature is identified stop work in the area and notify the contract representative. | |
| Other Resources: | |
| Trapper: TR0731T007 | Guide(s): 701263 Range: N/A |

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| Other Resources Comments: |
| No identifiable resources features were encountered during field activities. If a resource features such as a trail, structure, trap/trapline or other object associated with other resource users is encountered stop work in the area and notify the contract representative. |
| Treatment Objective(s): |
| The overall objective is to improve the future timber supply through the reforestation of this stand which has been severely impacted by wildfire and is currently not satisfactorily restocked (NSR). The objective is to conduct mechanical knockdown under frozen conditions of mainly standing fire killed trees dispersed amongst patches of free growing plantation and natural regeneration trees. This will be followed by chemical site preparation and planting. Mechanical knockdown will help reduce overhead and body hazards for planters and will improve safety for aerial herbicide applicators. Chemical site preparation will help control herbaceous species that have overtaken the site and are currently an impediment to coniferous tree growth. Planting is necessary as natural ingress is expected to be slow or negligible. |
| Treatment Method(s): |
| The following treatments should be conducted on the net area: 1) During frozen conditions, mechanically knock/push down remaining standing wildfire killed trees. Pile and heavy accumulations of debris that have been knock down or already existed on the ground. Lay flat as possible lighter accumulations with machinery on site. Effort should be made to retain healthy acceptable conifers and larger (>15 cm dbh) deciduous trees where operationally feasible and safe to do so. 2) Chemical site preparation. 3) Artificial reforestation (Planting). The area is prescribed to plant with acceptable species in accordance to the stocking standards. In addition, minor amounts of Lw and Fdi will be planted. These species were selected because of the effects of climate change and the adapting environment. |

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| Current Stand Description* |
| SU A: |
| I: SX80EP20-19/10-5.8/3.3-23/E-4-1167(17) |
| S: NSR-SX80EP20-15-4.3-23/E-333(17) |
| *based on survey completed by Silvicon Services Inc. 18/10/17 |

| Ecological Information | | | | | | | |
|------------------------|---------------|----------------------|---------------|-----------------------------|-------------------------|------------------|----------------------|
| Standards Unit (SU) | Net Area (ha) | Zone Subzone Variant | Site Series | Edatope Moisture /Nutrients | Soil Texture & C.F. (%) | Humus Depth (cm) | Slope Avg. % & Range |
| A | 7.4 | SBS wk 2 | 06 (60)05(40) | 6/C | SiL M 35-70% | 4-10 | 14% 2/10/30 |
| | | | | | | | |

| Management Practices | | | | |
|-------------------------|-----------|-----------|---|--|
| Streams/Wetlands/Lakes: | | | | |
| Riparian ID / Class | RRZ Width | RMZ Width | Location/Measures Prescribed/ Comments | |
| S4 | 0 | 30 | Stream illustrated on the Treatment Map as MT1. Equipment are only permitted to cross the streams on existing built roads. Equipment should work outside of RRZ at all times. | |

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| Riparian Management Comments: |
| Riparian assessments were carried out by Coastal NRM Ltd. in August, 2019. |
| Forest Health Management Strategies: |
| The purpose of this treatment plan is to rehabilitate this stand severely impacted by wildfire. |
| Coarse Woody Debris Management Strategies: |
| In accordance to Forest Planning and Practices Regulations s68 a minimum of 4 logs per hectare will be left after treatment, each being a minimum of 2 m in length and 7.5 cm in diameter at one end. |
| Archaeological Sites Management Strategies: |
| If a previously unidentified cultural heritage resource (such as a CMT or cultural depression) is encountered during treatment, operations should stop in the area to protect the feature and the contract representative should be notified. |
| Species at Risk: |
| Species at risk were not identified during field activities and the treatment area does not overlap a known occurrence of a species at risk. |
| Invasive Plants: |
| Invasive plants were not encountered during field activities. Equipment and vehicles should be cleaned prior to arriving at site to ensure that invasive plants are not transported to the site. In addition, if invasive plants are encountered work should stop in the area and the contract representative should be notified. |
| Vegetation Management Strategies: |
| The treatment area is prescribed to be chemically site prepared in 2020. The area should be reassessed during scheduled silvicultural surveys in 2024. |

| Soil Conservation | | | | | |
|---|-----------------|------------------------------------|----------------------|------------------------------------|------------------------------|
| Soil Disturbance Hazard Ratings: | | | | Soil Characteristics: | |
| SU | Soil Compaction | Soil Displacement | Surface Soil Erosion | Depth to Unfavourable Subsoil (cm) | Type of Unfavourable Subsoil |
| A | H | L | L | 46cm | Seepage |
| Soil Disturbance Limits: | | | | | |
| SU | | Maximum Allowable Soil Disturbance | | | |
| A | | 5% | | | |
| Permanent Access Structures: If greater than 7% provide rationale: N/A | | | | | |
| Maximum Allowable Soil Disturbance for a Roadside Work Area (if applicable): 25% | | | | | |
| Landslides / Terrain Stability: Evidence of landslides and/or terrain stability issues were not identified during field activities. | | | | | |
| Soil Disturbance Comments: | | | | | |
| Soil compaction is identified as High to Very High because of the SiL/C soils identified. Work should occur during times of frozen soil or snow covered conditions to minimize the impact of equipment. In addition, LGP equipment should be used where possible. | | | | | |

| Free Growing Stocking Standards | | | | | | | |
|---|-------------------------|-------------------------|----------------|-----------------------|---------------------------------|-------------------------|---------------------------------|
| Standards Unit (SU) | Area (ha) | Tree Species | | Target Stocking (TSS) | Minimum Stocking (pref. & acc.) | Minimum Stocking (pref) | Minimum Inter-tree Distance (m) |
| A | 7.4 | Bl, Sx | At, Ac, Ep, Pl | 1200 | 700 | 600 | 2 |
| Free Growing Stocking Standards (continued) | | | | | | | |
| Standards Unit (SU) | Regen Delay (Max years) | Free Growing Assessment | | | FG Minimum Height (m) | | |
| A | 4 | Earliest (yrs) | | Latest (yrs) | | 2.0 (PI) 1.0 (other) | |

| Site Preparation Treatment Specifications | |
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| Treatment Target: | |
| The target number of plantable spots per hectare is 1800, with a minimum of 1200. | |
| Boundary Flagging: | |
| The treatment unit boundary is flagged with orange "boundary" ribbon. Streams are flagged with yellow ribbon. | |
| Treatment Targets: | |
| Trees that have been affected by Wildfire and unacceptable (e.g. diseased or otherwise unhealthy) trees are to be removed from the site. In addition, woody brush species and small deciduous stems are to be reduced/removed to create plantable spots. Healthy conifers and larger deciduous (>15cm dbh) should be left standing where practicable. | |
| Treatment Constraints: | |
| This area is wet and if work occurs when the ground is not frozen then rutting may occur. A S4 stream flows through the area and machines are only permitted to cross the stream on existing built roads. | |

| Planting Specifications | | |
|--|--|---------------|
| Planting Unit | 1 (SU A) | Totals |
| Est. Net Area to Plant (ha) | 7.4 | |
| Elevation (m) | 857 | |
| Biogeoclimatic Zone/Subzone | SBS wk2 | |
| Seed Zone (class A) | PR Peace River | |
| Seed Zone (class B) | HH Hudson Hope | |
| Site Prep: Type / Yr | Mechanical/ 2019 | |
| *Proposed Tree Species, % & stock type for Planting: | Sx (60%) PSB412B Pli (20%) PSB412A Lw (10%) PSI512A Fdi (10%) PSB412A | |
| % Survival Expected | 80% | |
| **Target Planting Density (spots available per ha): | 1800 | |
| Contract / Min. Spacing | 2.5/1.4 | |
| Target, min. and max. well spaced Trees / Plot (3.99m radius) including existing trees | Target: 9 Maximum: 10 Minimum: 8 | |
| # OF TREES-Subtotal | Sx – 7,992 Pli – 2,664 Lw – 1,332 Fdi – 1,332 | |
| # OF TREES-TOTAL | 13320 | 133320 |
| Estimated Total Hectares | | 7.4 |
| * As per Section 7.3 of the Chief Forester's Standards for Seed Use, genetically improved seedlings must be used where available. A species mix should be planted unless specifically otherwise prescribed. Stock type and tree species is only "proposed". Another similar stock type may also be appropriate, and any of the preferred or acceptable species may be planted. | | |
| ** The target planting density is only "proposed". A higher, or lower planting density may be appropriate. | | |

| Characteristics of an Acceptable or Unacceptable Existing Tree and Ghost Trees: |
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| <p>Acceptable/Unacceptable: Existing acceptable trees must be the above stated preferred or acceptable species at least 50cm tall, free from disease, damage or pests, with good health, form and vigor as per regional or district Standards. When more than one candidate, the larger tree will be selected.</p> |
| <p>Characteristics of an Acceptable Microsite: Mineral soil or an acceptable mixture of mineral soil and decomposed organic material (e.g. FH planting) as per sections 3.5 and 3.6 of the FFT Planting Standards. Screening/scalping of existing litter layer ("L" layer), and vegetation is desirable to allow for a better microsite for seedling growth and survival.</p> |
| <p>Treatment Constraints/Comments: The treatment area has high brush cover.</p> |
| <p>Access from Hudson Hope:</p> |

Travel south along Highway 29 until the junction of the Johnson Creek Forest Service Road (FSR). Then, in a western direction along the FSR for approximately 20km. At the junction of R09315 turn west again and travel to the treatment area.

Return of Investment:

A Financial Analysis calculated by Coastal NRM Ltd. found that the IRR for this treatment and future planned activities to be greater than 2%.

Plan Preparing Forester:
Dan Rollert, RPF



Date: May 26, 2019

Plan Reviewing and Signing Forester:
Nicholas Miller, RPF



Date: May 28, 2019