

# Forest Fire Prevention and Suppression Plan

LAND USE PERMIT MV2022XXXX

Applicant: Digaa Enterprises Ltd. (Digaa)

Version 1.0

March 31, 2022

Project 1311-3

Prepared for:

Digaa Enterprises Ltd. (Digaa)  
Box 269 Fort Providence  
Northwest Territories XOE 0L0  
867.699.3411



Prepared by:

Patrick Bryant  
Forsite Consultants Ltd.  
330 – 42<sup>nd</sup> Street SW  
PO Box 2079  
Salmon Arm, BC V1E 4R1  
pbryant@forsite.ca  
250-832-3366

 **FORSITE**  
Forest Management Specialists

# Table of Contents

Table of Contents .....	i
List of Figures.....	i
List of Tables.....	i
Acronyms and Definitions .....	ii
<b>1 Introduction .....</b>	<b>1</b>
1.1 LUP Application .....	1
1.2 Background.....	2
1.3 Contact Information .....	2
1.4 Project Location.....	2
<b>2 Forest Fire Prevention.....</b>	<b>3</b>
2.1 Operational Restrictions .....	3
2.2 Required Personnel .....	4
2.3 Required Equipment.....	4
2.4 Training.....	5
<b>3 Forest Fire Suppression .....</b>	<b>5</b>
3.1 Reporting.....	6
3.2 Site Rehabilitation .....	6
3.3 Emergency Contacts for a Forest Fire.....	7
<b>4 References.....</b>	<b>7</b>

# List of Figures

Figure 1-1	Overview map of operations.....	3
Figure 3-1	Fire Response Flowchart .....	6

# List of Tables

Table 2-1	Fire Risk Classification by Activity.....	3
Table 2-2	Operational restrictions .....	4
Table 2-3	Fire equipment required for a work site .....	5
Table 3-1	Internal Contact List for a Forest Fire .....	7
Table 3-2	External Contact List for a Forest Fire .....	7

## Acronyms and Definitions

ASHL	Annual Sustainable Harvest Level
ATA	Annual Timber Allocation
Closed Season	The period beginning on May 1 and ending on September 30 as referred to in subsection 10(1) or the period established in an order made under subsection 10(2) of the Forest Protection Act (FPA).
Fire Danger Rating	The process of systematically evaluating and integrating the individual and combined factors influencing fire danger represented in the form of fire danger indexes.
Fire Equipment Cache	A supply of fire-fighting tools and equipment in planned quantities or standard units at a strategic point for the exclusive use in fire suppression.
Fire Extinguisher	A fully charged and operable fire extinguisher bearing the Underwriter's Laboratories of Canada (ULC) label that rates the extinguisher as suitable for use on class A, B or C fires.
Fire Prevention	Activities designed to prevent the occurrence of fires caused by people. Fire prevention activities include public and school education, media campaigns, preparation of community forest fire management and protection plans, and the reduction of fire hazards and risks.
Fire Suppression	All activities concerned with controlling and extinguishing a fire following its detection and may include initial attack, sustained attack, limited action, delayed action, or observation and monitoring.
Fire Watcher	A designated person at a worksite to provide surveillance for forest fires as a result of work at that worksite.
FMA	Forest Management Agreement
FWI	Fire Weather Index
GNWT	Government of the Northwest Territories
Hot Work	Any work generating significant amounts of heat and includes the cutting, grinding, welding, the heating of metals and flaring of gases.
Initial Attack	The action taken to halt the spread or potential spread of a fire by the first fire-fighting force to arrive at the fire.
Large Engine	An engine having a power greater than 7.5 Kw (10 hp) used in an industrial activity, excluding a water-borne engine, an engine in a vehicle primarily used for the transportation of people, or an engine in a helicopter.
MVLWB	Mackenzie Valley Land and Water Board
Portable Pump Unit	A water pump, not affixed to another machine, that is capable of maintaining a pressure of 1000 kPa (145 psi) while delivering 135 litres of water per minute from 30 metres of hose with: <ol style="list-style-type: none"> <li>1. a nozzle having a 9.5 mm (3/8") opening,</li> <li>2. a suction hose,</li> <li>3. at least 450 metres of discharge hose having a diameter not less than                     <ol style="list-style-type: none"> <li>a. 38 mm, (1 1/2") unlined, or</li> <li>b. 25 mm, (1") lined, and</li> </ol> </li> <li>4. the tools and accessories necessary to operate and maintain the water pump and hoses.</li> </ol>
Small Engine	an internal combustion engine having a power of 7.5 kW (10 hp) or less, excluding a water-borne engine or an engine in a vehicle primarily used for the transportation of people.
Water Delivery System	A system consisting of a water supply, a water pump or equivalent means of pressurizing water, the ancillary hoses, attachments, and tools necessary for the operation and maintenance of the system, that can deliver to any place on a worksite or burn area, <ul style="list-style-type: none"> <li>• water at a pressure of 280 kPa (40 psi) and a rate of 90 litres per minute through a 9.50 mm (3/8") bore nozzle opening for 50 minutes or</li> <li>• a 2500 litre stationary or mobile supply of water, of which 0.5 per cent is liquid surfactant concentrate that, when used with a pump, hose and nozzle, is capable of producing foam that will extinguish a fire in ordinary combustibles such as wood, paper or forest products.</li> </ul>
Wind firm	Trees able to withstand strong winds and resist wind throw or blow-down, wind-rocking and major breakage.
Worksite	In the case of an industrial activity other than timber harvesting, the site at which the work is performed, or in the case of timber harvesting, an area of land within which an operation relating to timber harvesting is performed.

# 1 Introduction

In accordance with the Mackenzie Valley Resource Management Act and subject to regulations, terms and conditions, a Land Use Permit (LUP) MV2015W0018 was granted to Digaa by the Mackenzie Valley Land and Water Board (MVLWB) on December 3, 2015, for a period of five years. As there were no operations during the five year period, Digaa applied for and received a two year extension to the permit in 2020.

Digaa is now applying for a LUP renewal and resubmitting the Forest Fire Prevention and Suppression Plan. It is substantially the same as Digaa's previous plan that the MVLWB Board approved under the previous LUP.

Generally there will be no need for fire prevention or preparedness because the timber harvesting activities - including burning debris piles - will be conducted during the winter months. However, in the event conducts industrial operations during the closed fire season (May 01 – Sept 30), this section outlines the preparation measures and response actions for forest fires. It also identifies key response personnel and their roles in the event of a fire, as well as the equipment and other resources available to respond. These procedures aim to ensure that Digaa can adequately respond to these events to minimize potential effects on health and safety, the environment, control and clean-up efforts.

## 1.1 LUP APPLICATION

The Land Use Permit (LUP) application is a key component to this submission of a Five-Year Timber Harvest Plan (THP) (2022-2026) required for the Fort Providence FMA. This application was developed using various guidelines provided by the Mackenzie Valley Land and Water Board (MVLWB), Indigenous and Northern Development Canada (INDC), the Government of NWT (GNWT), Department of Environment and Natural Resources (ENR) and the GNWT Department of Lands (LANDS). This document provides a Summary of Operations including a description of the planning process and details of proposed forest operation. This document is 1 of 7 as part of the application, with the others listed below and accompanying the application:

- 1 of 7: Five Year Timber Harvest Plan
- 2 of 7: Camp Plan
- 3 of 7: Waste Management Plan
- 4 of 7: Spill Contingency Plan
- 5 of 7: Forest Fire Suppression and Prevention Plan
- 6 of 7: Wildlife and Wildlife Habitat Protection Plan
- 7 of 7: Engagement Plan and Engagement Record

Since large scale timber harvesting applications are new to the NWT, many aspects of forest management are included in this application for context only. Forest management is regulated by the Forest Management Act and its regulations. This legislation is administered through the ENR's Forest Management Division.

This LUP application addresses plans to access timber harvesting areas (i.e., blocks) with respect to road building, maintenance and reclamation.

## 1.2 BACKGROUND

The Government of the Northwest Territories (GNWT) is intent on supporting the development of a forest industry that creates economic investment opportunities, provides long-term employment to local communities and enhances environmental stewardship and sustainability of regional forests.

A pellet manufacturing facility at Enterprise, proposed under a separate Land Use Permit, will require a steady annual supply biomass from forests within the Deh Cho and South Slave Regions.

On October 24, 2014, Digaa Enterprises Ltd. (Digaa), a business partnership between the Deh Gah Got'ie First Nation and the Fort Providence Métis Council, established a 25-year Forest Management Agreement with the Government of the Northwest Territories to enable development of a forest biomass industry in the region. It is anticipated that the opportunities for the pellet facility will create long-term viable business opportunities for the community of Fort Providence in the forestry sector of renewable natural resources.

The Minister of Environment and Natural Resources sets an Annual Sustainable Harvest Level (ASHL) for the FMA area by considering social, biological and economic aspects of the area and overall objectives for the NWT. In support of this ASHL, the recent draft 25-Year Strategic Forest Management Plan for the Fort Providence FMA area (GNWT 2015) provides summaries of analyses conducted to examine timber harvest rates with various non-timber constraints applied over a 300 year planning horizon.

The ASHL for the Fort Providence FMA is currently set at 102,680 m<sup>3</sup>/yr. Section 8.1 of the FMA sets Digaa's the annual timber allocation (ATA) at 85% of the ASHL, or 87,200 m<sup>3</sup>/year; apportioned 64,900 m<sup>3</sup>/year (74%) coniferous and 22,300 (26%) deciduous timber. With new information and/or expansion of the FMA area boundary, the Minister of Environment and Natural Resources may increase this Annual Timber Allocation to 100,000 m<sup>3</sup>/yr.

## 1.3 CONTACT INFORMATION

The applicant for this LUP is:

**Digaa Enterprises Ltd.**  
Bob Head, Manager  
Box 269 Fort Providence  
Northwest Territories, X0E 0L0  
867-699-3411; bobhead@northwestel.net

*Digaa is a business partnership between the Deh Gah Got'ie First Nation and the Fort Providence Métis Council.*

## 1.4 PROJECT LOCATION

This Land Use Permit allows Digaa to access timber stands and harvest logs under their FMA. The FMA timber harvest area generally borders upon the Redknife River to the west, Great Slave Lake to the east, Kakisa Lake to the south and just beyond Mills Lake to the north (see Figure 1-1). Digaa's operations include a temporary camp currently planned near 204 km along the Mackenzie Highway (117°46'15"W; 61°8'31"N).

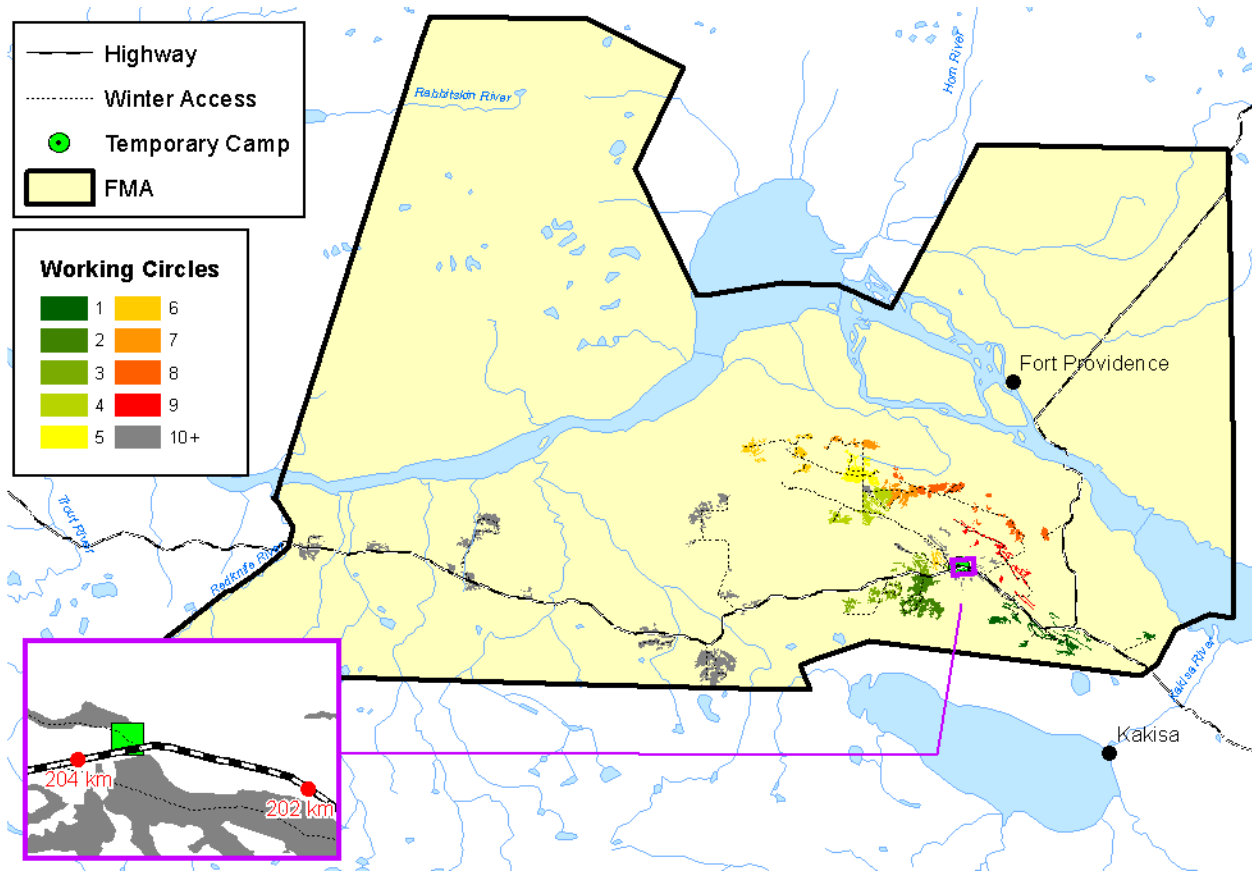


Figure 1-1 Overview map of operations

## 2 Forest Fire Prevention

This section outlines the preparation measures to avoid and respond to forest fires.

### 2.1 OPERATIONAL RESTRICTIONS

Fire prevention and suppression measures apply during the closed season between May 1 and September 30 – or where the Commissioner varies the closed season – and to activities in or within 1000 metres of a forested area.

Table 2-1 lists fire risk classifications by activity. These classifications are then used to identify operational restrictions that apply (Table 2-2). Any activity not specifically listed is deemed to be risk classification A.

**Table 2-1 Fire Risk Classification by Activity**

Risk Classification A (High)	Risk Classification B (Moderate)	Risk Classification C (Low)
Bucking – power saw	Bucking - at landing	Bridge building
Bucking – tree processor	Firewood cutting	Equipment transportation
Log skidding – ground system	Log forwarding	Excavating
Log yarding – cable logging	Right of way clearing or maintenance	Log sorting or reloading
Metal cutting, grinding or welding		Log hauling
Silviculture – using small engines		Log loading

Silviculture – using large engines	Log scaling
Trail building – using small engines	Log dumping
Tree felling	Road construction or maintenance
	Silviculture - using hand tools
	Surveying or engineering
	Timber cruising

Source: GNWT Forest Fires Prevention and Suppression Guidelines for Industrial Activities 2001

**Table 2-2 Operational restrictions**

Fire Danger Rating (FWI)	Risk Classification	Restriction	Duration
Moderate (6 – 12)	A or B	After 3 consecutive days of Moderate maintain a fire watch after work for 1 hour	Until the fire danger class falls below Moderate.
High – Very High (13 – 24)	A	Maintain a fire watch after work for 1 hour	Until the fire danger class falls below Moderate.
		After 3 consecutive days of High or greater, cease activity between 1300 and 1900 hours each day	Until the fire danger class falls to Moderate for 2 consecutive days, or until the fire danger class falls to Low.
Extreme (25+)	B	Maintain a fire watch after work for 1 hour	Until the fire danger falls below Moderate
	A	Maintain a fire watch after work for 1 hour.	Until the fire danger class falls below Moderate
		After 2 consecutive days of Extreme, cease all activity all day.	Until the fire danger class falls below Extreme, then resume the activity except between 1300 and 1900 hours local time, or until the fire danger class falls to Moderate.
	B	Maintain a fire watch after work for 1 hour	Until the fire danger class falls below Moderate
		After 3 consecutive days of Extreme, cease activity between 1300 and 2100 hours each day	Until the fire danger class falls to High for 3 consecutive days, or until the fire danger class falls to Moderate.

Source: GNWT Forest Fires Prevention and Suppression Guidelines for Industrial Activities 2001

## 2.2 REQUIRED PERSONNEL

### Fire Watcher

According to the operational restrictions described in Table 2-2, a Fire Watcher must:

- a) watch for sparks and fires;
- b) report any fires;
- c) assist in fighting any fire; and
- d) have access to one round-nosed shovel, one Pulaski tool or mattock, one hand-tank pump containing at least 18 litres of water, and a radio or telephone that can be used to report a fire and request assistance.

## 2.3 REQUIRED EQUIPMENT

### Work Site

Depending on the number of persons who normally work at a worksite, the person carrying out the industrial activity must ensure that the fire-fighting tools listed in Table 2-3 are kept at the worksite.



**Fire Equipment Cache**

Depending on the number of persons who normally work at a worksite and the activity’s Risk Classification (A or B), extra equipment must be kept at a central Fire Equipment Cache according to Table 2-3 where it can be delivered to any place on each worksite within 1 hour.

**Large Engines**

The equipment listed in Table 2-3 must be attached to every large engine.

**Hot Work**

The equipment listed in Table 2-3 must be kept at each worksite where hot work is performed.

**Table 2-3 Fire equipment required for a work site**

Category	Shovels	Pulaski / Mattocks	Hand-tank Pumps	Portable Pump Units <sup>1</sup>	Fire Extinguishers <sup>2</sup>
General					
<3 people	1	1			
4+ people	1 for each person <sup>3</sup>		1 for every 3 persons (max 8)		
Cache					
11 – 20 people	4	4	2	1	
21 – 40 people	6	6	4	2	
Other					
Large Engines <sup>2</sup>	1	1			1 @ ULC 1-A, 5-B, C and 1 @ ULC 3-A, 10-B,C or an integral vehicle fire suppression system
Hot Work <sup>2</sup>	2		2		2 @ ULC 3-A, 10-B, C

Source: GNWT Forest Fires Prevention and Suppression Guidelines for Industrial Activities 2001

1 – containing at least 18 litres of water (also see definition in Acronyms and Definitions)

2 – see definition in Acronyms and Definitions

3 – equal number of shovels and Pulaski/mattock tools

**2.4 TRAINING**

The Contractor is responsible for providing qualified supervisors to train site workers for forest fire prevention and suppression. These procedures are reviewed with all site workers during on-site orientation sessions periodically scheduled to ensure employees understand the steps to be undertaken to prepare for and respond to a fire. All site workers are shown where the fire equipment is stored and are trained in using this equipment for responding to fires.

**3 Forest Fire Suppression**

This section outlines the response actions for forest fires. It also identifies key response personnel and their roles in the event of a fire, as well as the equipment and other resources available to respond. These procedures aim to ensure that Digaa can adequately respond to these events to minimize potential effects on health and safety, the environment, control and clean-up efforts.

The flow chart depicted in Figure 3-1 describes the basic process for responding to a fire event:



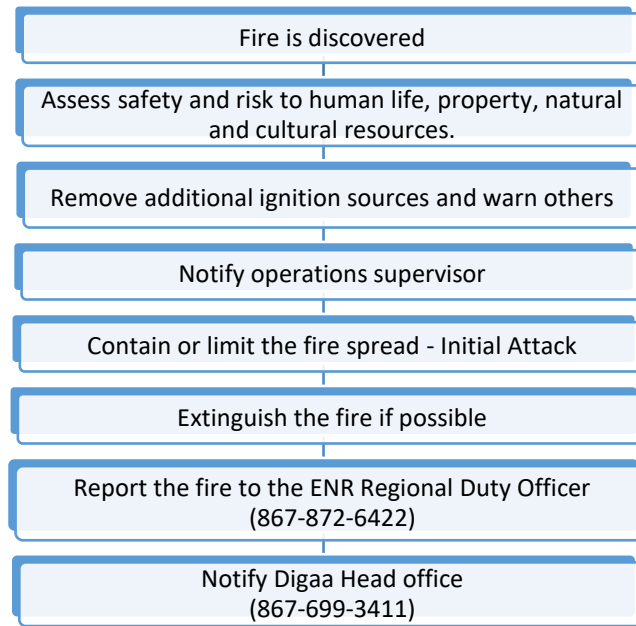


Figure 3-1 Fire Response Flowchart

### 3.1 REPORTING

When reporting a wildfire, be prepared to provide the following information:

- a) your name, organization and contact number;
- b) location of the fire with coordinates or description of landmarks (e.g., roads, lakes, creeks, highway mileposts, cabins, etc.);
- c) description of the fire (size, smoke colour and volume);
- d) people, property, or natural/cultural resources in immediate danger; and
- e) number of people fighting the fire at the time of your report

### 3.2 SITE REHABILITATION

Emergency fire operations must stabilize all fire access trails, fire guards and other fire suppression works to ensure that natural drainage patterns are maintained and surface soil erosion is minimized. Site rehabilitation activities must include the following activities:

- a) stabilize and re-vegetate soil exposed by heavy equipment;
- b) dispose of slash and debris;
- c) stabilize and restore stream channels and stream beds to its original alignment and cross-section; and
- d) stabilize sump and dam locations.

### 3.3 EMERGENCY CONTACTS FOR A FOREST FIRE

Table 3-1 lists the individuals in charge of preparedness, management and control of emergency response procedures for these operations.

**Table 3-1 Internal Contact List for a Forest Fire**

Role	Organization/Location	Contact	Office	Cell
On-Site Supervisors	Contractor (TBD)	TBD		
Manager	Digaa	Bob Head	867-699-3411	867-446-3878

Table 3-2 lists the external contacts for responding to a forest fire.

**Table 3-2 External Contact List for a Forest Fire**

Agency	Contact	Location
ENR Duty Officer	867-872-6422	Fort Smith, NT
Government of NWT; Environmental ENR Division	867-873-7564	Yellowknife, NT
	867-699-3002	Fort Providence, NT
	867-875-5550	Hay River, NT
	867-394-4596	Fort Resolution, NT
	867-872-6400	Fort Smith, NT
Wildfire Emergencies	867-872-0400; 1-867-NWT-FIRE (698-3473)	Fort Smith, NT
Mackenzie Valley Land and Water Board	867-669-0506	Yellowknife, NT
RCMP	867-874-1111	Hay River, NT
Fire Department	867-874-2222	Hay River, NT
Hospital	867-874-7000	Hay River, NT
NWT Power Corporation	867-874-5200 / 1-800-661-0855	Hay River, NT
Great Slave Helicopter (day light hours)	867-695-2326	Fort Simpson, NT

## 4 References

- Government of the Northwest Territories. 2001. Forest Fires Prevention and Suppression Guidelines for Industrial Activities. Department of Environment and Natural Resources. 24p.  
[https://www.enr.gov.nt.ca/sites/enr/files/industrial\\_guidelines\\_forest\\_fire\\_prevention\\_suppression.pdf](https://www.enr.gov.nt.ca/sites/enr/files/industrial_guidelines_forest_fire_prevention_suppression.pdf)