Village of Fort Simpson

Community Wildfire Protection Plan

Prepared for:
Government of the Northwest Territories
Environment and Natural Resources - Forest Management Division

Northwest Territories Environment and Natural Resources

March 2011

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1 Introduction

The Fort Simpson Community Wildfire Protection Plan was developed to provide practical and operational wildland/urban interface risk mitigation strategies to reduce the threat of wildfire to developments within the Village of Fort Simpson.

The project objectives include:

- Assess and quantify community wildland/urban interface hazard and risk
- Based on interface hazard and risk:
  - Develop and prioritize fuel management and maintenance recommendations and prescriptions
  - Develop a summary of significant factors within the community that would enhance its exposure to wildfire and offer recommendations to reduce that threat.

The Fort Simpson Community Wildfire Protection Plan was developed using standardized FireSmart hazard assessment protocols and mitigative measures were developed based on the seven disciplines of wildland/urban interface approach and current research and knowledge in interface community protection.

An implementation plan is included in this Plan to assist agencies to budget and complete projects based on the priorities identified.

This plan should be reviewed and updated at **five year intervals** to ensure it is based on current conditions.

2 Planning Area and Stakeholders

The planning area includes all lands within the Village of Fort Simpson municipal boundary and a two-kilometre buffer surrounding the Village (Map 1).

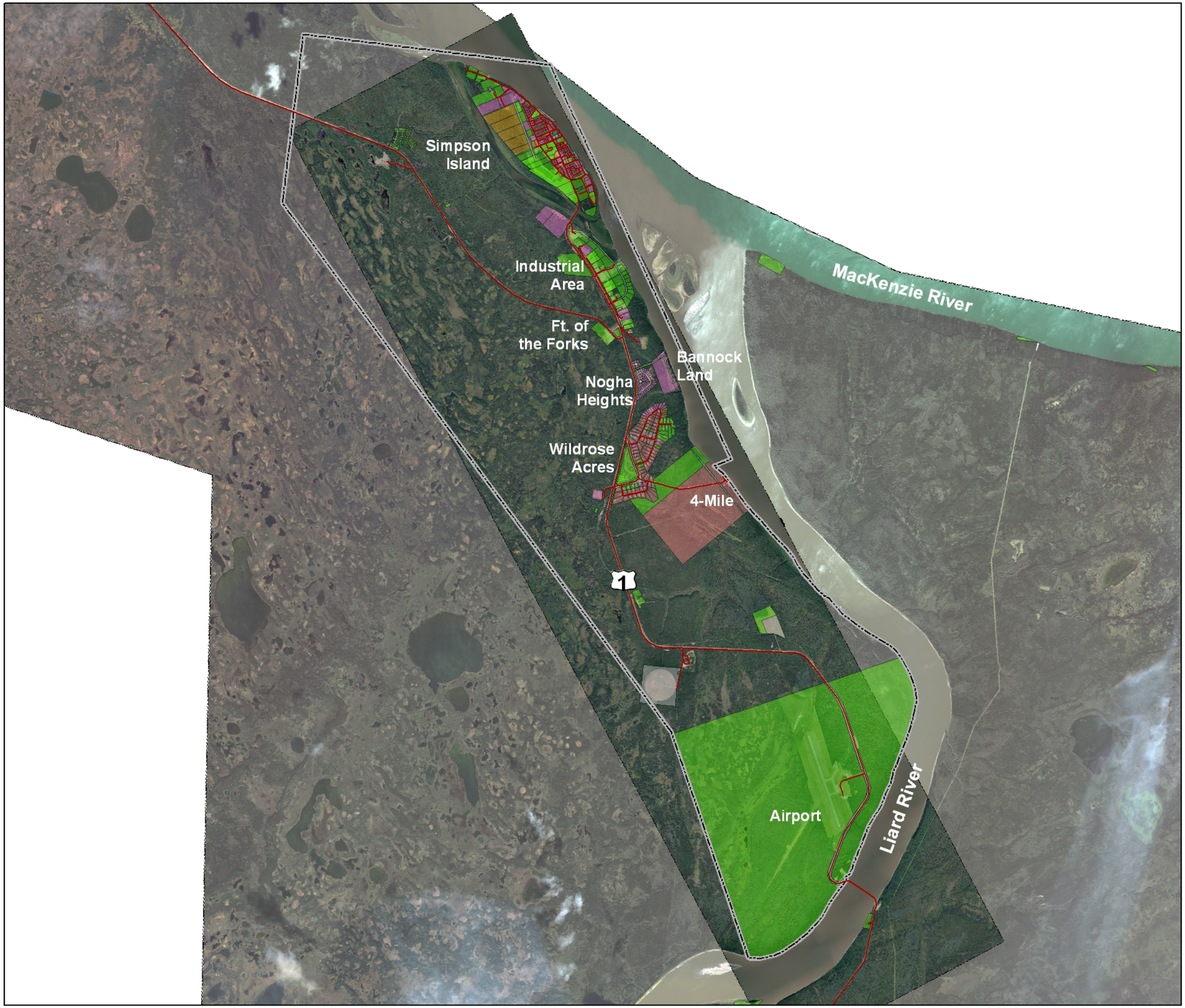
Stakeholders consulted with in the planning process included:

- Daniel Allaire, Forest Officer — GNWT ENR Fort Simpson
- John Ivey, SAO — Village of Fort Simpson

Land status authority is varied and is represented by the following (Map 1):

- Commissioner (GNWT MACA)
- Federal
- Indian Affairs Branch
- Municipal
- Private
- GNWT Crown lands (GNWT ENR)

Map 1 - Planning Area
Village of Fort Simpson



Land Status Authority

- Commissioner
- Federal
- Indian Affairs Branch
- Mixed
- Municipal
- Private

- Village of Ft. Simpson Boundary
- Roads

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3 Hazard & Risk Assessment

The hazard and risk assessment process analyses the risk of wildfire ignition through analysis of fire incidence, the wildfire behaviour potential through analysis of fuels and weather data, and the values at risk to wildfire through FireSmart hazard assessments.

3.1 Wildfire Ignition Potential

The assessment of recent fire incidence was completed using historical fire data from GNWT Environment and Natural Resources (ENR) for the twenty two-year period from 1988 to 2009.

Data within a 10 kilometre radius of the planning area boundary indicates that the risk of wildfire is present. Fire incidence data indicates that fire agencies responded to 18 wildfires in the planning area (Map 2). All are human-caused and contained at initial attack at less than 4 hectares in size (Table 1).

Table 1: Fire Incidence by Cause (1988 – 2009)

General Cause	Number of Fires	Percent of Total
Human-Caused	18	100
Lightning-Caused	0	0
Totals	**18**	**100.0**

The risk of wildfire in the planning area exists and most frequently occurs in areas accessible to residents and recreating public.

Map 2 - Wildfire Incidence
Village of Fort Simpson

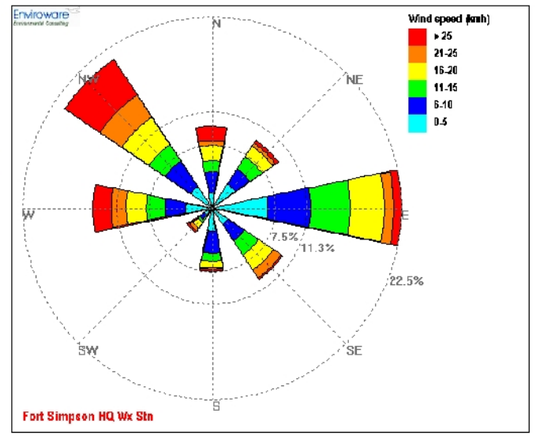
10 KM Buffer Zone

MacKenzie River

Liard River

1

- Village of Ft. Simpson Boundary
- Roads
- Human-Caused Wildfire
- Lightning-Caused Wildfire
- Wildfire > 4 hectares



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3.2 Wildfire Behaviour Potential

3.2.1 Wildland Fuel Types

Fire Behaviour Prediction (FBP) fuel types (Taylor, 1997) were used to analyze the fuel types and fire behaviour potential within and adjacent to Fort Simpson.

The planning area is dominated with boreal spruce (C-2) fuel types with patches of mixedwood (M-1), mature pine (C-3), deciduous (D-1), and cured-grass (O1) fuel types. Each of these fuel types can present hazard to interface structures based on fuel moisture conditions and time of year, however in the Fort Simpson area it is typically the C-2 and M-1 fuel types that present the highest hazard to development.

3.2.2 Fire Weather Analysis

Fire weather data from the Fort Simpson weather station was used to determine the predominant wind directions during the fire season. Data indicates that the predominant and strongest wind directions are from the northwest/west and east/southeast quadrants (Figure 1).

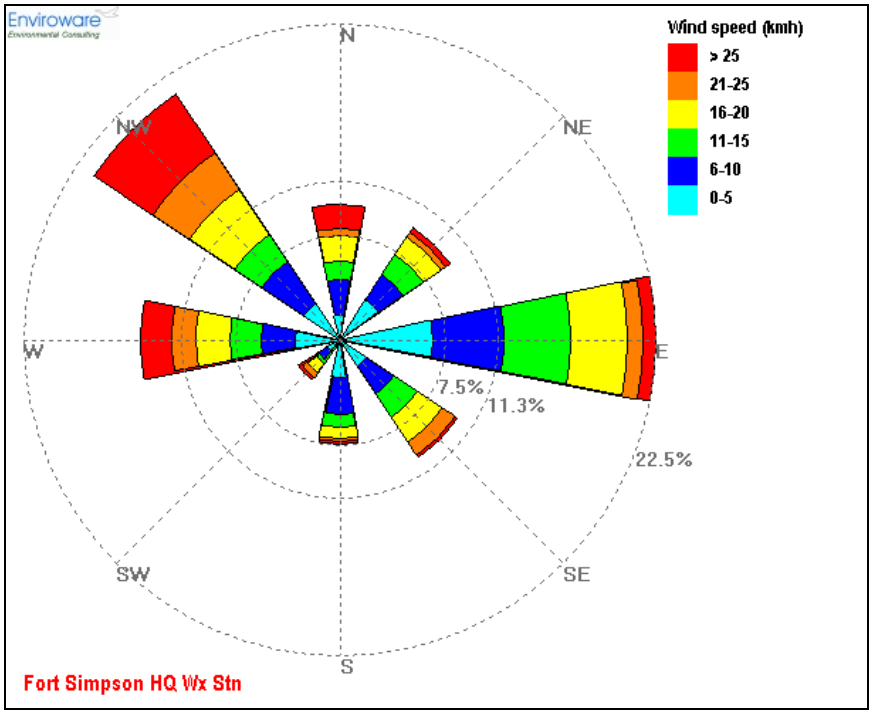


Figure 1 – Fort Simpson Windrose

Wildland fuels and fire weather data indicates that the potential for high to extreme wildfire behaviour exists in the Fort Simpson area.

MacKenzie River
Simpson Island
Industrial Area
Ft. of the Forks
Bannock Land
Nogha Heights
Wildrose Acres
4-Mile
1
Airport
Liard River

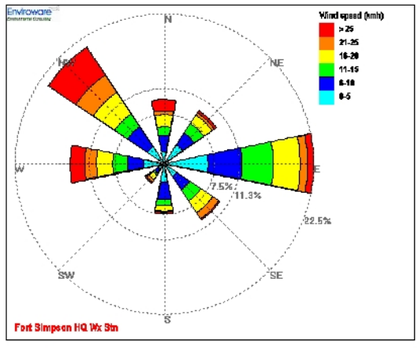
Map 3 - Fuel Types
Village of Fort Simpson

Village of Ft. Simpson Boundary

Roads

FBP Fuel Type

- Spruce-Lichen Woodland (C-1)
- Boreal Spruce (C-2)
- Mature Pine (C-3)
- Immature Pine (C-4)
- Deciduous (D-1)
- Mixedwood (M-1)
- Bog
- Non-Fuel (NF)
- Cured Grass (O1)



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3.3 FireSmart Hazard Assessments

FireSmart hazard assessments (P.I.P., 2003) were conducted on developments and adjacent wildland fuel types within the planning area. The FireSmart hazard assessment process evaluates wildland and structural fuel types, structural features, and topography within and adjacent to the development area to consistently quantify the wildland/urban interface hazards within the planning area and to help set priorities for mitigative options.

Developments at the highest risk to wildfire include (Table 2):

1. Wildrose Acres
2. Nogha Heights
3. Bannock Land

Hazard factor's for each of the development zones is discussed below.

Table 2: FireSmart Hazard Assessments

Development Zone	Structure/Site Hazard (0 – 30m)
Airport	Low
4 Miles	Low
Wildrose Acres	High-Extreme
Nogha Heights	High-Extreme
Bannock Land	Mod-High
Fort of the Forks	Low
Industrial Area	Low-Moderate
Simpson Island	Low-Moderate

Airport

The airport area includes the Ft. Simpson Airport, ENR Tanker Base, and NavCanada Tower and VOR sites. FireSmart hazard is rated as Low for all structures based on the clearance from low hazard deciduous fuels and the non-combustible structural materials used for all structures.

4-Miles Settlement
The 4-Miles settlement is comprised of residential dwellings with non-combustible roofing materials and wood or log siding. The development is at Low hazard to wildfire due to the excellent Zone 1 defensible space and surrounding deciduous fuel types.

Wildrose Acres
Wildrose Acres country-residential subdivision is at High to Extreme hazard due to the surrounding C-2 and C-3 fuel types and lack of adequate Zone 1 and 2 defensible space for many of the dwellings. Structural materials include asphalt shingle and metal roofs and hardi-plank, wood, or vinyl siding.

Nogha Heights
Nogha Heights country-residential subdivision is currently under development and is at High to Extreme hazard due to the surrounding C-2 fuel types and lack of adequate Zone 1 and 2 defensible space for the majority of the dwellings. Structural materials include asphalt shingle and metal roofs and wood or vinyl siding.

Bannock Land
Bannock Land is at Moderate hazard for the majority of the development and High risk on the north perimeter due to the adjacent C-2 fuels. Structural materials include asphalt shingle or metal roofs and wood or log siding. The dead-end access road could be cut-off by wildfire resulting in difficulty evacuating the residents.

Fort of the Forks
Fort of the Forks Open Camp is at Low hazard due to the metal exterior structural materials and the amount of clearing around the site. The debris pile from site clearing presents some threat to the development.

Industrial Area
The Ft. Simpson Industrial Area consists of several commercial and industrial storage yards, the Cooper Barging yard, ENR Firebase/Helipads, and Rowes Trailer Park. The area is at Low to Moderate hazard due to the amount of Zone 1-2 defensible space and the mixedwood or deciduous fuel types surrounding the area.

Simpson Island

The Simpson Island area consists of the main residential and commercial portion of the Village of Fort Simpson. The area is at Low/Moderate hazard due to the lack of coniferous fuel types on the Island. Structural materials include primarily asphalt shingle or metal with scattered wood-shake roofs and wood or vinyl siding.

FireSmart hazard is High/Extreme for the county-residential developments along Hwy 1. The threat of significant structure loss within the Wildrose Acres and Nogha Heights subdivisions is significant.

Map 4 - FireSmart Hazard
Village of Fort Simpson

MacKenzie River

Simpson Island

Industrial Area

Ft. of the Forks

Bannock Land

Nogha Heights

Wildrose Acres

4-Mile

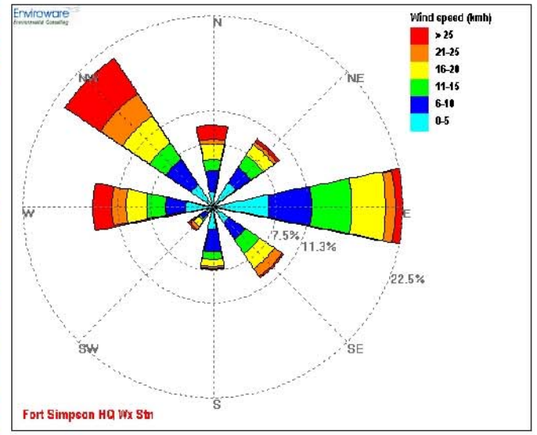
1

Airport

Liard River

FireSmart Hazard

- Low
- Moderate
- High
- Extreme
- Village of Ft. Simpson Boundary
- Roads



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4 Vegetation Management Options

The goal of vegetation management is to create a fuel-reduced buffer between structures and flammable wildland vegetation to reduce the intensity and rate of spread of wildfire approaching or leaving the development. Vegetation management options are proposed at the appropriate scale, based on hazard and risk, to reduce the threat of wildfire to developed areas. While fuel modification projects reduce the threat of wildfire to developments, they do not ensure structure survival under all hazard conditions.

Vegetation management consists of one or any combination of the following options:

- Fuel removal
- Fuel reduction
- Species conversion

Complete descriptions of the methods included in each of the above options are included in *"Fire-Smart Protecting Your Community from Wildfire"* (PIP 2003).

FireSmart standards refer to three interface priority zones with vegetation management for interface structures recommended in Zones 1 and 2 at a minimum and in Zone 3 based on hazard and risk.

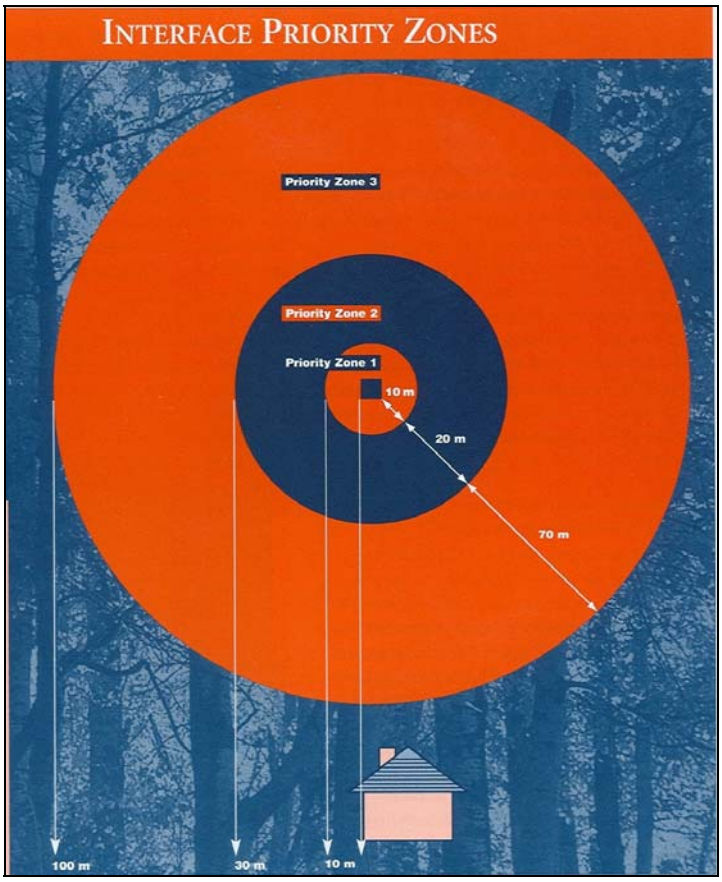


Figure 3 – Interface Priority Zones (PIP, 2003)

4.1 Existing Vegetation Management

Fuels removal and reduction projects have been completed within the planning area by the GNWT ENR Department (Map 5 & Table 3).

Table 3: Existing Vegetation Management Areas

Name	Area (ha)	Year	Agency	Comments
South Fireguard	3.0	2010	GNWT ENR	Widen and continue
Wildrose Acres South	3.0	2010	GNWT ENR	Widen and continue
Nogha Heights	1.2	2009/10	Residents	

The South Fireguard was originally constructed in the mid-1980's and has become overgrown with deciduous and coniferous regrowth. GNWT ENR maintained approximately 1 kilometre of the existing line to it's original width of 25 metres with heavy equipment during the winter of 2010. The project was stopped due to steep ground and requires additional maintenance work to complete the remaining 1.4 kilometres and widen the entire fireguard to a minimum width of 40 metres.

The Wildrose Acres fuel modification area consisted of hand-crew fuels reduction work during the winter of 2010 on the south perimeter of the development to approximately 25 metres in width. The project area should be widened to a minimum of 100 metres in width for the entire area surrounding the development.

The Nogha Heights fuels reduction has been completed by local residents immediately behind some of the lots on the east side of the development. These areas require further work to complete the work started and to include the remaining perimeter areas around the development.

4.2 Proposed Vegetation Management

4.2.1 Zone 1

Zone 1 vegetation management is lacking throughout the Wildrose Acres and Nogha Heights developments thereby increasing the threat of wildfire to homes in those areas.

FireSmart Zone 1 vegetation management options include:

- Removal of flammable forest vegetation within 10 metres of structures.
- Removal of all coniferous ladder fuels (limbs) to a minimum height of 2 metres from ground level on residual overstory trees.
- Removal of all dead and down forest vegetation from the forest floor.
- Increased maintenance to ensure that all combustible needles, leaves, and native grass are removed from on and around structures.
- Establishment and maintenance of a non-combustible surface cover around the structure including the use of FireSmart landscaping species.
- Removal of all combustible material piles (firewood, lumber, etc) within 10 metres of the structure.

For more information on FireSmart Zone 1 standards refer to *FireSmart – Protecting Your Community from Wildfire* (PIP 2003).

Recommendation 1: Encourage residents to establish adequate Zone 1 defensible space around their structures.

4.2.2 Zone 2-3

Four priority areas are recommended for Zone 2-3 fuels management based on hazard and risk and the need to progressively complete areas (Table 4 & Map 5). The intent is to establish fireguards around the development area perimeters as the first priority with fuels reduction inside the developed areas as subsequent priorities.

Proposed fuels management areas are conceptual at this time and will require detailed fuels reduction planning to identify fuels management prescription, unit boundaries, and operational constraints.

Table 4: Priority Fuel Modification Areas

Priority	Area (Ha)	Proposed Fuel Modification Standards	Land Status Authority
1 Fireguard	6.2	▪ Fuels removal to maintain and widen existing fireguard to minimum 40m width ▪ Dispose of debris by piling and burning onsite	▪ GNWT ENR ▪ Indian Affairs
2 Wildrose Acres	37.1	▪ Fuels reduction to widen existing and create new fuelmod area by spacing Spruce to 2-3 m crown spacing for a minimum 75-100m wide behind homes ▪ Remove all dead standing and dead & down coniferous and deciduous ▪ Retain deciduous overstory stems ▪ Prune limbs to 2 metres ▪ Dispose of debris by piling and burning onsite	▪ GNWT ENR ▪ Commissioner
3 Nogha Heights	12.0	▪ Fuels reduction to space Spruce to 2-3 m crown spacing for a minimum 75-100m wide behind homes ▪ Remove all dead standing and dead & down coniferous and deciduous ▪ Retain deciduous overstory stems ▪ Prune limbs to 2 metres ▪ Dispose of debris by piling and burning onsite	▪ GNWT ENR
4 Bannock Land	3.5	▪ Fuels reduction to space Spruce to 2-3 m crown spacing for a minimum 75-100m wide on north perimeter of Bannock Land ▪ Remove all dead standing and dead & down coniferous and deciduous ▪ Retain deciduous overstory stems ▪ Prune limbs to 2 metres ▪ Dispose of debris by piling and burning onsite	▪ GNWT ENR
Total	**58.8**		

Recommendation 2: Zone 2-3 fuels reduction and maintenance is the responsibility of the Land Status Authority holder(s) and should be implemented based on the priorities identified in this plan.

4.3 Vegetation Management Maintenance

Fuel modification area maintenance schedules depend on many factors including fuel type, soil and moisture conditions, and specific weather events. It is suggested that land managers provide periodic inspections of their fuel modification project areas and complete maintenance as required. It is projected that fuel modification area maintenance will be required at least each five-year period.

Recommendation 3: Ensure that all existing fuel modification projects are inspected on a regular basis and maintained as necessary to ensure fuel modification effectiveness. Maintenance should be the responsibility of the land manager or landowner.

Map 5 - Fuel Modification
Village of Fort Simpson

Fort of the Forks

Bannock Land

Nogha Heights

Wildrose Acres

4-Mile

Liard River

4

3

3

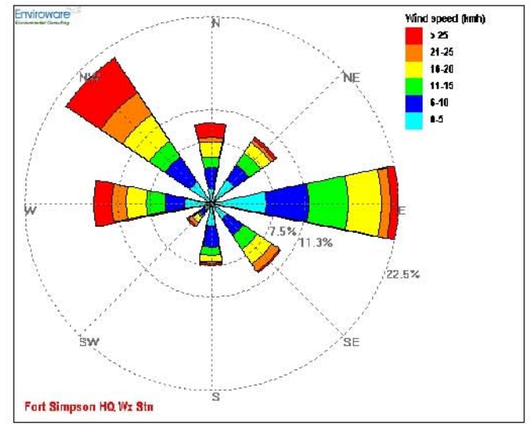
2

2

2

1

- Existing Fuel Modification
- Proposed Fuel Modification
- Fuel Removal/Clear
- Fuel Reduce/Thin
- Village of Ft. Simpson Boundary
- Roads



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5. Development Options

Consideration of wildfire at the planning stage of new development is encouraged to ensure that wildfire hazard and appropriate mitigation measures are developed and implemented prior to development.

New developments may overlap or conflict with existing fuel modification resulting in a reduction in fuelbreak effectiveness and an increase in wildfire threat to the new or existing development in the area.

Recommendation 4: If a new development removes or reduces the effectiveness of any existing or proposed FireSmart mitigation measures or introduces new wildfire hazards, the area must be assessed and measures implemented to maintain the community protection standards.

5.1 Structural Options

Structural characteristics that contribute to a structure's ability to withstand wildfire ignition include type of roofing and siding material, structure siting with respect to steeper forested slopes, and proper construction and maintenance of eaves, vents, and openings that can accumulate flammable debris and allow wildfire to gain entry to the structure.

The most common roofing materials in the planning area are asphalt shingle and metal. There are scattered dwellings in the Village with combustible wood-shake roofing materials, putting these structures at risk to airborne firebrand ignition.

The most common siding materials are combustible vinyl and wood with scattered structures with non-combustible metal and hardi-plank siding.

5.2 Infrastructure Options

Infrastructure options include provision of adequate access standards to ensure quick and safe ingress and egress for residents and emergency responders during a wildfire, adequate and accessible water supply for structure protection and suppression, and utility installation standards that do not increase risk to emergency responders during a wildfire emergency.

5.2.1 Access

Access road standards throughout the planning area are mainly adequate for an interface community. Most access roads are gravel loop-road design and cul-de-sacs have adequate turnaround dimensions for fire apparatus.

The main access roads to 4-Miles and Bannock Estates developments are dead-end access which may create evacuation problems for residents and responders during a rapidly-moving wildfire.

5.2.2 Water Supply

Fort Simpson Island is provided with municipal hydrant water-supply. All other development areas do not have dedicated fire suppression water-supply and would rely on water-tender supply for structure protection activities. Each home is equipped with an in-house water tank (3100 – 5400 litres).

5.2.3 Franchised Utilities

Franchised utilities affected by an interface fire include electrical power and gas. Proper installation and maintenance of these services can minimize the risk to residents and emergency services personnel.

Electrical Power

Power distribution and residential service is provided through above-ground distribution lines from the NTPC power generation plant in Ft. Simpson. Some overhead distribution and service lines in the area are at risk to hazard trees which could result in wildfire ignition or downed lines during a wildfire resulting in a risk to emergency responders and a loss of power, and critical services, during the emergency.

Gas

Gas distribution is provided by heating oil or propane. Most of the propane tanks have adequate defensible space from wildland fuels.

6. Public Education Options

Public education is a large part of the solution to success. Residents, landowners, municipal administration, and elected officials all need to be aware of the issues related to *FireSmart* development and the solutions to minimizing the risk and need to become a partner in implementation of the solutions in their communities. If stakeholders understand the issues relating to wildland/urban interface hazard they will be more likely to take action on their own property or to support actions taken by other authorities.

Residents and stakeholders can refer to the GNWT ENR, Forest Management Division website at www.nwtfire.com for further information on the GNWT FireSmart program, current wildfire updates, and other wildfire management related information.

Key Messages

FireSmart hazard assessments identified the need for the following key messages to target audiences in the planning area.

- Development and maintenance of FireSmart defensible space surrounding the home, including:
  - Grass maintenance
  - Firewood and combustibles storage

Recommendation 5: Public education on acceptable FireSmart Zone 1 standards is recommended for all residents, and specifically for residents located in Wildrose Acres and Nogha Heights. Priority items include:

- Development and maintenance of FireSmart defensible space surrounding the home

7. Legislation Options

Legislating *FireSmart* requirements can assist municipalities to achieve their FireSmart objectives. The Village of Fort Simpson uses the General Plan (2008) and the Zoning Bylaw (2008) to control land use and development within the planning area.

7.1 Village of Fort Simpson General Plan – Bylaw No. 674 (2008)

The purpose of the General Plan is to describe the manner in which development, or redevelopment projects may be best carried out to contribute to the economy, character, and future of the Village of Fort Simpson. The General Plan:

- provides guidelines to Council and administration for the consistent review of subdivision and development applications;
- establishes a strategy for future development that takes growth and the effect on existing municipal reserves into account;
- includes proposals for the financing of public development projects; and
- identifies objectives to be accomplished in the Zoning bylaw.

The General Plan recognizes the threat of wildfire to community development and offers objectives and policies to manage the threat.

> ***3.7 Future Urban Use - Objective UR(c)*** identifies the need to reduce the risk to buildings and other infrastructure from forest fires by managing undeveloped areas within the Village boundaries.
>
> ***3.10 Landscaping and Environmental Protection – Objective E(b)*** identifies the desire to maintain stands of existing trees in the Village while providing protection from forest fires and ***Policy E2*** states that all development applications will be reviewed to encourage development that balances the conservation of the natural environment with the need to provide protection from forest fires.

7.2 Village of Fort Simpson Zoning Bylaw No. 675 (2008)

The purpose of the Zoning Bylaw is to facilitate the orderly, economic and convenient development of the Village of Fort Simpson by controlling the development and use of land, and for that purpose, among other things:

1. To divide the Village into districts;
2. To prescribe and regulate for each district the purposes for which buildings and land may be used;
3. To prescribe and regulate standards for related development matters such as landscaping, parking, signage and others, in the interests of amenity and **safety**.

It is within the Zoning Bylaw that specific FireSmart development regulation can be achieved with respect to exterior structural materials. The following recommendations are offered to assist with future revisions to the Village of Fort Simpson Zoning Bylaw.

Recommendation 6: Revise the Fort Simpson Zoning Bylaw to include the following:

a) All roofing materials on new, replacement, or retro-fitted residential, commercial, or accessory buildings shall have a minimum Class C U.L.C. fire rating or as determined by the Development Authority based on wildland/urban interface hazard.

b) All siding materials on new, replacement, or retro-fitted residential, commercial, or accessory buildings within 30 metres of high or extreme hazard combustible wildland fuels and as determined by the Development Authority shall be fire-resistant material including, but not limited to, stucco, metal, brick, cement shingles, concrete block, poured concrete, rock, or fibre-cement siding extending from ground level to roofline.

c) All new dwellings, accessory buildings, and commercial buildings with exposed undersides and/or raised decks and porches less than 2 metres from ground level shall be sheathed from the floor level to the ground level with fire-resistant material, to prohibit the entry of sparks and embers under the structure.

d) All new dwellings, accessory buildings, and commercial buildings shall establish and maintain FireSmart defensible space for a minimum of 10 metres or to lot boundary.

e) All above-ground propane tanks greater than or equal to 80 U.S. gallons (420 lbs) shall have a minimum of 3 metres clearance from combustible vegetation and materials.

8. Inter-Agency Cooperation and Cross-Training Options

Interagency cooperation and cross-training between all stakeholders is necessary to ensure cooperative and effective implementation of wildland/urban interface mitigation options and to coordinate an effective response to a wildland/urban interface fire.

Interagency stakeholders within the planning area include:

- Village of Fort Simpson
- GNWT Environment and Natural Resources (ENR)
- GNWT Municipal and Community Affairs (MACA)

Recommendation 7: Develop a FireSmart Committee, consisting of all relevant stakeholders, to coordinate and lead the FireSmart program for the area.

Cross-training for Fort Simpson Fire Department and ENR wildfire suppression personnel should include basic wildfire, wildland/urban interface fire, and incident command system training courses.

The following cross-training courses are available.

Wildland Fire

- Wildland Firefighter (NFPA 1051 Level I, S-100, or equivalent)

Wildland/Urban Interface Fire

- Structure and Site Preparation Workshop (S-115)
- Fire Operations in the Wildland/Urban Interface (S-215)

Incident Command System

- ICS Orientation (I-100)
- Basic ICS (I-200)
- Intermediate ICS (I-300)
- Advanced ICS (I-400)

Recommendation 8: Village of Fort Simpson Fire Department and GNWT MACA & ENR should partner on cross-training initiatives to ensure emergency responders are cross-trained to the following minimum standards:

- Wildland Firefighter
- Structure and Site Preparation Workshop (S-115)
- Fire Operations in the Wildland/Urban Interface (S-215)
- Incident Command System (I-100 to I-400) as applicable

9. Emergency Planning Options

Emergency preparedness is an important part of any disaster planning. The need for organization, clear chain of command, and an understanding of job responsibilities during an interface fire are of paramount importance.

At present the Village does not have a wildfire pre-plan to provide emergency responders with detailed tactical information with respect to values at risk and operational strategies and tactics to minimize losses during a wildland/urban interface fire. A suggested outline is as follows:

- Planning Area Jurisdictional Authority
- Values at risk (life, structures, infrastructure)
- Fire operations plan (strategies/tactics, water sources, equipment, communications plan)

Recommendation 9: Develop a Community Wildfire Pre-Plan for the Village of Fort Simpson to provide greater operational detail to emergency responders during a wildland/urban interface incident.

10 Implementation Plan

The goal of the implementation plan is to identify the responsible stakeholders for each of the recommendations and set timelines for commencement and completion based on priorities and funding availability.

Vegetation Management

Issue	Recommendation	Responsible Agency
Zone 1	**Recommendation 1:** Encourage residents to establish adequate Zone 1 defensible space around their structures.	Village of Fort Simpson
Zone 2-3	**Recommendation 2:** Zone 2-3 fuels reduction and maintenance is the responsibility of the Land Status Authority holder(s) and should be implemented based on the priorities identified in this plan.	GNWT ENR & MACA Indian Affairs
Maintenance	**Recommendation 3:** Ensure that all existing fuel modification projects are inspected on a regular basis and maintained as necessary to ensure fuel modification effectiveness. Maintenance should be the responsibility of the land manager or landowner.	GNWT ENR & MACA Indian Affairs

Development

Issue	Recommendation	Responsible Agency
FireSmart Development Planning	**Recommendation 4:** If a new development removes or reduces the effectiveness of any existing or proposed FireSmart mitigation measures or introduces new wildfire hazards, the area must be assessed and measures implemented to maintain the community protection standards.	GNWT MACA Village of Fort Simpson

Public Education

Issue	Recommendation	Responsible Agency
Public Education Priorities	**Recommendation 5:** Public education on acceptable FireSmart Zone 1 standards is recommended for all residents, and specifically for residents located in Wildrose Acres and Nogha Heights. Priority items include: Development and maintenance of FireSmart defensible space surrounding the home	GNWT ENR & Village of Ft. Simpson

Legislation

Issue	Recommendation	Responsible Agency
Village of Fort Simpson Zoning Bylaw	**Recommendation 6:** Revise the Fort Simpson Zoning bylaw to include regulation relating to the following: ▪ Roofing and siding materials ▪ Sheathing requirements ▪ Defensible space requirements ▪ Propane tank clearances	Village of Ft. Simpson

Interagency Cooperation & Cross-Training

Issue	Recommendation	Responsible Agency
FireSmart Committee	**Recommendation 7:** Develop a FireSmart Committee, consisting of all relevant stakeholders, to coordinate and lead the FireSmart program for the area.	GNWT ENR & MACA Village of Fort Simpson
Cross-Training	**Recommendation 8:** Village of Fort Simpson Fire Department and GNWT MACA & ENR should partner on cross-training initiatives to ensure emergency responders are cross-trained to the following minimum standards: ▪ Wildland Firefighter ▪ Structure and Site Preparation Workshop (S-115) ▪ Fire Operations in the Wildland/Urban Interface (S-215) ▪ Incident Command System (I-100 to I-400) as applicable	GNWT MACA & ENR Village of Ft. Simpson

Emergency Planning

Issue	Recommendation	Responsible Agency
Community Wildfire Pre- Planning	**Recommendation 9:** Develop a Community Wildfire Pre-Plan for the Village of Fort Simpson to provide greater operational detail to emergency responders during a wildland/urban interface incident.	GNWT ENR & MACA Village of Ft. Simpson