



# DOGNOSE & 10 MILE 2021-2025

Silviculture Treatment Plan



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## Executive summary

If a harvest area is found to be underperforming and is not likely to reach the established reforestation goals, a silviculture treatment plan with remedial activities can be implemented. A silviculture treatment plan outlines the reason for the treatment, where and what activities will be undertaken and the anticipated outcomes, in addition to providing First Nations and the public an opportunity for review and comments on proposed treatments, as required under the *Forest Resources Regulation*.

The planned treatments are located at the Dognose and 10 Mile operating units, west of kilometre 10 on the Dempster Highway, east of Dawson City, Yukon. The area has been selectively harvested for white spruce over many years dating back to the 1980s.

The Tr'ondëk Hwëch'in Final Agreement, the *Forest Resources Regulation* and the following high-level plans were taken into consideration in developing this silviculture treatment plan: the Dawson Forest Resources Management Plan, the Dempster Highway Harvest Planning Area Timber Harvest Plan (THP), and several site plans.

The objectives of this silviculture treatment plan are to maintain acceptable regeneration levels according to relevant plans and stocking standards. The project area has a historic harvest of 100 hectares that currently requires reforestation and an estimated future harvest area of 40-60 hectares planned over the next several years.

Due to the site conditions, various treatments will be required to reforest the site. Seedlings will be focused on available plantable spots as soon as possible after harvesting. The treatments may consist of planting white spruce and white birch trees, and various site preparation techniques to promote natural regeneration and the survival of planted trees. The treatments are planned to be ongoing between 2021 and 2025, with continued monitoring in future years.



## Background

### Disturbance history

Active logging operations have occurred in the Dognose operating unit during the winter months from 2015 to 2021, with harvesting planned to continue each year within the Dognose harvest area. Logging is predominately for white spruce (*Picea glauca*) saw logs with secondary fuelwood harvests. Areas to reforest include patch cuts, skid trails, and landings or log storage areas no longer in use.

### Previous silviculture prescriptions

- A mix of harvest prescriptions were used: selective harvest; partial cut; patch cut; and patch cut with retention.
- Previous regeneration prescriptions at the site include:
  - natural regeneration where seedbed allows;
  - straight blade site preparation and planting trials set up in 2008;
  - a birch plant in 2017 of 8,000 seedlings; and
  - a spruce plant in 2020 of 14,000 seedlings.

## Treatment location

Access to this area is located along the Dempster Highway (Figure 1).

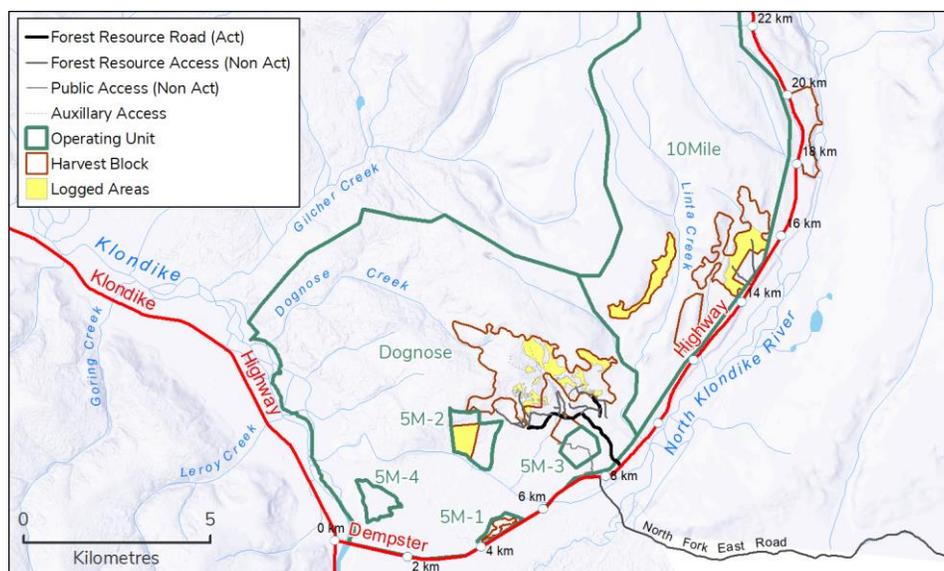


FIGURE 1: DOGNOSE AND 10 MILE OPERATING UNITS AREA OVERVIEW



## Site details

- Natural regeneration is the primary reforestation method.
- Fill planting is the secondary reforestation method.
- Site preparation may be required as grasses and willow are major competitors.
- Preferred species:
  - White spruce; and
  - White birch.
- Acceptable species:
  - Trembling aspen;
  - Black spruce; and
  - Balsam poplar.
- Slopes are generally south facing, uniform to gullied, and the harvest sites are generally located mid-upper slope. The soil at this site has moderate drainage, 12 cm organic layer (litter, fermentation, humus), and a silty loam composition.
- Water seepage is evident in harvest areas.
- The vegetation inventory for the area shows a predominately spruce mixed wood stand composed of white spruce (50-90%), black spruce (0-30%), birch (0-20%), and aspen (0-10%) at average heights ranging from 16 metres to 22 metres.
- Site class in the openings ranges from medium to high productivity.
- This site is within the Klondike Plateau Boreal Low Subzone; BOLkp/01.
- The stocking standard for this site is coniferous leading mixed wood:
  - Target stocking – 1400 stems per hectare;
  - Primary minimum stocking – 1100 stems per hectare.

## Post-harvest conditions

- The site has been selectively harvested for white spruce, leaving a mosaic of openings.
- Trees were harvested in winter leaving little exposed mineral soil for seedbed.
- 2019 surveys found a major component of current regeneration at the site is shrub and grass species (*Salix spp.*, *Poa spp.*, *Rosa acicularis*, *Alnus viridis*) with minimal regeneration of tree species (Figure 2)
- The current area to reforest is 100 hectares, with future harvest areas to reforest is predicted at 40-60 hectares.
- Straight blading site preparation trials conducted in 2008 are indicating that site preparation is effective at reducing competition and increasing tree regeneration.



FIGURE 2: AREAS HARVESTED BETWEEN 2017 AND 2019 THAT REQUIRE REFORESTATION (2020)



## Planning considerations

This treatment plan followed the principles set out in higher levels plans and agreements, including:

- The Tr'ondëk Hwëch'in Final Agreement;
- Dawson Forest Resources Management Plan;
- Dempster Highway Harvest Planning Area Timber Harvest Plan; and
- any associated site plans.

## *Forest Resources Regulation*

- As per section 57(3)(a) of the *Forest Resources Regulation*, copies of this treatment plan will be made available to any First Nation whose traditional territory overlaps wholly or partially with the area to which the plan will apply and are invited to make representations during a period of not less than 30 days.
- As per section 57(3)(b) of the *Forest Resources Regulation*, copies of this plan will be made available to the public and are invited to make representations during a period of not less than 30 days.
- All comments received will be taken into consideration for the approved plan, as per section 57(3)(c) of the *Regulation*.

## Treatment objectives

This treatment plan aims to complete the following objectives:

1. Increase natural regeneration and artificial regeneration survival through site preparation techniques; and
2. ensure a valuable forest stand will be available for future harvests.

## Planned treatments and schedule

Adaptive management will be used to ensure that the treatments will meet the goals and objectives of this silviculture plan. Adaptations from previous prescriptions include:

- Site preparation will occur yearly during fall and winter between 2021 and 2025 and will include:
  - Disc trenching in areas with the appropriate soil conditions and a high component of grass competition; and



- Straight blading that removes only the grass and shrub competition where the disc trencher cannot access due to seepages (soil disturbance will be minimized).
- Planting treatments will occur yearly in the spring between 2022 and 2025 and will include:
  - planting areas of harvest immediately after harvesting and in site prepared areas; and
  - fill planting all other areas in which natural regeneration is low and site preparation is not possible.

## Trials or research

Seedling and natural regeneration will be tracked in each varying treatment type to monitor the success and inform future treatments in the area. The blading trial in the 10 Mile operating unit will continue to be monitored.

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**Forest Management Branch**

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**Date**

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**Lisa Walker, Director**  
**Forest Management Branch**

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**Date**