



	YEAR 1	YEAR 2	YEAR 3
Reference Number:			
Client Number:			

FIRE COMPLEXITY RATING: 52 - Type II

Submitted by:

Company or Agency & Applicant Name: Adrian Batho, Ministry of Environment		Date: Jul. 16, 09
Signature:		Certification Level:

Reviewed by: (may have more than one reviewer)

REVIEWER MUST BE QUALIFIED ACCORDING TO THE COMPLEXITY RATING OF THIS FIRE.

Name:	Mike Pritchard	Date:	Jul. 16, 09
Signature:		Certification Level:	

**PRESCRIBED FIRE BURN PLAN APPROVED:
Designated Forest Official – Protection**

Name:		Date:	
Signature:		Certification Level:	

EXTENSION APPROVED:

YEAR 2	Name:		Date:	
	Signature:		Certification Level:	
YEAR 3	Name:		Date:	
	Signature:		Certification Level:	

AUTHORIZATION TO CONDUCT THE PRESCRIBED BURN ON THE SITE MUST BE ACQUIRED FROM THE LAND MANAGER PRIOR TO SUBMITTING THE BURN PLAN.

THIS BURN PLAN DOES NOT PROVIDE FOR APPROVAL UNDER THE ENVIRONMENTAL MANAGEMENT ACT, OPEN BURNING SMOKE CONTROL REGULATION

For help with this form, please visit our web site:

Online help at <http://bcwildfire.ca/Prevention/PrescribedFire/burnplanhelp.htm>



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N/A	7. Information Plan – Notification Checklist (if required)
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N/A	10. Security Plan (if required)
x	11. Prescribed Fire “Go-No-Go” Checklist (mandatory)
x	12. Burn Plan Map (mandatory)



A. Project Overview

Location:

Geographic Location	South of Laidman Lake	Lat/Long	125 09" 42" 53 07' 17"
Base Map/Opening	93F015	Forest Region	Northern Interior
Fire Centre	Prince George	District	Vanderhoof
Zone	VanJam	TSA	Prince George

Legal:

Land Status	Crown	Tenure /Licence	Range: RAN075042
Licencee/Owner	Range: Wayne and Deborah Daul	Phone Number (24hr.)	Not Available
Land Description		Plan Number	

Information:

Burning Supervisor	Adrian Batho	Phone Number (24hr.)	250-614-9923
Size	36.5 ha	Photo Line Number	Ortho Image: bc_093f015_xc1m_ut m10_2000_2001.tif

General Description:

This project will explore the use of prescribed fire following a stand knock-down to help perpetuate the long-term supply of terrestrial forage lichens within northern caribou winter range. The proposed prescribed burn treatment area has been pre-treated (cabled/tramped) and a fuel free zone established along its perimeter.

Terrestrial lichens, a primary winter forage for northern caribou, are found on nutrient poor dry pine sites and rely on a wildfire natural disturbance regime. Fire intervals, based on Natural Disturbance Unit targets would be approximately 125 years; however, based on evidence of fire-scarred stems within dry pine-lichen forests and First Nations oral history, the return interval could be much less.

Management strategies have been developed to use forestry as the disturbance agent on these types to perpetuate lichen communities in the absence of wildfire. Given the impact of the mountain pine beetle epidemic and other socio-economic factors, managers cannot be guaranteed that an appropriate area of disturbance will be created by forestry activities to satisfy the management targets set in northern caribou Ungulate Winter Range policy.

In turn, alternate approaches to forestry are being explored to determine the feasibility and effectiveness towards UWR management. This project aims at using prescribed burning as a tool to rehabilitate terrestrial lichen habitats.



B. Fuel /Stand Description

1) Biogeoclimatic Subzone	SBPS mc
2) Site Series	01b/02
3) FBP Fuel Type	S1: Jack or Lodgepole Pine Slash
4) Forest Cover	60 to 100 year plus lodgepole pine
5) Slope	Uniform slope ranging from 0-5%
6) Aspect	West
7) Elevation	1067 m
8) Slope Position	Mid/Level
9) Valley Orientation	flat ground
10) Duff Depth	3-5 cm
11) Soil Texture (predominant)	Sandy Loam
12) Fuel Loading	Approx. 1.5 kg/m ² (based on visual comparison with PG CFS plots)

Additional Comments:

C. Prescribed Burn Objectives and Desired Fire Effects

Summary

The Burn Objectives are:

1. To determine if prescribed burns can be applied as an operational tool in UWR management.
2. To implement a prescribed burn to determine if the vegetation response after prescribed burning is equivalent to the response after wildfire on ecologically similar sites.
3. To determine if prescribed burning can reduce the potential for extreme debris accumulations thus a) reducing future fire risks, b) maintaining access through stands for northern caribou and c) provide a fuel break for future standing tree prescribed burning

Desired Fire Effects:

1. Near complete consumption of duff layer to reduce seedbed and vegetation
2. Near complete consumption of slash
3. Considerable mineral soil exposure to facilitate lichen recolonization of the site.

Weather

Maximum wind speed of 20 km/h

Temp 10 - 25 c

RH 35



Fire Weather Indices/Codes

FFMC 80+, DMC 30+, DC 300+. From Moose Lake Weather Station and/or on-site weather station and on-site assessment.

Fuel Moisture Content

An on-site weatherstation will be used to monitor hourly FFMC values leading up to the burn.

Fire Behaviour to Meet Desired Fire Effects

In order for the objectives to be met, a moderately intense slash fire is required Impact Rank 5 required to consume 85% of duff depth and 60% exposure of mineral soil under duff depths of 3 cm. Adjusted Spread Rank 5 (up to 3 m/min).

Smoke Management

The Smoke management plan will be in compliance with the Open Burning Smoke Control Regulation of the Environmental Management Act.

The burn site is located in an area having a Open Burning Smoke Control Regulation (OBSCR) rating of LOW. The plume drift is expected to be to the east based on historical wind patterns and the prescription requirements. It is anticipated that very little smoke will persist over the burn area 48 hours after ignition. A venting index of 'good' is required on Day 1, with 'good to fair' venting on Day 2.

D. Values at Risk

Threatened Areas (outside the burn area)

Airstrip and private land with structures (Laidman Lake Lodge) W and NW of the burn site. Distance to airstrip is 500 m from closest point on western edge across Mathews Creek.

Distance to Private land is 700 m from NW edge to SE private land (1100 m to structures) .

Plantations to east of treatment area - Plantations have been established by BC Timber Sales and Canfor

Distance to closest plantation is 250 m from SE burn edge.

Mature timber surrounds the treatment area some licensee recce has been undertaken in these areas.

Water Quality - Mathews Creek is adjacent to the burn area. There will be no ignition of fuels within 50 m of Mathews Creek. The prescription calls for NW, W, or SW winds which will result in smoke and ash being blown away from Mathews Creek.

Areas to be Protected (inside the burn area)

N/A



E. Public Relations and Information Strategy

Prince George Fire Centre immediately prior to ignition (250) 565-6126

Lhoosk'uz Dene Nation to be notified via telephone

John Blackwell (Moose Lake Lodge, Licensed Trapper)

William Karson (Laidman Lake Lodge) will be notified via telephone

Impacts to the local communities are expected to be low and the treatment area is quite remote. The First Nation consultation process started in summer 2008.

F. Prescribed Burn Operations

Pre-Burn preparations

Complete Public Relations and information Strategy

Obtain Burn Reference Number

Ignition and Control Plan					
Heli-torch and/or Hand light ignition around the perimeter. Monitor surrounding timber and cutblocks to the NE and E for spotting.					
Fire Suppression Resources at Burn Area for Ignition and Control					
-12 adult persons (2 x 5 five person crews if required + 2 supervisor types)					
Adult Persons	Hand Tools	Pumps	Hose	Heavy Equipment	Other
12	Shovels, Pulaskis, Hand Tank Pumps, drip torches	2	3000	N/A	Helicopter, Heli-torch and Bucket

Mopup and Patrol Objectives					
(All fires will be extinguished <u>4</u> days after ignition.)					
Mopup operations will commence on day 2 of the burn and will be carried out by mop-up crews under the direction of the Burn Boss.					
Extinguish perimeter completely after 2 days. The initial mop-up operations will concentrate within the first 30 meters around the burn area perimeter. Once the outer perimeter is safeguarded it is planned to let the areas within the guards continue to burn. This will allow time for accumulations and stumps to burn out, minimizing the amount of mop-up required.					
Adult Persons	Hand Tools	Pumps	Hose	Heavy Equipment	Other
12	Shovels, Pulaskis, Hand Tank Pumps	2	3000	N/A	N/A

(total resources to be available and required for mop-up and patrol for Day 2 and onward)

Patrol Plan

Description:

- Adrian Batho will walk the treatment area daily until 4th day following the burn after 13:00
- If MOF flights (Vanderhoof) are occurring in the vicinity of burn, they will be asked to overfly the burn area. Contact between the Districts Air coordinators and the Van/Jam Protection will be maintained to ensure this happens.

Escape Fire Contingency Plan

Refer to the attached map which identifies the Burn Plan Area as well as the Burn Management Zone. This map will show the burn plan area boundary in yellow and the burn management area boundary in red.

Any fire that escapes the burn plan area will be aggressively attacked to minimize spread. However, until a fire crosses over the burn management zone boundary it will not be called a wildfire, at which point Prince George Fire Centre will be immediately notified.

Crews will patrol along the burn area perimeter to deal with any spot fires outside the burn area as they occur.

Total Resources Required in Event of a Fire Escape

6 persons

Adult Persons	Hand Tools	Pumps	Hose	Heavy Equipment	Other
6	pulaski, shovels and handtanks	2	3000 ft	N/A	Helicopter Bucket

G. Prescribed Burn Budget Estimates (if required)

Ignition:

Burn Fuel (reg gas) - \$600

Helicopter Light-up and recce flight - \$3300

12 people 10 hours @ \$30/hour - \$4680

Mop-Up:

Next day recce flight and crew moves (if required) - \$2000

12 people 10 hours @ \$30/hour (if required) - \$4680

Patrol:

1 person 21 hours (3 days post burn) @ \$30/hour - \$630

TOTAL: \$15890



H. Monitoring

Monitoring

Activities identified under this burn plan are a treatment within a larger adaptive management project. Monitoring will be outlined in the an Adaptive Management Plan and will be specified for both short- and long-term assessments

Depth of burn pin transects will be installed prior to burning and will be measured as soon as possible following the burn

Documentation

As per Attached Map and PB Planner Worksheets



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PRESCRIBED FIRE BURN PLAN

SCHEDULES

Schedule 1. STAND/FUELS DESCRIPTION MAP (if required)

N/A

Comments



Schedule 2 – Prescribed Fire Complexity Worksheet and Rating Guide (mandatory)

Complexity Element	Weighting Factor	Complexity Factor	Total Value
Safety	5	1 - Easy	5
Threats to Boundaries	5	2 - Moderate	10
Fire Behaviour	5	1 - Easy	5
Objectives	4	1 - Easy	4
Size of Burn Organization	4	1 - Easy	4
Improvements within or Adjacent to Burn Area	3	2 - Moderate	6
Environmental/Timber/Cultural or Social Values	3	2 - Moderate	6
Air Quality Values/Issues	3	1 - Easy	3
Logistic Considerations	3	1 - Easy	3
Political Considerations	2	1 - Easy	2
Tactical Operations	2	1 - Easy	2
Multiagency Involvement	1	2 - Moderate	2
Project Total			52

Type III Burn Boss Required for Projects with Rating of 40 – 51

Type II Burn Boss Required for Projects with Rating of 52 - 84

Type I Burn Boss Required for Projects with Rating of >84

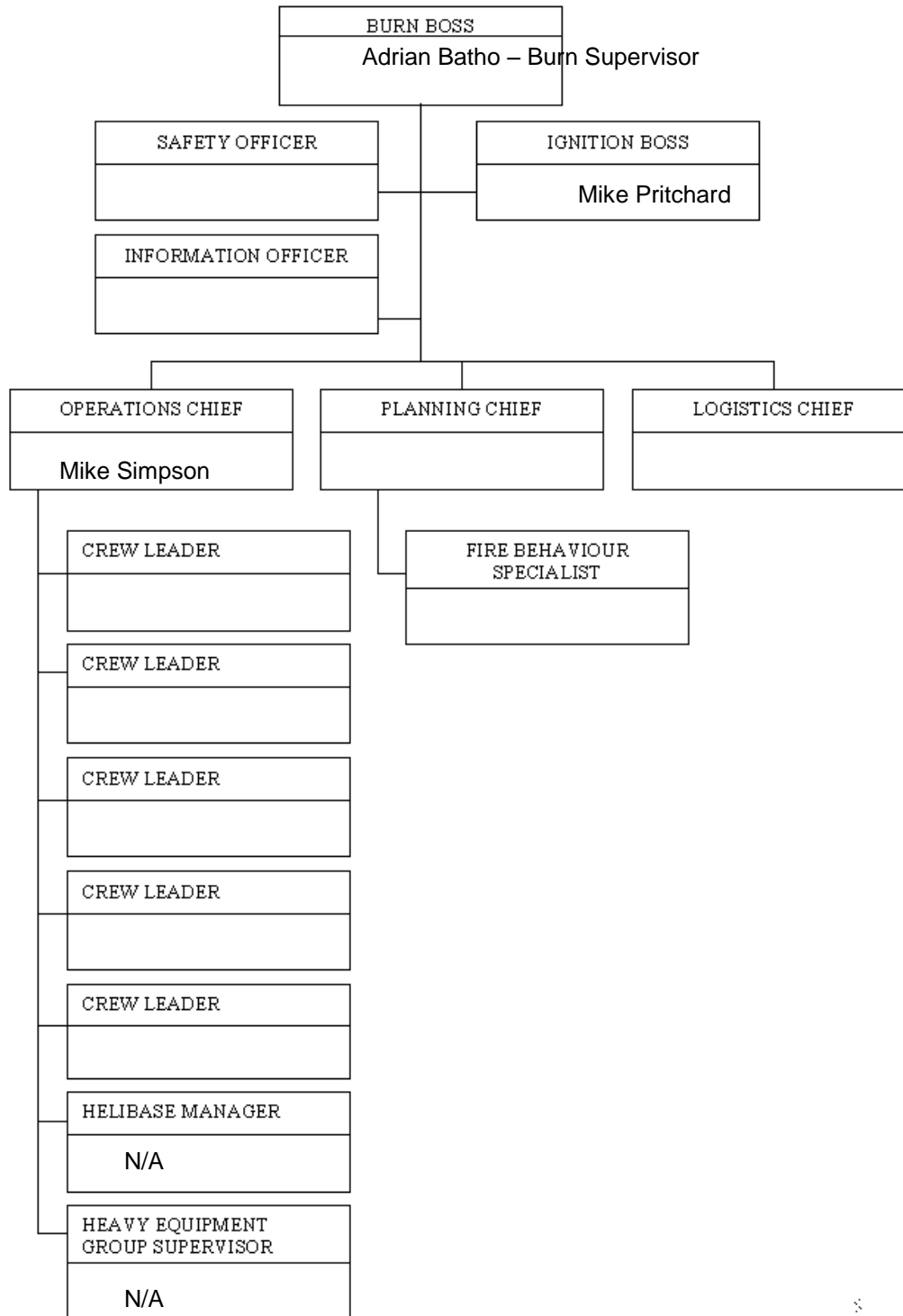
The Prescribed Fire Complexity Analysis provides a method to assess the complexity of the Planned prescribed fire project. The analysis incorporates an assigned numeric rating complexity value for specific complexity elements that are weighted in their contribution to overall complexity. The weighted value is multiplied by the numeric rating value to provide a total value for that element. All elements are then "added to generate the total project complexity value. Breakpoint values are provided for low & moderate and high complexity elements." This complexity worksheet is accompanied (on the Prescribed Fire web site - click the button below) by a guide to numeric values for each complexity element shown.

Guide to Numeric Values at

<http://bcwildfire.ca/Prevention/PrescribedFire/burnplanhelp.htm#wshelp>



Schedule 3 - Organization Chart (if required)



Schedule 4 – On Site Communications Plan (if required)

All on-site personal will be equipped with a radio and tuned to the **SILVER** channel while burning

Schedule 5 – Medical Operations Plan (if required)

See attached **Medical Operations Plan**

Yellowhead Helicopter: 567-5777

Vanderhoof Hospital: 567-2211

Ambulance: 1-800-461-9911

Schedule 6 – Safe Work Procedures (if required)

All personal will be given a tailgate safety plan and ignition plan will be discussed prior to operations commencing.

Schedule 7 – Notification Checklist (if required)

(use ctrl + tab to move to next column)

Contact	Notified	Telephone	Fax
Wayne & Deborah Daul	Written (returned), Verbal	TBD	
Lhoosk'uz Dene Nation	Written, Verbal	(250) 747-3293	
William F. Karson	Written (returned), Verbal	(613) 839-3168	
Janine Gervais	Written, Verbal	(250) 962-3310	

Schedule 8 – Public Notice (if required)

N/A

Public Notice – Radio Station (if required)

N/A

Schedule 9 – Traffic Plan (if required)

N/A

Schedule 10 – Security Plan (if required)

N/A



Schedule 11 – GO NO-GO CHECKLIST (mandatory)

A 'NO' RESPONSE TO ANY ITEM MEANS STOP!

Project Name Laidman Lake Caribou UWR Enhancement	Burn Boss/Burn Supervisor Adrian Batho
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Checklist Item:	YES	NO
1. Is burn plan complete and approved?	<input type="checkbox"/>	<input type="checkbox"/>
2. Are all fire prescription specifications met? (fire weather indices / site conditions)	<input type="checkbox"/>	<input type="checkbox"/>
3. Are all smoke management prescription specifications and requirements met? Has the public information and communications plan been fully implemented?	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the current and projected fire weather forecast favourable?	<input type="checkbox"/>	<input type="checkbox"/>
5. Are all personnel, required in the prescribed burn plan, on site and qualified for assigned positions?	<input type="checkbox"/>	<input type="checkbox"/>
6. Have all personnel been briefed on the prescribed burn plan requirements?	<input type="checkbox"/>	<input type="checkbox"/>
7. Have all personnel been briefed on the project safety plan, including known hazards, and L.C.E.S. (Lookouts, Communications, Escape Routes, and Safety Zones)?	<input type="checkbox"/>	<input type="checkbox"/>
8. Is all the required equipment in place and in working order?	<input type="checkbox"/>	<input type="checkbox"/>
9. Are available resources including backup, adequate for containment of potential escapes? Are the assigned resources in place?	<input type="checkbox"/>	<input type="checkbox"/>
10. Is the test burn adequate for assessing the burn's potential?	<input type="checkbox"/>	<input type="checkbox"/>
11. In your opinion, can the burn be carried out according to plan and will it meet the planning objectives?	<input type="checkbox"/>	<input type="checkbox"/>
12. Is there an adequate contingency plan developed? Has it been communicated to assigned supervisors?	<input type="checkbox"/>	<input type="checkbox"/>
13. Have notifications been completed?	<input type="checkbox"/>	<input type="checkbox"/>



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PRESCRIBED FIRE BURN PLAN

Schedule 12 – Burn Plan Map (mandatory)

Attach map to printed copy.

Comments