Project Plan
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FPInnovations
Wildfire Operations Research
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Effectiveness of Mulching as a Fuel Treatment in Jack Pine / Black spruce

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Introduction

Mechanical mastication (mulching) is becoming widely utilized as a forest fuel treatment with the goal of reducing fire intensity and spread rate in treated areas. Mulching fuel treatments have not been widely field tested and little empirical data exists to validate this fuel treatment as a fuel break.

Standards for mulching as a fuel treatment will be of benefit to fire managers and community planners in the development of community protection plans and implementation of mulching as a fuel treatment. This project will document fire behaviour in a mulched grid pattern and evaluate the effectiveness of this fuel treatment in reducing fire behaviour.

This project is one part of the Forest Fuel Treatment Study which aims to gain an understanding of the effectiveness of specific forest fuel treatments. The Forest Fuel Treatment Study consists of several projects that will look at the effectiveness of stand-thinning, stand-cleaning, mulching, and under-burning.

Methods

Mulched fuel grids have been prepared adjacent to a planned prescribed burn at Rainbow Lake, AB and at the Canadian Boreal Community FireSmart (CBCFS) experimental burn site near Fort Providence, NWT (see project notes for Winter Mulching Operations – Fort Providence and Rainbow Lake).

For each of these test areas, crown fire will be initiated in the adjacent natural forest stand upwind of the fuel treated plot and allowed to run into the fuel treated plot. Fire behaviour data will be collected in the natural stand and in the fuel treated plot.

Safety

Tailgate safety briefings will include fireline safety (LACES). Fire crews will be on site with firefighting equipment to prevent spread of fire beyond pre-determined boundaries. First aiders and first aid equipment will be available on site. Emergency procedures and contact numbers will be communicated and posted on site. A satellite phone will be on site if cell phone coverage is not available. All personnel will use required PPE.

While travelling to these sites, personnel will use HomeSafe check-in procedures.

Timeline

Fire managers will monitor weather and fuel conditions for an appropriate burn window for the prescribed burn at Rainbow Lake. June 2012 is the anticipated time frame for ignition of the prescribed burn.

Experimental burns at the Canadian Boreal Community FireSmart (CBCFS) experimental burn site are planned for the last two weeks of June 2012.

Deliverables

Completion of these field operations will be documented in a project report to be published in September 2012.

Participating Members/Collaborators

Alberta Sustainable Resource Development

Northwest Territories Environment and Natural Resources

University of Toronto

References

Winter Mulching Operations – Fort Providence, NWT. 2011 FPInnovations Project Note March 2011. http://wildfire.fpinnovations.ca/3/WinterMulchingOperationsNWT2011.pdf

Winter Mulching Operations – Rainbow Lake, AB. 2011 FPInnovations Project Note March 2011. http://wildfire.fpinnovations.ca/3/2011RainbowLakeMulchingTripReport.pdf