Inuvik

Community Wildfire Protection Plan

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

Northwest Territories Environment and Natural Resources

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Stew Walkinshaw, R.P.F.
MONTANE
Forest Management Ltd.
Canmore, AB.
Phone: (403) 678-7054 Email: montane@shaw.ca

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1 Introduction

The Inuvik 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 community.

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.

This 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 stakeholders 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 Inuvik and a two-kilometre buffer surrounding the community (Map 1).

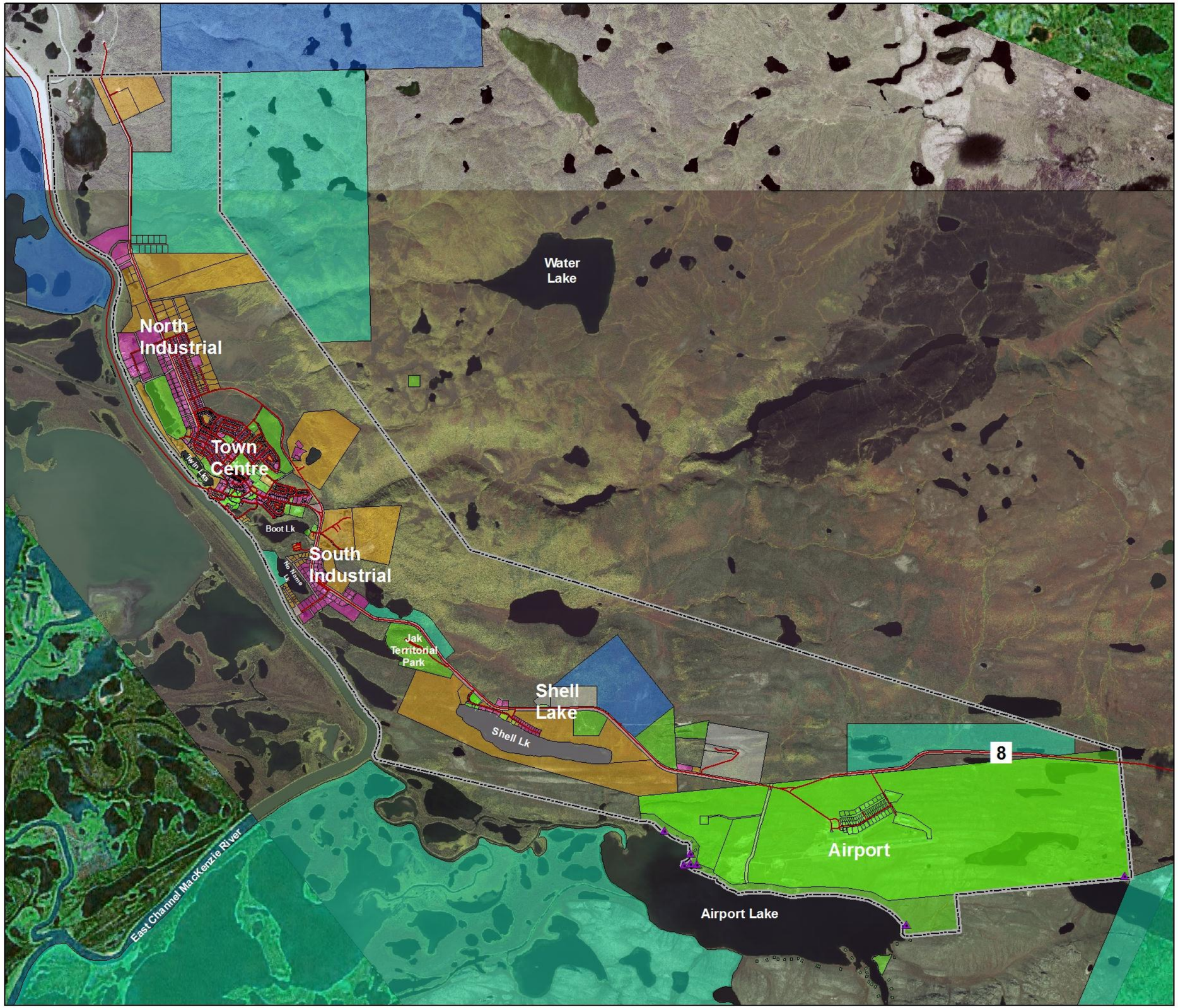
Stakeholders consulted with in the planning process included:

- Martin Callaghan, Manager, Forests — GNWT ENR Inuvik Region
- Grant Hood, S.A.O. — Town of Inuvik

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

- Commissioner (GNWT MACA)
- Federal
- Gwich'in
- Inuvialuit
- Mixed
- Municipal
- Private
- GNWT Crown lands (GNWT ENR)

Map 1 - Planning Area
Inuvik



- Community Boundary
- Roads
- Remote Structure Site

Land Status Authority

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

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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 ten-year period from 2002 to 2011.

Fire incidence data indicates that 12 wildfires were discovered within a 10 kilometre radius of the community, 75% were human-caused and 25% were lightning-caused (Table 1). Two of those fires escaped initial attack (2003 & 2007) and presented a threat to Inuvik while the historic1968 Inuvik wildfire spread under northwest winds and presented significant threat to development in Inuvik (Map 2).

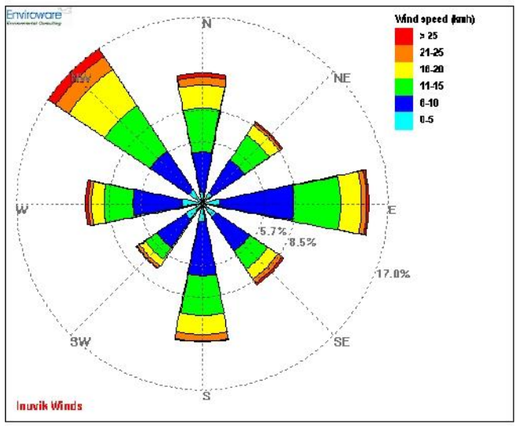
Table 1: Fire Incidence by Cause (2002 – 2011)

General Cause	Number of Fires	Percent of Total
Human-Caused	9	75
Lightning-Caused	3	25
Totals	**12**	**100**

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
Inuvik

- 10 Km Boundary
- Human-Caused Wildfire
- Lightning-Caused Wildfire
- Wildfire > 4 hectares
- Community Boundary
- Roads
- Remote Structure Site



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3.2 Wildfire Behaviour Potential

3.2.1 Wildland Fuel Types

Fire Behaviour Prediction (FBP) fuel types were used to analyze the fuel types and fire behaviour potential within and adjacent to Inuvik (Map 3).

The planning area is dominated with deciduous (D-1), created as a result of the 1968 and 2003 wildfires, and C-1 fuels with scattered patches of boreal spruce (C-2), cured-grass (O1), mixedwood (M-1/M-2) and non-fuel (NF).

3.2.2 Fire Weather Analysis

Fire weather data from the Inuvik weather station was used to determine the predominant wind directions during the fire season. The predominant and strongest wind direction is from the northwest with secondary winds from the north, east, and south (Figure 1).

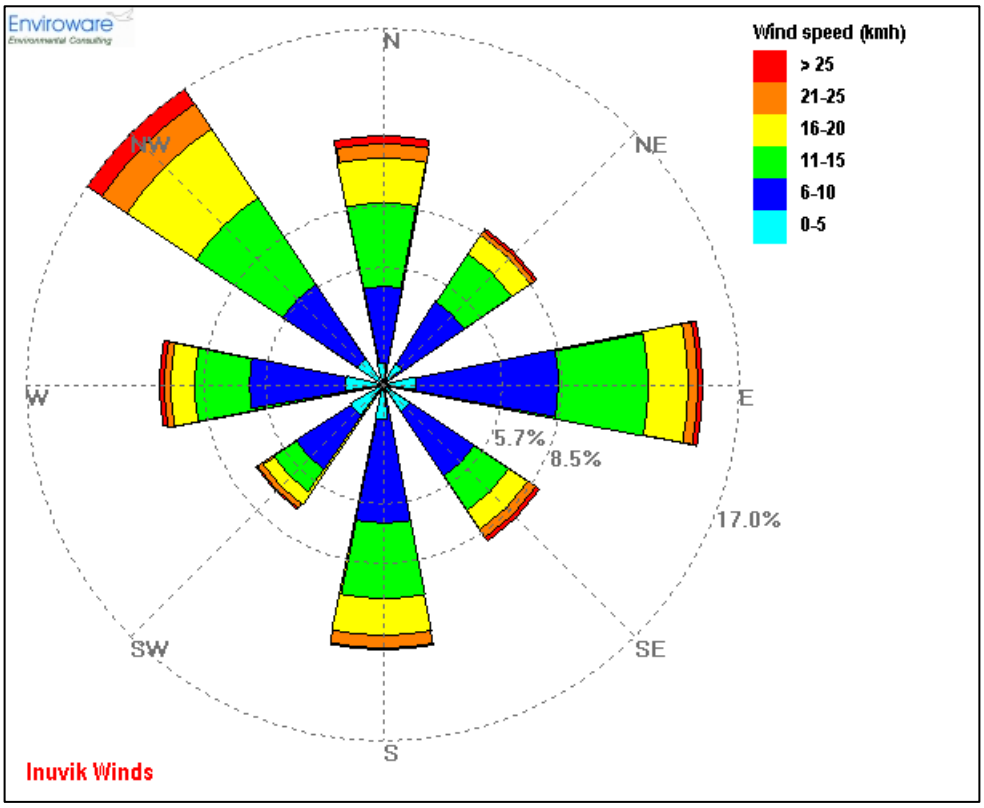


Figure 1 – Inuvik Windrose

Wildland fuel types and fire weather data indicates that the potential for landscape-level wildfire is Low due to the historic wildfire activity north and east of Inuvik.

Map 3 - FBP Fuel Types
Inuvik

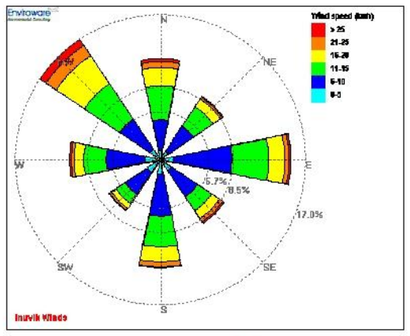
Community Boundary

Roads

Remote Structure Site

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 development areas and adjacent wildland fuel types within the planning area (Table 2 & Map 4).

Table 2: FireSmart Hazard Assessments

Development Area	Structure/Site Hazard (0 – 30m)
North Industrial	Low - Moderate
Town Centre	Low - Moderate
South Industrial	Low – Extreme
Shell Lake	Moderate - Extreme
Airport	Low - Moderate
Airport Lake Remote Cabins	Extreme

Hazard factor's for each of the development areas are discussed below.

North Industrial

FireSmart hazard for the North Industrial area is **LOW-MODERATE**. Zone 1-2 defensible space is generally adequate for the majority of the structures and perimeter fuels primarily consist of deciduous (D-1) and open-density spruce (C-1) with patches of boreal spruce (C-2) and cured-grass (O1). Exterior structure materials are primarily metal or asphalt-shingle roofing and metal or wood siding.

Town Centre

FireSmart hazard for the Town Centre area is **LOW-MODERATE** with the correctional facility, Bompass St. booster station, and two residences on Boot Lake Rd. at **HIGH** hazard. Zone 1-2 defensible space is generally adequate for the majority of the structures with Wolverine Rd. and Bompass St. acting as excellent fuelbreaks for the new developments along the east-side of Inuvik. Perimeter fuels between the Marine Bypass Rd. and Wolverine Rd./Bompass St. primarily consist of moderate-density spruce (C-2), deciduous (D-1), and mixedwood (M-1/M-2) fuels and present moderate threat to perimeter developments. Exterior structure materials are primarily asphalt-shingle or metal roofing and hardiplank or vinyl siding on newer structures and wood, metal, or log siding on older structures.

South Industrial

FireSmart hazard for the South Industrial area is **LOW-EXTREME**. Zone 1-2 defensible space is generally adequate for the majority of the structures on the east and west-sides of Hwy 8 however structures along Carn St and the sled dog facility along No-Name Lake have minimal defensible space and are at **HIGH-EXTREME** hazard. Perimeter fuels primarily consist of deciduous (D-1), boreal spruce (C-2), mixedwood (M-1/M-2) fuels. Exterior structure materials are primarily metal or asphalt-shingle roofing and metal or wood siding.

Shell Lake

FireSmart hazard for the Shell Lake area is **MODERATE-EXTREME,** with residential dwellings in the Shell Lake country-residential subdivision being at the highest threat to wildfire. Zone 1-2 defensible space is generally adequate for the majority of the industrial sites however is inadequate for several dwellings in the residential subdivision. Perimeter fuels primarily consist of deciduous (D-1) and mixedwood (M-1/M-2) fuels. Exterior structure materials are primarily asphalt-shingle or metal roofing and hardiplank, wood, or metal siding.

Airport

FireSmart hazard for the Airport and surrounding area is **LOW-MODERATE**. Zone 1-2 defensible space is generally adequate for the majority of the structures except for the new satellite dishes and outbuildings at the Canada Atmospheric Environment Service weather station site. Perimeter fuels primarily consist of deciduous (D-1) and open-density spruce (C-1) with patches of boreal spruce (C-2) and mixedwood (M-1/M-2) fuels. Exterior structure materials are primarily metal or asphalt-shingle roofing and metal or wood siding.

Airport Lake Remote Cabins

FireSmart hazard for the remote cabins located on the north shore of Airport Lake is **EXTREME**. Zone 1-2 defensible space is inadequate for the majority of the structures. Perimeter fuels primarily consist of open (C-1) to moderate-density (C-2) spruce, mixedwood (M-1/M-2), and deciduous (D-1). Exterior structure materials are primarily metal or asphalt-shingle roofing and metal or wood siding.

FireSmart hazard is High-Extreme for the Shell Lake country-residential subdivision and for the Airport Lake remote cabins. Pockets of Moderate-High hazard exist along Wolverine Rd/Bompass St, Duck Lake St./Boot Lake Rd., the correctional facility, and the Canada Atmospheric Environment Service weather station.

Map 4 - FireSmart Hazard Inuvik

Community Boundary

Roads

Remote Structure Site

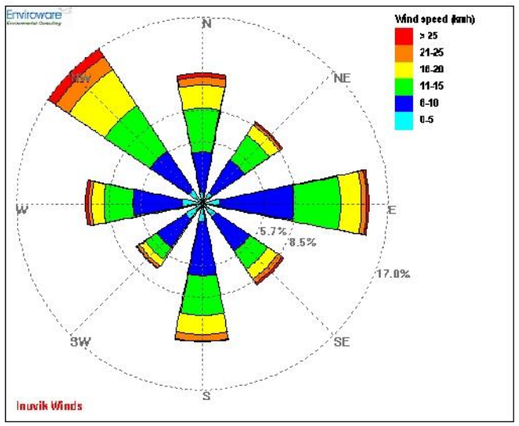
FireSmart Hazard

Low

Moderate

High

Extreme



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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.

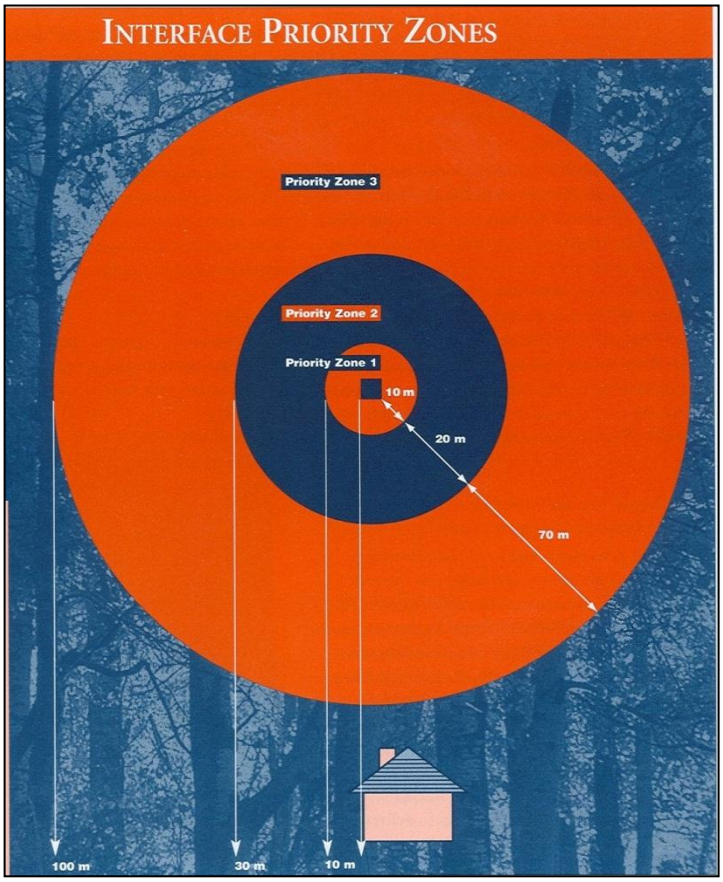


Figure 3 – Interface Priority Zones (PIP, 2003)

4.1 Existing Vegetation Management

The fuelbreaks constructed during the 1968 wildfire have been significantly overgrown and are no longer necessary based on fuel types and new development. Two vegetation management projects have occurred along the southwest side of Boot Lake Rd. and along the access road to the Town water tank and pump house (Table 3 & Map 5).

Table 3: Existing Vegetation Management Areas

Name	Area (ha)	Year Established	Agency	Comments
Boot Lake	1.2	2011	Inuvik	Requires minor extension on north and south to complete
Town Water Tank & Pump House	0.2	2010	Inuvik	

4.2 Proposed Vegetation Management

4.2.1 Zone 1

Zone 1 vegetation management is **adequate** for the majority of structures in Inuvik except for the Airport Lake cabins, structures along Carn St, the sled dog facility at No-Name Lake, and the new satellite dishes and outbuildings at the Canada Atmospheric Environment Service weather station where defensible space is minimal and poses increased wildfire threat these facilities.

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

Priority areas are recommended for Zone 2-3 fuels management based on hazard and risk (Table 4 & Map 5). 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
FM1 Shell Lake Residential	6.2	▪ Fuels Reduction by thinning spruce to achieve 2-3 m crown spacing for a minimum of 50 metre width behind dwellings ▪ Remove birch and alder shrub understory ▪ Remove all dead standing and dead & down coniferous and deciduous ▪ Retain all live deciduous overstory stems ▪ Prune limbs to 2 metres ▪ Dispose of debris by piling and burning onsite or use as biomass or other product	▪ Commissioner ▪ GNWT ENR
FM2 Inuvik East Boundary	23.5	▪ Fuels Reduction by thinning spruce to achieve 2-3 m crown spacing for 50-100 metres width along Wolverine Rd, Bompass St, and Stringer Rd ▪ Remove birch and alder shrub understory ▪ Remove all dead standing and dead & down coniferous and deciduous ▪ Retain all live deciduous overstory stems ▪ Prune limbs to 2 metres ▪ Dispose of debris by piling and burning onsite or use as biomass or other product	▪ Municipal ▪ Federal
FM3 GNWT ENR Compound	1.9	▪ Fuel Remove to ensure a minimum of 10 metres clearance around all structures ▪ Fuels Reduction by thinning spruce to achieve 2-3 m crown spacing ▪ Remove birch and alder shrub understory ▪ Remove all dead standing and dead & down coniferous and deciduous ▪ Retain all live deciduous overstory stems ▪ Prune limbs to 2 metres ▪ Dispose of debris by piling and burning onsite or use as biomass or other product	▪ Commissioner ▪ Federal
FM4 Duck Lk St & Boot Lk Rd	1.9	▪ Fuels Reduction by thinning spruce to achieve 2-3 m crown spacing for a minimum of 50 metres behind Boot Lk Rd/Spruce Hill Dr and behind the Parkview Place apartments ▪ Remove birch and alder shrub understory ▪ Remove all dead standing and dead & down coniferous and deciduous ▪ Retain all live deciduous overstory stems ▪ Prune limbs to 2 metres ▪ Dispose of debris by piling and burning onsite or use as biomass or other product	▪ GNWT ENR ▪ Commissioner
FM5 Canada Env Serv Wx Stn	0.7	▪ Fuel removal to ensure a minimum of 20 metres clearance around all structures	▪ Federal
Total	**34.2**		

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 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
Inuvik

FM2

FM4

Boot Lake

East Channel MacKenzie River

FM3

FM1

Shell Lake

FM5

Community Boundary

Roads

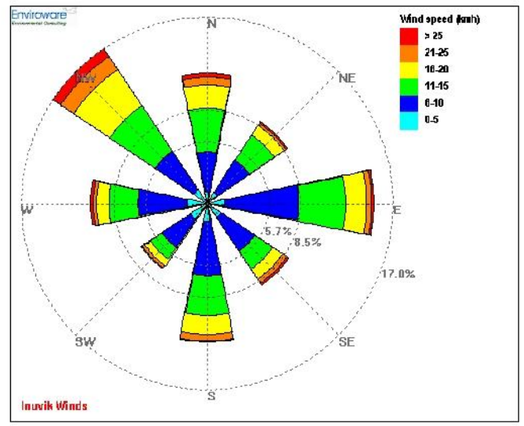
Existing Fuel Modification

Proposed Fuel Modification

Fuel Removal/Clear

Fuel Reduce/Thin

1968 Fuelbreak



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5. Development and Legislation 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, 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.

Siding materials vary between non-combustible hardi-plank and metal to combustible wood, log, and vinyl.

Open decks and undersides are common.

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 all-weather loop-road design and cul-de-sacs have adequate turnaround dimensions for fire apparatus. There is no road access to the Airport Lake cabins.

5.2.2 Water Supply

Inuvik town centre has municipal fire hydrant water-supply provided through the utilidor system. All other development areas rely on water-tender supply for structure protection activities.

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 powerlines from the NWTPC generation plant.

Heating Fuel

Gas distribution is provided in Inuvik town centre by above-ground natural gas lines in the utilidor system and by diesel tank supply for all other development areas.

5.3 Legislation Options

Legislating *FireSmart* requirements can assist municipalities to achieve their FireSmart objectives. The Town of Inuvik uses the Community Plan and the Zoning Bylaw to control land use and development within the planning area. Both documents are scheduled for revision in the near future.

5.3.1 Town of Inuvik Community Plan (Bylaw 2224)

The purpose of the Community Plan is to provide policy statements and maps which will guide development in Inuvik for the next 20 years. The Community Plan ***does not*** recognize the threat of wildfire to community development.

Section 3 – Implementation recognizes a list of Projects and Development Schemes to be articulated in the process of updating the Community Plan and Zoning By-Laws.

Recommendation 5: Revise Section 3 to include the Inuvik Community Wildfire Protection Plan (2011) to ensure that wildfire is considered in the development planning process.

Section 11 – Transportation and Pedestrian Circulation provides policies regarding road widths for arterial, collector, and local roads and the need for the provision of off-street parking for all residential units and the requirement that all roads in new subdivisions will paved. All of these policies are consistent with FireSmart access standards.

Section 13 – Environmental provides policies relating to conservation of the natural environment.

Policy (a) states that existing tree and vegetation cover will be preserved and integrated into all classes of development.

Recommendation 6: Revise Policy 13(a) to state that "existing tree and vegetation cover will be preserved and integrated into all classes of development ***providing it does not increase the threat of wildfire to the development.***"

Policy (c) states that for each future subdivision, the Developer will carry out a site assessment pertaining to slope stability, soil types, tree and vegetation cover, natural drainage ***and any other factors deemed necessary***.

Recommendation 7: Use Policy 13(c) to request that Developers provide a Wildfire Risk Assessment, developed by a qualified professional, for any new developments located in High or Extreme hazard areas.

5.3.2 Town of Inuvik Zoning By-Law (Bylaw 2225)

The purpose of the Zoning By-law is to facilitate the orderly, economic and sustainable development of the Town of Inuvik by controlling the development and use of land.

The Zoning By-law ***does not*** specifically recognize wildfire threat or FireSmart development standards. 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 Town of Inuvik Zoning By-law.

Recommendation 8: Revise Section 5 of the Town of Inuvik Zoning By-law to include the following conditions to <u>all development on all sites</u>:

32. FireSmart Development

(1) 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.

(2) 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.

(3) 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. An adequately screened open area shall be provided in the skirting to allow for proper ventilation of the area.

(4) 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.

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 all residents, in particular those living in the Airport Lake cottages, Shell Lake country residential, and along Carn Rd.

- Development and maintenance of FireSmart Zone 1 defensible space surrounding the home, including:
  - Tree, grass and brush maintenance
  - Firewood and combustibles storage
- Evacuation planning

Recommendation 9: Public education on acceptable FireSmart Zone 1 standards is recommended for all residents.

7. 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:

- Town of Inuvik
- GNWT Environment and Natural Resources (ENR)
- GNWT Municipal and Community Affairs (MACA)

Recommendation 10: Develop a FireSmart Committee, consisting of all relevant stakeholders, to coordinate and lead the FireSmart program for the area.

The Inuvik Fire Department has an active fire department with a full-time Fire Chief, part-time Deputy Chief, and 34 members. Apparatus includes a ladder truck, 2-Type I engines, 1-Type I water tender, and access to an additional 5 private water tenders.

Approximately 10 members have Wildland Firefighter Level I (NFPA 1051) and some members have Incident Command System 100 and 200 training. Additional cross-training for fire department members 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 11: The Inuvik 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

8. Emergency Planning Options

The Town of Inuvik Community Emergency Response Plan (2005) is used to provide authority and direction during an emergency. The plan is outdated and requires updating with respect to:

- Contact names and numbers
- GNWT department names (change RWED to ENR)
- Change from Emergency Site Management to Incident Command System terminology

Recommendation 12: Revise and update the Town of Inuvik Community Emergency Response Plan and utilize ENR fire management personnel to review the Wildland Fires Procedures section.

At present the community 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 pre-plan 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 13: Develop a Community Wildfire Pre-Plan for the community to provide greater operational detail to emergency responders during a wildland/urban interface incident.

9 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.	Town of Inuvik GNWT MACA
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 Town of Inuvik Federal Government
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 Town of Inuvik Federal Government

Development and Legislation

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 Town of Inuvik
Community Plan	**Recommendation 5:** Revise Section 3 to include the Inuvik Community Wildfire Protection Plan (2011) to ensure that wildfire is considered in the development planning process.	Town of Inuvik
Community Plan	**Recommendation 6:** Revise Policy 13(a) to state that "existing tree and vegetation cover will be preserved and integrated into all classes of development ***providing it does not increase the threat of wildfire to the development.***"	Town of Inuvik
Community Plan	**Recommendation 7:** Use Policy 13(c) to request that Developers provide a Wildfire Risk Assessment, developed by a qualified professional, for any new developments located in High or Extreme hazard areas.	Town of Inuvik
Zoning By-Law	**Recommendation 8:** Revise Section 5 of the Town of Inuvik Zoning By-law to include the following conditions to <u>all development on all sites</u>: 32. FireSmart Development (1) 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. (2) 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.	Town of Inuvik

Zoning By-Law	(3) 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. An adequately screened open area shall be provided in the skirting to allow for proper ventilation of the area. (4) 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.	

Public Education

Issue	Recommendation	Responsible Agency
Public Education Priorities	**Recommendation 9:** Public education on acceptable FireSmart Zone 1 standards is recommended for all residents.	GNWT ENR & MACA Town of Inuvik

Interagency Cooperation & Cross-Training

Issue	Recommendation	Responsible Agency
FireSmart Committee	**Recommendation 10:** Develop a FireSmart Committee, consisting of all relevant stakeholders, to coordinate and lead the FireSmart program for the area.	GNWT ENR & MACA Town of Inuvik
	Recommendation 11: The Inuvik 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 Town of Inuvik

Emergency Planning

Issue	Recommendation	Responsible Agency
Community Emergency Response Plan	**Recommendation 12:** Revise and update the Town of Inuvik Community Emergency Response Plan and utilize ENR fire management personnel to review the Wildland Fires Procedures section.	Town of Inuvik GNWT MACA
Community Wildfire Pre- Planning	**Recommendation 13:** Develop a Community Wildfire Pre-Plan for the community to provide greater operational detail to emergency responders during a wildland/urban interface incident.	GNWT ENR & MACA Town of Inuvik