District of 100 Mile House, B.C.
Community Wildfire Protection Plan
June 2007

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1 Introduction

The District of 100 Mile House initiated the development of a Community Wildfire Protection Plan (CWPP) to identify and address the wildfire hazard and risk present within their Fire Protection Area. The hazard assessment and CWPP report were jointly funded by the District of 100 Mile House and the B.C. Ministry of Forests, co-ordinated through the Union of B.C. Municipalities. The 100 Mile efforts have been led by Darrell Blades, Director of Community Services and Fire Chief.

The wildfire hazard assessment was completed using the guidelines laid out in FireSmart: Protecting Your Community from Wildfire, second edition, 2003. This publication is endorsed by the B.C. Ministry of Forests – Protection Branch, as the best source of information to assist communities in managing their wildfire hazard concerns.

2 Area Description

The District of 100 Mile House (100 Mile) is situated on Highway #97, one hundred and ten kilometers north of the Highway #1 junction at Cache Creek and ninety kilometers south of Williams Lake.

100 Mile was originally a roadhouse situated 100 miles northeast of Lillooet on the gold rush trail to Barkerville. Today, 100 Mile acts as the primary service center for the South Cariboo with an area population of approximately 20 000. The local economy is dominated by forestry, agriculture and tourism.

The forested land is dominated by two tree species, Douglas-fir (*Pseudotsuga menziesii*) and lodgepole pine (*Pinus contorta*). Douglas fir is the most common tree in the town area. Lodgepole pine is dominant at the higher elevations and towards Horse Lake and south of 100 Mile. The local pine trees have been devastated by the Mountain Pine Beetle (*Dendroctonus ponderosae*).

3 Biogeoclimatic Ecosystem Classification

100 Mile House is located in the Interior Douglas fir Very Dry Warm Subzone (IDFxw) in the Ministry of Forests and Range Biogeoclimatic Ecosystem Classification (BEC) system. This zone is known for long, dry summers and cold winters. Moisture deficits are common.

This ecosystem is also classified as Natural Disturbance Type 4: ecosystems with frequent stand-maintaining wildfires (NDT4). NDT4 includes grassland, shrubland and forest communities that normally experience frequent low-intensity wildfires.

Before successful wildfire suppression strategies were implemented, wildfires had a big influence on the forest ecosystems of the IDF Zone. 'Wildfires were historically responsible for maintaining the vegetative species composition and the forest stand structure, and also for regulating coarse woody debris loading' (Biodiversity Guidebook – chapter 2c). Low intensity fires had a return interval of four to fifty years, creating uneven-aged stands of Douglas-fir. Larger, high intensity fires occurred about every 150 to 250 years. The wildfire exclusion policy practiced over the last several decades has caused many pine and fir stands to fill in with young conifers. This has resulted in heavier fuel accumulations, denser forest canopies and an increased likelihood of crown fires instead of surface fires. This has also led to a loss of understorey forage, and insect and disease damage as witnessed in the 100 Mile area today.

Wildfire suppression has lengthened the wildfire return interval into these stands. The resulting stands have fewer natural openings as tree infill encroaches on the grasslands. The forested areas have higher stem and crown densities. Fires resulting in these new, denser stands tend to be higher in intensity, often stand replacement fires.

The local forest ecosystems are under extreme stress. Warmer than average winters, combined with hot summers and drought over the last decade have led to a forest cover of weakened conifers with very low resistance by insects and disease. Local insect populations, most notably the mountain pine beetle, have adjusted quickly to the favourable conditions, completing exponential population growth and causing mortality in their host species.

4 Wildfire Hazard Assessment Methodology

The wildfire hazard assessment completed for 100 Mile covers the entire District of 100 Mile House and its contracted Fire Protection Area (FPA). The perimeter land is included in the assessment, although not on the hazard maps, to ensure that the wildfire hazard within the village is representative of the hazard across the entire valley, since wildfires do not respect map boundaries.

The hazard assessment was designed to map the forest fuels found in the 100 Mile area. The assessment attempts to quantify the potential of wildfires spreading across the District, based on the ability of the present forest fuels to support wildfires. The area was broken into four distinct wildfire hazard classes. The four wildfire hazard classes, and their accompanying definitions and examples of local forest fuel types, are listed in Table One.

The wildfire hazard class is determined by using a Wildland/Urban Interface Fire Hazard Assessment Form. The form used in this assessment has been developed and modified over fifteen years of hazard assessment work by the report author. The form was taken from an early version of the National Fire Protection Association (NFPA) 299, which has since been replaced by NFPA 1144. The form is very similar in content to the assessment form found in FireSmart. The form provides a numerical rating of the overall

wildfire hazard within a unique area, or polygon. The numerical rating then fits into one of the four wildfire hazard classes. A blank copy of the form can be found in Appendix A.

To speed up the assessment process, only a sampling of areas had full assessment forms completed. The remaining areas were assessed based on the 100 Mile specific wildfire hazard class definitions (Table One). These hazard class definitions relate to Priority Zone 2 in the FireSmart publication (see Section 10 of this report). The definitions for each Hazard Class were developed for lay persons to better appreciate the scope of each hazard class and to tailor the general Hazard Class descriptions in FireSmart to the 100 Mile area.

Table One
Wildfire Hazard Class Definitions

The following wildfire hazard class definitions have been developed specifically for the 100 Mile House area. The four hazard classes are taken from the FireSmart: Protecting Your Community from Wildfire, Second Edition, July 2003 publication. This document is endorsed by the B.C. Ministry of Forests and Range, Protection Branch as the standard for assessing wildfire hazard in Wildland/Urban Interface areas in B.C. The specific definitions for each hazard class have been developed to clarify the wildfire hazard definition and to provide a locally relevant written description of each hazard class that is not available in the FireSmart publication.

Wildfire Hazard Class Definitions

Low Developed and undeveloped land that will not support wildfire spread. Examples Irrigated and managed fields, heavily grazed fields, gravel pits, severely disturbed land, fully developed residential and commercial areas not directly adjacent to forested or undeveloped land.

Moderate Developed and undeveloped land that will support surface fires only. Examples Unmanaged fields with more than one year of matted grass. Grass fields with shrubs and a deciduous tree overstorey. Grass fields with coniferous shrubs and tree overstorey below 20% canopy coverage. Small patches, less than 0.5 hectares, of isolated coniferous stands.

High Forested land that will support intermittent crown and continuous crown fires. Multi-aged Douglas-fir and lodgepole pine stands > 0.5 hectares in size. Harvested area without surface fuel treatments that will allow hot surface fire spread. Valley bottom riparian areas large enough to support aggressive wildfires.

Examples Forested land with coniferous coverage exceeding 40% canopy closure. Harvested forested land without surface fuel treatments and some coniferous canopy present.

Extreme Forested land that will support intermittent or continuous crown fires adjacent to and within communities, or surrounding individual homes. Areas of live and dead pine beetle attack of greater than 40% canopy closure adjacent to structures. Areas of very high surface fuel loading after harvesting, adjacent to developments.
Examples Forested land with relatively continuous coniferous canopy closure, in excess of 40%, within 100 meters of homes. Continuous dead pine around homes. Recently harvested areas, adjacent to developments, where no slash reduction efforts have occurred.

The complete version of Table One can be found in Appendix B.

The completed wildfire hazard assessment forms and associated pictures are located in Appendix F.

4.1 Wildfire Hazard Class Mapping

The wildfire hazard class mapping was conducted using a variety of aged ortho photos at a 1:20 000 scale. All sites were field checked to determine the extent and health of the forest canopy, any new harvesting or land clearing activities that would change the hazard class in the area, and the condition of the surface fuels under the forest canopy. Differentiating unmanaged fields from those that were irrigated or grazed proved to be very difficult. Without irrigation systems on site, or obvious signs of grazing cattle, the hazard class was defaulted to the moderate class for unmanaged fields instead of the low hazard class for irrigated fields.

The wildfire hazard assessment results in a map of forest fuels and their ability to support wildfire spread and intensity. The condition of the houses and other structures within and adjacent to the forest is not measured, only the ability of the forest to support a wildfire that could impact on those structures.

Extensive forest harvesting is occurring throughout the area as the Ministry of Forests and private landowners attempt to manage the pine beetle's devastation. The hazard class data was finalized in the middle of April 2007. Any new harvesting or land clearing activities after this date will not be reflected on the attached maps or in this report.

The Ministry of Forests has produced Headfire Intensity maps on a province wide basis that attempt to quantify the ability of forest fuels to support wildfires. This information was reviewed before the hazard assessment commenced. The data did provide a useful overview of the 100 Mile area but the scale and coarseness of the data limited its usefulness as a mapping tool. The data did not reflect irrigation or any of the recent forest management efforts on both Crown and private lands for pine beetle damage control or land clearing. The Headfire Intensity map can be found in Appendix D.

Thomas Bennett of Kamloops produced the hazard class map. All errors or omissions in the mapping work are the responsibility of the report author, not the GIS Technician.

4.2 Land Management Referrals

Information regarding the development of the District of 100 Mile House Community Wildfire Protection Plan has been referred to five organizations. The following groups received letters regarding the development of this plan.

High Bar First Nation
Esketemc First Nation
Canim Lake Indian Band
Canoe Creek Indian Band
Cariboo Regional District – via email

Darron Campbell from the CRD has responded to this information with a request to review a draft copy of the report for comments and input. A meeting is planned to address this request. A copy of the referral letters is included in Appendix K.

5 100 Mile House Wildfire Hazard

The FireSmart publication recommends that forest homes be considered FireSmart if they are exposed to a wildfire hazard class of Moderate or Low. Structures identified in, or adjacent to, High and Extreme Hazard Class areas are exposed to unacceptable wildfire hazards. These are the structures most at risk to wildfires. To effectively reduce the wildfire hazard, the forest adjacent to the structures must be modified to reduce their ability to support a wildfire.

An attempt was made, during the assessment process, to determine the number of homes located in the High and Extreme wildfire hazard areas. This involved keeping a running tally of the number of homes identified in, or immediately adjacent to, each area of High and Extreme wildfire hazard, as the areas were mapped. No attempt was made to map outbuildings or to determine whether the homes were occupied. The number of homes tallied is simply a 'ballpark' figure to give some idea of the amount of homes at risk to wildfires in the District and fire protection area. Homes identified outside the township perimeter were not included in this tally. The results of the house tally are shown in Table Two.

Table Two
Number of Houses Tallied in High and Extreme Wildfire Hazard Areas

Wildfire Hazard Class	# of Houses Located
High	195
Extreme	410
Total	**605**

5.1 100 Mile House Wildfire Hazard Class Map

The 100 Mile House area has been divided into four wildfire hazard classes as shown below. A large scale map can be found in Appendix H. The area covered by each hazard class is shown in Table Three.

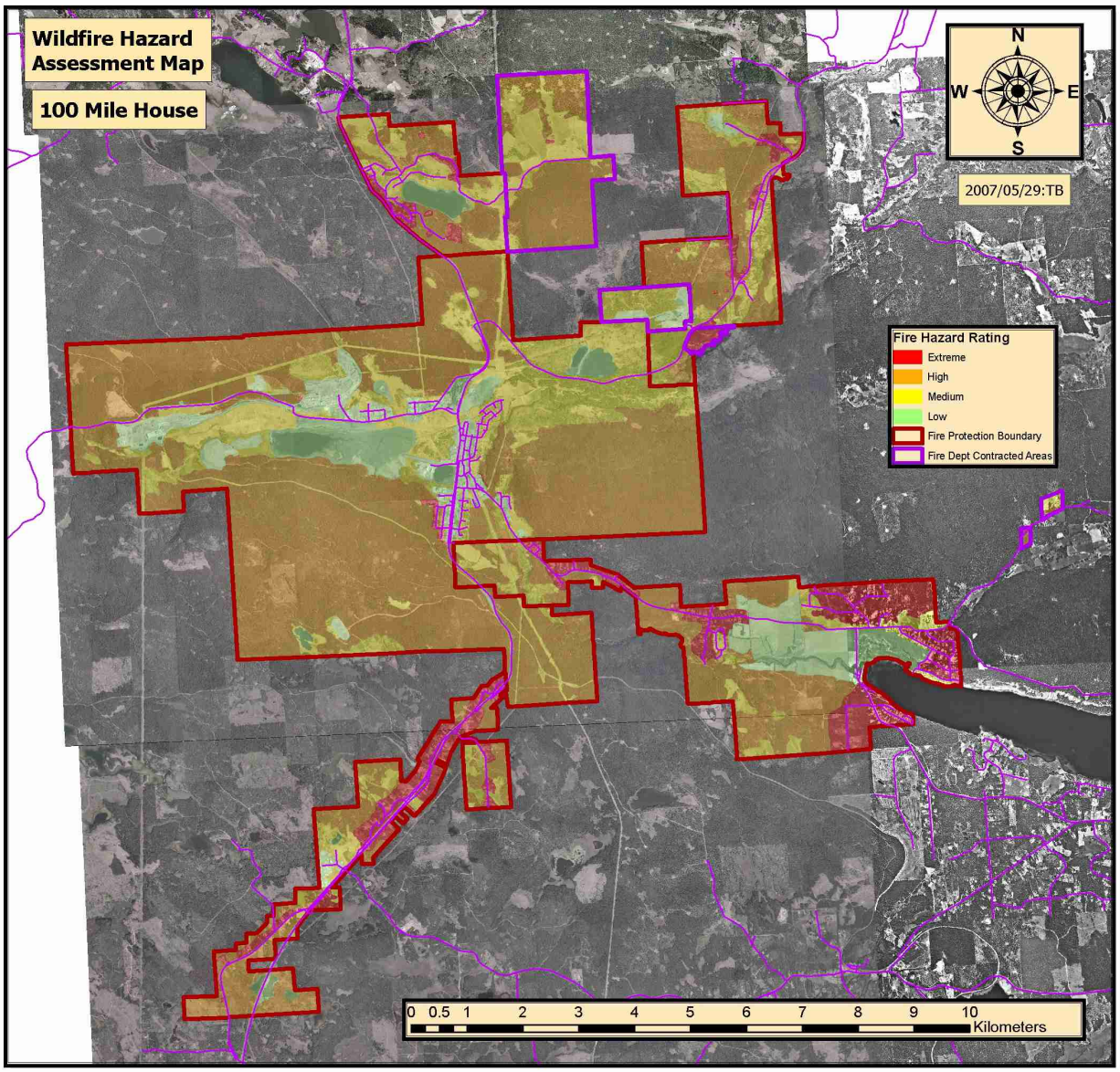


Table Three

Wildfire Hazard Class Areas

Wildfire Hazard Class	Area (Hectares)
Low	1191
Moderate	2103
High	5338
Extreme	747
Total	**9397 hectares**

Low Wildfire Hazard Class – 1191 hectares

The areas identified as Low Wildfire Hazard Class do not contain surface fuels that will allow wildfire spread. Developments in this area are considered acceptably isolated from wildfires, no further actions are required.

Wildfire Concerns

The only wildfire concerns for the developments in this area are in the case of a wildfire event similar to the events of 2003 in McLure (Barriere), Kelowna, Falkland and other locations. In these cases, wildfires created a wind event and an ember shower covering wide areas, igniting and destroying numerous homes and buildings in low hazard class areas. The downtown core of 100 Mile is dominated by older, flat roofed buildings that would be prone to such a wildfire event.

Irrigated and grazed fields do not support wildfire spread.

Moderate Wildfire Hazard Class – 2103 hectares

The areas identified as moderate wildfire hazard class contain forest fuels that will allow surface fire spread only. These areas have little or no coniferous forest overstorey. These areas do not pose a significant hazard to homes and buildings with minimal wildfire hazard reduction efforts in place. Minimum efforts consist mainly of a ten meter wide FireSmart landscaping or non-burnable surface (FireSmart Priority Zone 1) buffer between the forest and the structure(s).

The 100 Mile Fire Department can expect to control wildfires in these areas with basic fire suppression techniques. Assistance from the Ministry of Forests and Range crews and equipment or other outside agencies is likely not required under most circumstances. Public/homeowner evacuations are likely not required. Traffic control may be required along main road arteries or high visual fires that attract the public or cause visibility problems due to smoke.

Unmanaged fields will support fast spreading, low intensity surface fires.

Wildfire Concerns

The moderate wildfire class areas are only a serious wildfire concern if a wildfire start coincides with a severe wind event. Wildfires in these open grassland and small forest areas can spread very quickly through the surface fuels. In the event of a strong wind event and multiple wildfire starts in one or more of the moderate or higher hazard

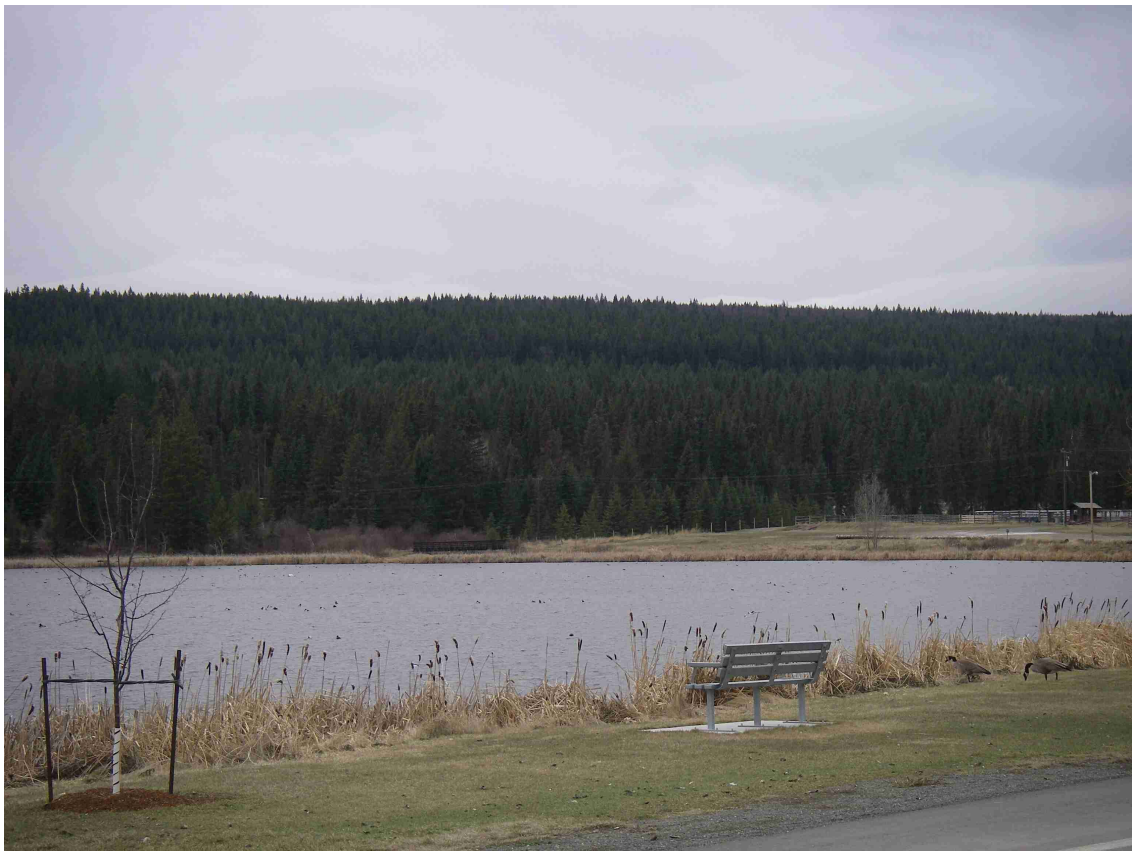
class areas, including the railway track right-of-ways, the local fire department could be easily overwhelmed by multiple responses and the large area to be extinguished. These moderate hazard sites are often inter-mixed with high hazard areas. They can contribute to fast wildfire spread and movement into higher hazard fuels.

High Wildfire Hazard Class – 5338 hectares

Developments and individual structures within, and immediately adjacent to, high hazard class areas are exposed to wildfire hazards that would seriously threaten the structures. The adjacent coniferous forest or logging slash can support aggressive wildfire behaviour. High hazard class areas will support intermittent or continuous crown fires that can ignite adjacent structures through radiant heating or more likely through ember showers.

Wildfire Concerns

At least 195 homes plus numerous outbuildings were identified within or immediately adjacent to high hazard areas. Wildfires in these areas can easily outstrip the ability of a local fire department to suppress these fires. Ministry of Forests and Range crews and equipment assistance should be immediately requested on any wildfires within or adjacent to the high hazard class areas during the summer months.



Continuous coniferous forest cover will support high intensity crown fires.

Extreme Hazard Class – 747 hectares

Thirty-one unique areas were identified in extreme hazard class areas. These areas are characterized as individual homes and subdivisions surrounded by forested land where separation between the homes and the forests is not sufficient to minimize the wildfire hazard. Also, many rural acreages were rated Extreme because continuous forests land is present in and around the houses and other structures. Approximately 410 homes plus many outbuildings were identified in these areas.

Wildfire Concerns

Wildfires in the Extreme areas will directly threaten homes and buildings. They can easily outstrip the ability of a local fire department to suppress these fires. Ministry of Forests crews and equipment assistance should be immediately requested on any wildfires within or adjacent to the extreme hazard class areas during the summer months.

Houses adjacent to continuous dead pine stands are included in extreme wildfire hazard areas.

5.2 Railway Tracks

Railway lines snake through the 100 Mile area, servicing the mills and industrial area. For the most part, the right-of-way for these tracks is covered in unmanaged brush, small conifers and deciduous trees. This type of forest fuel composition falls into a moderate wildfire hazard class. Railway lines are a 'double edged sword.' They provide the positive benefit of a continuous crown free corridor through the forest and grasslands

in the 100 Mile area. The rail lines provide a good fuelbreak and logical boundary for fuel management treatments. Unfortunately, railways are one of the three main ignition sources of man caused fires in B.C. (Ministry of Forests - S-100 Basic Fire Suppression and Training Course).

5.3 Powerlines

There are multiple sets of powerlines that traverse the valleys around 100 Mile. The distribution lines that follow Highway #97 have almost continuous dead lodgepole pine along their full length both north and south of 100 Mile. Similar problems exist on the Horse Lake and Canim Hendrix Lake Roads. These dead trees are already starting to fail. Dead dry trees hitting a powerline are a likely ignition source during the dry months of the year. B.C. Hydro has a right-of-way clearing program for removing pine beetle killed trees along its exposed powerlines. Line clearing efforts commenced in 2006 and appears to be continuing in 2007.

Failed pine beetle killed tree across powerlines south of 100 Mile House.

5.4 Cariboo Regional District Dump

The CRD dump site is located northwest of the 100 Mile townsite, within the District boundaries. The site is surrounded by a pine/fir forest type. A majority of the pine has been recently killed by pine beetle. The site is heavily used by the public for the

depositing of home and yard waste. A wildfire that established in this area would mostly threaten both local mills, the 100 Mile Industrial Area and the 103 Mile subdivision. The Dump site needs its own fire management plan, on site water resources and fire training for personnel. A fuel management zone around the dump perimeter of at least fifty meters wide would also reduce the wildfire hazard and make suppression of any fires easier and safer.

5.5 Mill Sites

Ainsworth and Weldwood both operate large mills in the northwest portion of the District of 100 Mile. Both mills have forested land adjacent to their log storage facilities that would support aggressive wildfire behaviour. The ignition of log decks at either mill would threaten the mill itself, plus create a high intensity fire that would encourage spread towards the community. The mill yards and milling activities themselves are a further ignition source that could allow a structure fire to spread onto forested land and threaten the northern part of the District.

6 Fire Weather

The southern Cariboo is known for its long, warm, dry summers and cold winters. Three local weather stations were polled to determine how local weather contributes to wildfire risk. The Ministry of Forests and Range weather stations at Lone Butte, Young Lake and Meadow Lake are all considered relatively representative of the fire weather experienced in the 100 Mile area during the summer months. The weather history for the last five to fifteen years (1991-2006 as available) was analyzed to determine how many days each of these weather stations recorded high or extreme fire weather conditions for May through October. This data gives an approximate idea of how many days in the average year the weather conditions are conducive for aggressive wildfire spread. A summary of this data can be found in Table Four. The complete weather data is located in Appendix C.

The three Ministry of Forests and Range weather stations in the 100 Mile area recorded an annual average of twenty-three high and extreme fire weather days for the weather data for the available years between 1991 and 2006. The number of high and extreme fire weather days varies dramatically from year to year. Table Five identifies the maximum number of high and extreme days documented for each weather station.

Table Four
Summary of Fire Weather Data

Weather Station	Wx Data (# of years)	High Hazard (days)	Extreme Hazard	Total High and Extreme	Average Annual H

			(days)	Hazard (days)	and E Hazard (days)
Meadow Lake	1991-2006 (15)	263	73	336	22.4
Young Lake	2001 – 2006 (5)	88	54	142	28.4
Lone Butte	1998-2006 (7)	116	32	148	21.1
Average	(27)	467	159	626	23.2 *

* 626 High and Extreme hazard days over 27 years of weather data

The fire weather data collected from the three local weather stations suggests that the 100 Mile area experiences annual, regular occurring weather that would allow wildfires that ignite in the area to spread aggressively.

Table Five
Maximum Annual High and Extreme Fire Days for Each Weather Station (1991 - 2006)

Weather Station	Maximum Annual High and Extreme Fire Wx Days
Meadow Lake	62 (2003)
Young Lake	58 (2003)
Lone Butte	49 (2003)

The year 2003 was an unprecedented wildfire year, with hundreds of houses destroyed and hundreds of thousands of hectares burned by wildfires in B.C. The local weather stations averaged 56 high and extreme fire days that year.

7 Local Fire History

The Ministry of Forests and Range historical fire data shows twenty-three wildfire responses by forestry wildfire suppression crews, within five kilometers of 100 Mile, in the last nine years.

The 100 Mile House Volunteer Fire Department has recorded 148 wildfire related incidents in the last ten years (1997-2006), for an average of almost 15 per year. Ministry of Forests and 100 Mile Fire Department fire data can be found in Appendix E.

8 Future Wildfire Concerns

Whether it's global warming or a short term increase in earth's temperature, mild winters and warm, long summers appear to be here to stay for the near future at least. The five warmest years since weather records have been kept in B.C. have occurred in

the last decade. Four of those years have occurred in the last five years. The goods news appears to be that the summers are not getting much warmer, but the winters are less cold, accumulating into a warmer overall weather pattern (Kelvin Hirsch, Canadian Forest Service). A serious concern is that the fire season in B.C. appears to be getting one day longer each year (Peter Fuglem, Ministry of Forests – Protection Branch).

Higher average temperatures and a longer wildfire season will both contribute to increase wildfire risk to the residents and structures in the 100 Mile area.

8.1 Mountain Pine Beetle

The warmer winters are allowing forest pest populations to grow at unprecedented rates. The growth of the Mountain Pine Beetle (*Dendroctonus ponderosae*) is the most obvious example. The pine beetle epidemic is modeled to peak in 2007 and continue at epidemic proportions until 2013 at which time it is predicted that at least 80% of the mature lodgepole pine (Pinus contorta) trees in the province of B.C. will have been killed (Ministry of Forests and Range website). This epidemic covers over 10 million hectares of the Interior of B.C. and presently affects over 400 million cubic meters of timber.

Two pine beetles are aggressively attacking our pine forests in B.C. The Mountain Pine Beetle (*Dendroctonus ponderosae*) is by far the most successful, and doing a majority of the damage in the 100 Mile area. It attacks all native pines in B.C. with equal vigour. It is responsible for millions of hectares of dead lodgepole pine trees, one of the main commercial tree species in the Interior of B.C. It will also attack western white pine and ponderosa pine. The Western Pine Beetle (*Dendroctonus brevicomis*) is only found in ponderosa pine in the valley bottoms of the southern interior. Both beetles are native to B.C and have been around for as long as there have been pine trees. These beetles are also found in Alberta, twelve Western U.S. States and Mexico.

Pine beetle infested stands adjacent to communities represent an increase in wildfire hazard. Excessive needle drop increases surface fuel loadings. The trees start to fall over, adding to ladder fuels and surface fuels. The fallen or partly fallen trees impede site access, reducing the effectiveness of wildfire suppression crews and equipment. This wildfire hazard created by dead, falling trees can last for decades.

8.1.1 Pine Beetle Life Cycle

Pine beetles, no bigger than a grain of rice, colonize and kill pine trees by boring through the bark and building galleries in the cambium of the tree, right under the bark layer. A successful beetle emits a pheromone that alerts other beetles to the susceptible tree, causing mass attack and ultimately the death of the tree. The beetles lay eggs along their gallery. The eggs hatch and the larvae eat the cambium, girdling the tree. The beetle also introduces a blue stain fungi into the tree that assists the beetle in killing the tree. The fungi clogs the sapwood cells, preventing water movement in the tree. Red needles, the most obvious indicator of successful pine beetle attack, show up the Fall or Spring after the attack. The beetle larvae mature and fly from late Spring to early Fall. During dry, warm summers, this life cycle can occur more than once. The beetle population from one tree can easily attack and kill five trees during the next cycle. In

warm years with two beetle flights, one colonized tree can become thirty within one summer season. Once a pine tree has been successfully colonized by pine beetles, it is effectively dead and cannot recover. Pine beetles only attack live trees, they cannot survive in dead or downed wood.

Pine beetle populations are largely controlled by the weather and the amount of pine available. The pine beetle larvae survive the winter by producing their own anti-freeze that prevents them from freezing solid. A short cold snap of –25C in the early Fall or an extended –35C weather event in the winter can also cause high mortality in the overwintering larvae. The only other factor that will contribute to large scale pine beetle mortality will be a lack of suitable host, when there is no longer enough mature pine trees in B.C. to support the beetle.

8.1.2 Factors in Pine Beetle Populations

A combination of factors has led to the pine beetle population explosion. Two main factors include; a long spell of warmer than normal winters that has minimized overwinter larvae mortality, and secondly B.C.'s timber profile that includes higher than historical levels of mature pine trees, the pine beetle's favourite target. It is estimated that B.C. presently has three times more mature lodgepole pine than historically. These older pine stands are largely a result of wildfire suppression techniques that have reduced the average fire size and extended the wildfire return interval to these stands.

Once dead, lodgepole pine trees are viable for harvesting and fiber recovery for only a few years. Once the timber degrades to a certain point, its uses are very limited. Major efforts are being made to identify economic uses for the timber not milled shortly after beetle attack. Lodgepole pine are known for their small, shallow root systems. They do not stand long after tree mortality in exposed areas. Blowdown can start to occur shortly after mortality especially in windy, exposed locations, or in areas with shallow soils. Many lodgepole pine will develop dangerous characteristics and be prone to failure within a half dozen years of mortality.

Patch or strip harvesting is usually the best treatment in heavily pine beetle infested lodgepole pine stands. Retaining other tree species mixed with these stands, specifically Douglas fir and deciduous trees, assists with retaining biodiversity.

For More Information www.for.gov.bc.ca/hfp/mountain_pine_beetle

8.2 Other Forest Health Concerns

The 100 Mile area has other forest health concerns. Douglas fir is the second most common tree found on the sunny south facing slopes and it dominates the lower elevations and northern aspects within the valley. The Spruce Budworm (Choristoneura ssp.) has been a serious problem in the forests surrounding 100 Mile for the past decade and more. Spruce Budworm is a defoliator that eats the newest growth of Douglas fir

trees. It does not usually kill the tree but it does slow growth. Repeated heavy budworm attack over a number of years will cause dead tree tops or sometimes mortality in the attacked trees. The most obvious sign of budwork infestation is a red tinged forest in mid to late summer. Other forest pests, such as the Douglas fir Tussock Moth (Orgyia pseudotsugata) and the Douglas Fir Beetle (Dendroctonus pseudotsugae) are also on the rise in the province. Exponential population growth in any forest pest that causes mortality in Douglas fir trees would have a massive impact on the wildfire hazard in the 100 Mile area.

9 Wildfire Hazard Reduction Options

Reducing the wildfire hazard to existing communities and homes, and to future developments can be a very complex planning process. All plans or prescriptions for wildfire hazard reduction must be site specific, aesthetically pleasing, economically feasible and environmentally sensitive.

The objective of wildfire hazard reduction efforts should not be to stop all fires. Stopping all wildfires is not achievable. The objectives should be:

- to alter wildfire behaviour on the forested land adjacent to developments, through forest fuel management, to greatly reduce the potential for house and structure losses, and
- to construct houses that are designed to withstand a wildfire.

House construction materials and design are outside the scope of this report but are discussed in detail in the FireSmart manual, Chapter Three.

Improving structure survivability through forest fuel management has two key components; separating the structures from the forest with FireSmart landscaping, and reducing or modifying the forest fuels adjacent to the structures to reduce the wildfire behaviour.

Table Six

Recommended Wildfire Hazard Reduction Guidelines for Each Wildfire Hazard Class

Hazard Class[1]	Forest Fuel Description[2]	Wildfire Behaviour	Maximum Fire Rank	Hazard Reduction Requirements [3]
Low	None	None	None	None
Moderate	Grass/Sage - Surface Fuels Only	Surface Fires	2 - 3	Priority Zone 1
High	Continuous Conifers and Surface Fuels	Candling/Crown Fires	4 – 5	Priority Zone 1 and 2
Extreme	Continuous, Dense Conifers and Surface Fuels	Aggressive Crown Fires	4 - 6	Priority Zone 1, 2 and 3 (as required)

1 Wildfire Hazard Class for Priority Zone 2 from FireSmart
2 See full definitions for each Priority Zone 2 Hazard Class
3 Priority Zones from FireSmart

Landowner awareness and buy in are the only options for reducing the wildfire hazard to their own property. FireSmart information needs to be distributed to the private landowners in established developments with unacceptably high wildfire hazard. The

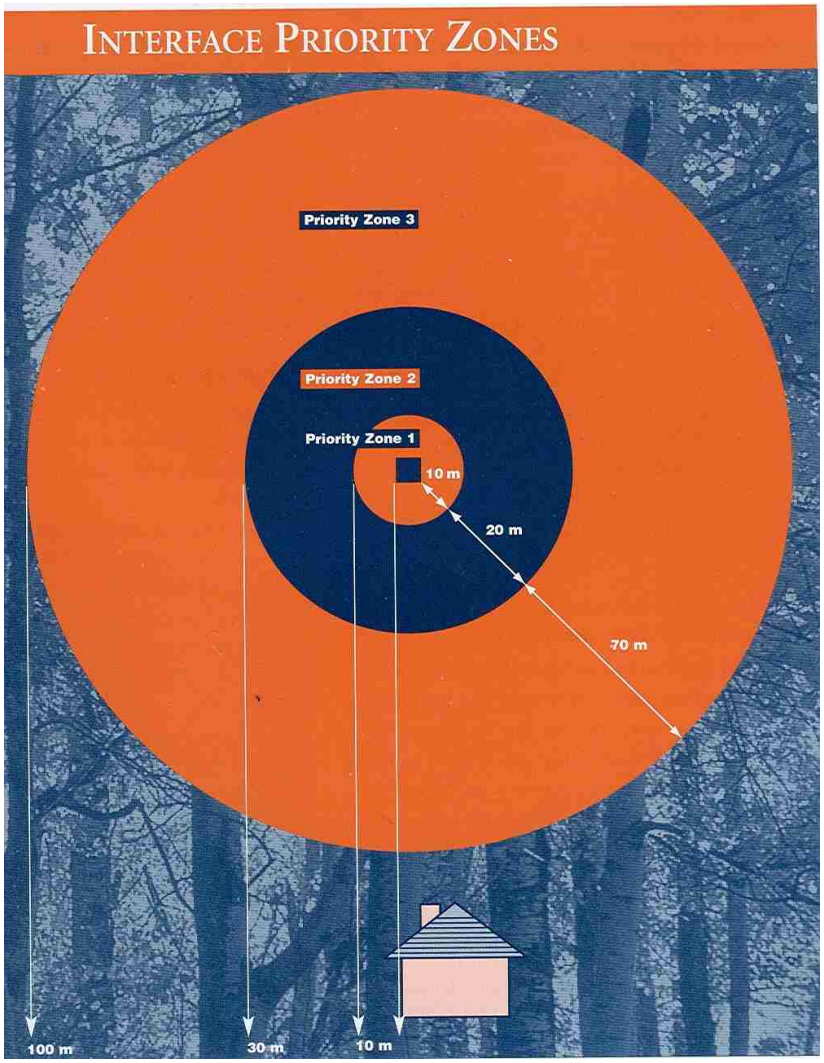
District of 100 Mile needs to concentrate on ensuring any new developments, trailer parks or subdivisions are not established without adequate wildfire hazard reduction efforts put in place before construction begins. By ensuring the new developments are adequately planned and managed to reduce the wildfire hazard to acceptable levels, many of the present problem areas will have there hazard reduced as well.

9.1 FireSmart Landscaping

Separating the house and other structures from the forest environment involves establishing FireSmart landscaping around the structure so a wildfire cannot burn up to the structure. This surface can be a wide variety of plants and surface covers as long as they do not support combustion. FireSmart landscaping is referred to as Priority Zone One in the FireSmart manual and is discussed in detail in Chapter Three of that publication. A minimum of ten meters of FireSmart landscaping from the structure to forested land is recommended. This distance should be increased with increasing slopes and the extent of the wildfire hazard in the adjacent forest. For example, a ten meter buffer would likely be sufficient on flat ground adjacent to an unmanaged field of matted grass. The distance should be increased greatly, or combined with other treatments in an area of continuous, dense, tall coniferous trees on a steep (greater than 20%) slope.

FireSmart landscaping alone is suitable for structures adjacent to Moderate Hazard Class areas as identified on the maps attached to this report. FireSmart landscaping alone is not enough to increase house survivability in the areas identified as High and Extreme in this report. The High and Extreme Hazard Class areas will need much wider FireSmart landscaping or some other type of forest fuel modification on the adjacent forest lands.

FireSmart Interface Zones



9.2 Forest Fuel Modification

Wildfire behaviour is based on three factors.

1. Forest Fuel – the woody material available to burn, configuration and continuity
2. Weather – daytime temperature, the amount of drying and wind
3. Topography – the lay of the land, slope, aspect and terrain

Of these three factors, only the forest fuels are within our control. Reducing the volume and continuity of the forest fuels can reduce the intensity and the rate of spread of a wildfire, thus reducing the wildfire hazard. The objectives for forest fuel management should be:

a) Reducing the crown fire potential, and

b) Reducing the surface fire intensity.

Other important benefits include easier access into an area and better firefighter safety.

Reducing the amount and configuration of the forest fuels consists of three basic activities.

1. Spacing

Spacing, thinning or tree removal involves the reduction of the number of stems and associated branches and needles within the forest canopy. There are a number of different techniques. The spacing treatment necessary is dependent on many factors including, tree species, age of the stand, stand structure and other factors. Spacing treatments must be designed on a site specific basis. In some cases, small scale forest harvesting may be the best method to space the area and cover the costs of the treatment. Any forest harvesting in interface areas must be well planned and supervised.

One commonly used convention is to space the trees so the crowns are at least one-half of the average tree crown diameter apart. This inter crown distance should be increased on slopes. This spacing distance is also dependent on crown base height and the amount of surface fuel remaining after the site treatment.

2. Pruning

Pruning involves the removal of the lower branches of coniferous tree species to separate the crown fuels from the surface fuels. By raising the Crown Base Height (CBH) within the stand, it will be more difficult for a surface fire to spread upwards into the tree canopy where it will spread quickly, greatly increase the wildfire intensity and create ember showers onto adjacent structures. The required height of the pruning is variable depending on canopy closure and amount of surface fuels remaining after the site treatment.

One commonly used convention for pruning is a three meter crown base height. Again, there is no one prescription to manage all situations.

3. Surface Fuel Reduction

Surface fuel reduction involves the removal, chipping or burning of all spaced and pruned material, plus additional downed and dead material that will contribute to wildfire spread. Removal of the fine (small diameter) fuels is the priority as these fuels dry out quickly, ignite easily and are the main contributor to surface fire spread on most sites.

Surface fuel treatments are often considered the most important component of any fuel modification activities. Prescriptions often call for surface fuel loadings of below two tonnes per hectare in the IDF biogeoclimatic zone. This involves removing all dead and downed material, including conifer needles, over the entire treatment area.

These techniques should be employed on the forested land adjacent to homes or new developments in all High and Extreme wildfire hazard class areas to reduce the wildfire hazard to Moderate or below.

No one prescription will solve all wildfire hazard problems. All prescriptions must be site specific and developed by an experienced individual.

A widely spaced and pruned forest will not support crown fires.

9.3 Wildfire Hazard Reduction Maintenance

Done properly, only the surface fuel treatment requires regular maintenance. Spacing and pruning treatments should last decades before further work is required. The amount of maintenance on the surface fuels will depend on tree species, mortality in the stand, tree ingress, grass growth and other factors that increase the amount of dead and down forest fuel.

9.4 Implications of Wildfire Hazard Reduction Work

Reducing wildfire hazard through the reduction of the forest fuels sounds simple enough, but forest fuel treatments can have a wide variety of implications. Fuel treatments can have both positive and negative effects on wildfire hazards.

The application of spacing, pruning and surface fuel removal techniques creates a more open forest stand. Open forest stands;

- allows more light to reach the surface, often drying out the site or allowing more grass, herb and shrub growth,
- can lengthen the fire season on the site by allowing the site to dry up faster and stay dry longer,
- allows more wind to move through the stand and along the surface, possibly increasing the rate of spread of surface fires, and

- often have lower relative humidity in the summer months from the increased sunlight and temperatures.

The positive effects of wildfire hazard reduction through forest fuel reduction include;

- lower probability of crown fires due to the more open forest canopy and the lower surface fuels,
- lower intensity surface fires from the reduced forest fuels,
- easier and safer access for wildland firefighters, and
- more effective aerial fire control efforts with air tankers.

In general, forest fuel reduction work reduces the crown fire potential and overall intensity of wildfires in an area. This will increase the survivability of the trees in the stand and of adjacent homes and structures. Forest fuel reduction work can also increase the dryness on the site, and allow more wind to reach the surface, creating conditions for fast moving, low intensity wildfires to spread.

10 Recommendations

The Community Wildfire Protection Plan process has identified a number of recommendations for the people of the 100 Mile area. Eleven areas were identified and mapped as requiring hazard reduction work to reduce the wildfire hazard to the adjacent homes. A number of other areas were also identified on larger acreages where FireSmart treatments are required on private land to reduce the wildfire hazard to acceptable levels. Recommendations also focus on Public information, pine beetle management, suggested Official Community Plan and Bylaw amendments, and reaching out to partners to assist with reducing the wildfire hazard concerns in the 100 Mile area.

10.1 Priority Areas for Treatment

Action Initiate communication with the Ministry of Forests on planning and implementing wildfire hazard reduction work on identified pieces of Crown land.

Eleven areas have been identified for fuel management treatments. All these areas are adjacent to extreme interface areas where continuous forestland abuts subdivisions, acreages or homes. The identified areas are mapped as the minimum area for forest fuel treatment to attempt to meet FireSmart standards. The treatment areas do not take into account long range spotting from large fires but instead, try to reduce direct radiant heat from wildfires directly impacting on structures. As a result, the identified treatment areas have been identified immediately adjacent to communities or subdivisions. By reducing the fuel continuity and density immediately adjacent to the communities, wildfire suppression efforts to protect the homes will be safer and more successful. Long range spotting activities would require landscape level timber harvesting and fuel management activities that are not addressed in this report. A map covering the recommended treatment areas is included in Appendix G.

Completing fuel management activities on the identified treatment areas will be complicated by the land ownership. A majority of the land in the 100 Mile area is privately held. Fuel management on treatment areas on private land is solely at the decision of the landowner. The District of 100 Mile House can encourage and provide support for such initiatives but cannot force any work onto private landowners. Fuel management on crown land is more easily handled. The Ministry of Forests, land manager for a majority of the forestland in the 100 Mile area, fully supports wildfire hazard reduction efforts and will work with interested agencies and other levels of government to implement fuel management activities.

Table Seven
Identified Treatment Areas

Treatment Area #	**Ownership**	**Area (ha)**
1	Private	68.5
2	District of 100 Mile	7.2
3	Private	41
4	Crown – North of Horse Lake Road Private – South of Horse Lake Road	252
5	Crown outside FPA Private inside FPA	418
6	Crown	102
7	Private	16
8	Private/Crown	22
9	Private/Crown	28
10	Private	70
11	Private	15.5
Total		**1040.2 hectares**

Each treatment area is discussed in further detail in Appendix L.

The hazard assessment identified numerous locations where B.C. Crown Land contributed directly to high and extreme wildfire hazard to the local residents. The 100 Mile Forest District Office, the forest land managers for this area, should be contacted by letter. The Cariboo Regional District should also be made aware of the wildfire hazard issues identified in this report. The letters must identify the problem areas and request assistance to address the wildfire hazard problems.

The letter should be addressed to the following individuals.

1. Ken Waite District Manager 100 Mile House Forest District
2. Chris Betuzzi Fire Zone Manager 100 Mile House Fire Zone

Mailing Address
Box 129
100 Mile House, B.C.
V0K 2E0
(250) 395-7800

3. Darron Campbell
Cariboo Regional District
Suite D 180 North 3rd Ave
Williams Lake, B.C.
V2G 2A4
(250) 392-3351
dcampbell@cariboord.bc.ca

10.2 Other Areas of Concern

Action Inform landowners within areas of concern of the identified wildfire hazard in their area.

The eleven identified areas represent the largest areas where fuel modification through harvesting or spacing, pruning and slash removal techniques will benefit the local landowners by reducing the wildfire hazard. Many other areas would also benefit from fuel management work. These areas includes:

- Birchwood Road
- Bisett Road
- Sundman Road
- Eastwood Road
- Multiple scattered individual homes.

All these areas are acreages where the wildfire hazard exists on the landowners property itself. Employing FireSmart efforts can only be the responsibility of the property owners. A thorough public information campaign to inform these individuals of the wildfire hazard and the solutions is necessary.

10.3 District of 100 Mile House Bylaw No. 951

Action Consider bylaw changes to allow for hazard reduction burning and to extend bylaw over entire Fire protection Area.

Bylaw 951 regulates open burning within the District of 100 Mile House. In section 2.4, the bylaw limits open air burning permits to 'any area zone "Agriculture" or "Industrial" '. The addition of an Interface Zone to this criteria should be considered to allow landowners with a minimum amount of property to perform open air burning to reduce their wildfire hazard. The interface zone could be defined as High and Extreme wildfire hazard areas or areas deemed to be at risk to wildfires by the Fire Chief or his designate. Establishing the minimum property size of one acre to qualify for the permit would limit the open air burning to the larger properties and perimeter of the District. This would minimize the smoke impacts on the higher density core.

Consider extending Bylaw No.951 to cover the entire 100 Mile House Fire Protection Area. This would allow the fire department to control all burning within the FPA for which they are responsible for fire control and suppression. The CRD would have to be involved in this process.

All open air burning should be controlled by the venting index as presently defined within the bylaw. The venting index can be accessed through www.weatheroffice.pyr.ec.gc/wxhealth/smoke/.

Sections 2.7 and 2.11 of the bylaw should be referencing the Wildfire Act.

Bylaw No.951 can be found in Appendix J.

10.4 Partners List

Action Contact all the possible stakeholders and partners who mat be able to assist in wildfire hazard reduction work.

The District of 100 Mile House is not alone in trying to manage its wildfire hazard concerns. Many other organizations have land management obligations and abilities, and programs in place to manage components of the wildfire hazards identified in this report. The following list covers other organizations and individuals who could play an active role in assisting the District of 100 Mile House reduce the overall wildfire hazard within its boundaries.

Table Eight
Partners List

NAME	ORGANIZATION	ADDRESS	POSTAL CODE	PHONE #
Rick Takagi	Ainsworth Lumber	Box 67, 100 Mile House, B.C.	V0K 2E0	395-6200
Ian Hamilton	Ainsworth Lumber Weldwood	Box 67, 100 Mile House, B.C.	V0K 2E0	395-6200
Richard Prill	BC Timber Sales	Box 129, 100 Mile House, B.C.	V0K 2E0	395-7800
Mark Seiles	Ministry of Forests and Range	Box 129, 100 Mile House, B.C.	V0K 2E0	395-7800
Michelle Schilling	Ministry of Highways	Box 1600, 100 Mile House, B.C.	V0K 2E0	395-8948
Darron Campbell	CRD	Suite D 180 North 3rd Ave Williams Lake, B.C.	V2G 2A4	393-3351
Gary Hanson	Canadian National Railway	11717 - 138th St Floor 1 Surrey, B.C.	V3R 6T5	604 589-6522
Doug McMaster	Telus	30 St Paul St Kamloops, B.C.	V2C 5R8	371-4809
Andy Hick	Rogers	#1600 - 4710 Kingsway, Burnaby, B.C.	V5H 4W4	(604) 431-1464
Wayne Faulkner	B.C. Hydro	1155 McGill Rd Kamloops, B.C.	V2C 5L1	371-6909
Lorne Sandstrom	Terasen Gas	1402 McGill Road Kamloops, B.C.		604 576-7253
RickTotten	Terasen Gas	1402 McGill Road Kamloops, B.C.		250 371-5005
Bob Brodie	ILMB	145 - 3rd Ave, 3rd Floor Kamloops, B.C.	V2C 3M1	377-7038
Tami Fur	ILMB	145 - 3rd Ave, 3rd Floor Kamloops, B.C.	V2C 3M1	377-7038

10.5 Hydro Powerlines

Action Contact Hydro to support their hazard tree removal plans in the 100 Mile area and beyond.

B.C. Hydro is actively conducting tree removal along their powerlines within the District boundaries, the Fire Protection Area and outlying areas. Falling pine trees will be a likely wildfire ignition source if the trees within reach of the powerlines are not

removed in the short term. Involved Hydro personnel should be contacted to encourage them to continue and expand the program to all outlying areas in the southern Cariboo around 100 Mile House.

10.6 Large Landowners

Action An information campaign focused on local landowners with larger holdings, informing them of their role in wildfire hazard reduction efforts.

The large landowners in the area will play a very important role in their own wildfire safety, and that of the entire community. Individual homes in continuously forested areas are very difficult to defend during large wildfire events. Completing fuel management around these homes will make them easier to defend and more likely for forestry crews to defend them. Also, landowners with large numbers of dead pine trees must be encouraged to remove these trees, or at least the trees along their access roads to create reduced fuel areas for wildfire suppression and safe access.

10.7 Public Information

Action Increase awareness of all individuals within the Fire protection area of the serious wildfire hazard concerns in the area.

The most important outcomes from this report should be a public information campaign that informs the 100 Mile House area residents of the wildfire hazard problems identified. This campaign should incorporate as many different mediums as possible to get the message to as many residents as possible. The campaign should involve the radio, newspapers, mail outs and public meetings. The areas identified as having unacceptably high wildfire hazard should be focused on. Involvement and endorsement by the District Council and fire department would add great credibility to the program.

A public meeting that deals directly with the results of this report should be scheduled as soon as possible after the report is accepted by the District Council.

10.8 Pine Beetle Pamphlet

Action Mail out pine beetle information to all Fire Protection Area landowners to increase awareness.

The pine beetle epidemic sweeping across the Interior of British Columbia is having a serious impact around 100 Mile. Aggressive pine beetle management by the community may reduce the impact of the pine beetle and save high value character trees in the area. The public, landowners, business owners, maintenance staff and contractors need to understand the seriousness of the problem, be able to identify newly attacked trees and understand the management options that are available to deal with the pine beetle and the dead trees.

The Thompson Nicola Regional District has produced a very good pine beetle information package that can be viewed at www.tnrd.bc.ca. Further pine beetle

information can also be found at www.gov.bc.ca and follow the links to Ministry of Forests and Range.

10.9 Update Official Community Plan

Action Improve wildfire hazard related wording in the OCP.

The District of 100 Mile House Official Community Plan (OCP) mentions wildfire hazard concerns in five different locations. The following should be considered for inclusion the next time the OCP is updated or reviewed.

1. All new developments are designed to meet FireSmart guidelines, as they apply to the District of 100 Mile and its FPA. This would apply to both house construction and forest setbacks.
2. All new subdivisions and developments in identified high and extreme hazard areas require a Forest Professional conduct a wildfire hazard assessment and develop a mitigation strategy to ensure the wildfire hazard to the homeowner and the adjacent landowners is minimized. This report could be part of the requirements before a building or subdivision permit is issued.
3. A fine or ticketing process for landowners and industrial sites that do not adequately minimize the wildfire hazard on their property. The District of 100 Mile House already has a by-law where it has the ability to enter and conduct wildfire hazard reduction on private land and bill the costs to the landowner.

Many Regional Districts and other levels of government in southern B.C. have enacted such amendments to their OCPs and by-laws to better manage wildfire hazards on private lands and as a result of industrial activities. A search of these jurisdictions OCPs might bring up additional issues that 100 Mile could address regarding wildfire hazard in the District.

Appendix I has a summary of the sections of the Official Community Plan that address wildfire hazard issues. The appendix also includes suggestions on where wildfire hazard wording would strengthen the OCP.

10.10 Report Distribution

Action Ensure all involved parties receive a full copy of this report.

This Initial Wildfire Hazard Assessment report should be made available to:

Darrell Blades	Director of Community Services/Fire Chief	
Ken Waite	District Manager	100 Mile House Forest District
Chris Betuzzi	Fire Zone Manager	100 Mile House Fire Zone
Darron Campbell		Cariboo Regional District

10.11 Funding Opportunities

Action Ensure all private landowners and other agencies are aware of funding programs to assist with wildfire hazard reduction efforts.

The UBCM has funding to further the wildfire hazard reduction efforts within the District of 100 Mile House and its fire protection area on Crown land. There is funding for sample hazard reduction projects, public information development, detailed hazard reduction prescriptions and other related activities. The funding is provided at 75% cost sharing with the District. The funding criteria and application forms can be found at www.civicnet.bc.ca. The funding formulas do not subsidize harvesting activities, but do allow for fuel management where necessary after harvesting is complete.

The federal government offers funding for pine beetle infested areas. Landowners with between 10 and 4000 hectares can apply for funding through Natural Resources Canada (NRCAN). Funding is available for surveys, planning and rehabilitation work. Funding received from NRCAN can be considered as in kind community contributions when applying for provincial funding through the UBCM. There is also funding available for danger tree removal through the same program. More information is available at http://mpb.cfs.nrcan.gc.ca/control/private.

11 Summary

Over 600 homes are located in or adjacent to high and extreme wildfire hazard areas within the District of 100 Mile House. Local fire weather data collected suggests that the 100 Mile area experiences annual, regular occurring weather that would allow wildfires that ignite in the area to spread aggressively. The warming weather trend is expected to produce longer dry periods and a longer wildfire season across B.C.

The mountain pine beetle has decimated the lodgepole pine trees in the 100 Mile area. Removal of these dead pine trees in proximity to homes and businesses is the single most important wildfire hazard reduction effort in the short term. These trees need to be removed or burned on site to reduce the escalating local wildfire hazard. Forest health threats to the Douglas-fir, the second most common tree in the 100 Mile area could further increase the local wildfire hazards.

New developments should be the main focus to reduce the wildfire hazard in the long term. By ensuring the new developments are adequately planned and managed to reduce the wildfire hazard to acceptable levels, many of the present problem areas will have there hazard reduced as well. All plans or prescriptions for wildfire hazard reduction must be site specific, aesthetically pleasing, economically feasible and environmentally sensitive. New developments should follow the FireSmart recommendations endorsed by the Ministry of Forests to minimize wildfire hazards to developments within and near forested areas. Wildfire hazard reduction plans should be completed by an experienced Registered Forest Professional.

The objective of wildfire hazard reduction efforts should not be to stop all fires. Stopping all wildfires is not achievable. The objectives should be:

- to alter wildfire behaviour on the forested land adjacent to developments, through forest fuel management, to greatly reduce the potential for house and structure losses, and
- to construct houses that are designed to withstand a wildfire.

The District of 100 Mile House is located within a fire dependent ecosystem. Wildfires are going to occur in the forested areas that surround the valley. Houses built in these forested areas should be protected from these wildfires. Public information and enforcement of hazard assessment process for new houses and developments is the key to the long term reduction of fire risk in the 100 Mile area.

APPENDIX A

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT FORM

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner:	Forest District/Reg. Dist/City:
Location:	Date:

Factor	A	B	C
1 Thickness of duff or litter	Less than 5 cm 1	5 - 20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3 Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5 Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6 Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7 Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8 Exposure (Aspect)	North 1	East 2	South or West 4
9 Slope	0-15 % 1	16-30 % 3	Over 30 % 6
10 Terrain	Flat 0	Rolling 2	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12 Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes. 4
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14 Special factor	This factor rates from-2 to +4 to cover unique or special situations not addressed		

Total = _____ = Fire Danger Rating

less than 21 points .... Low (safe)

21-33 points .... Moderate

34-42 points .... High

43+ points .... Extreme

Completed by:

Remarks/Recommendations for further action

Updated September 1, 2004

APPENDIX B

100 Mile House –
Wildfire Hazard Class Definitions

Table One
Wildfire Hazard Class Definitions

The following wildfire hazard class definitions have been developed specifically for the 100 Mile House area. The four hazard classes are taken from the FireSmart: Protecting Your Community from Wildfire, Second Edition, July 2003 publication. This document is endorsed by the B.C. Ministry of Forests and Range, Protection Branch as the standard for assessing wildfire hazard in Wildland/Urban Interface areas in B.C. The specific definitions for each hazard class have been developed to clarify the wildfire hazard definition and to provide a locally relevant written description of each hazard class that is not available in the FireSmart publication.

Wildfire Hazard Class Definitions

Low Developed and undeveloped land that will not support wildfire spread.
Examples Irrigated and managed fields, heavily grazed fields, gravel pits, severely disturbed land, fully developed residential and commercial areas not directly adjacent to forested or undeveloped land.

Moderate Developed and undeveloped land that will support surface fires only.
Examples Unmanaged fields with more than one year of matted grass. Grass fields with shrubs and a deciduous tree overstorey. Grass fields with coniferous shrubs and tree overstorey below 20% canopy coverage. Small patches, less than 0.5 hectares, of isolated coniferous stands.

High Forested land that will support intermittent crown and continuous crown fires. Multi-aged Douglas-fir and lodgepole pine stands > 0.5 hectares in size. Harvested area without surface fuel treatments that will allow hot surface fire spread. Valley bottom riparian areas large enough to support aggressive wildfires.
Examples Forested land with coniferous coverage exceeding 40% canopy closure. Harvested forested land without surface fuel treatments and some coniferous canopy present.

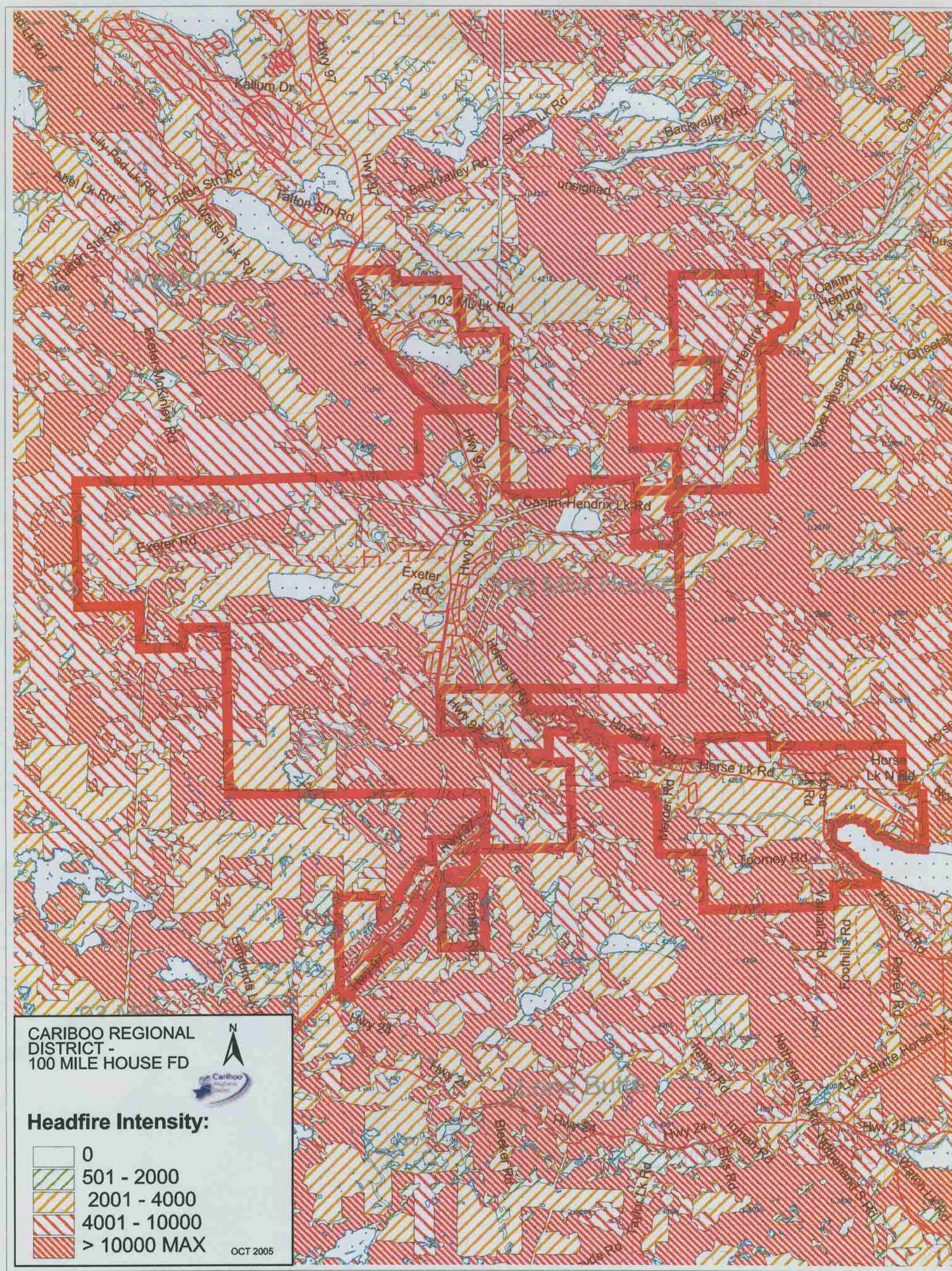
Extreme Forested land that will support intermittent or continuous crown fires adjacent to and within communities, or surrounding individual homes. Areas of live and dead pine beetle attack of greater than 40% adjacent to structures. Areas of very high surface fuel loading after harvesting, adjacent to developments.
Examples Forested land with relatively continuous coniferous canopy closure, in excess of 40%, within 100 meters of homes. Continuous dead pine around homes. Recently harvested areas, adjacent to developments, where no slash reduction efforts have occurred.

APPENDIX C

FIRE WEATHER DATA SUMMARY

APPENDIX D

PROVINCIAL HEADFIRE INTENSITY MAP


CARIBOO REGIONAL DISTRICT - 100 MILE HOUSE FD
N
Headfire Intensity:
0
501 - 2000
2001 - 4000
4001 - 10000
> 10000 MAX
OCT 2005
Kallum Dr
Hwy 97
Lily Pad Lk Rd
Abel Lk Rd
Tatton Stn Rd
Watson Lk Rd
Backvalley Rd
Smith Lk Rd
103 Mi Lk Rd
Canim Hendrix Lk Rd
Exeter Rd
Horse Lk Rd
Toomey Rd
Hwy 24
Foothills Rd

APPENDIX E

HISTORICAL WILDFIRE DATA

APPENDIX F

WILDFIRE HAZARD ASSESSMENT FORMS AND PICTURES

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private / Crown	Forest District/Reg. Dist/City: 100 Mile House #1
Location: Scott Rd - SEast N51 37.90 W121 18.16	Date: April 16, 2007

Factor	A	B	C
1 Thickness of duff or litter	Less than 5 cm 1	5 - 20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3 Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5 Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6 Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7 Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8 Exposure (Aspect)	North 1	East 2	South or West 4
9 Slope	0-15 % 1	16-30 % 3	Over 30 % 6
10 Terrain	Flat 0	Rolling 2	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12 Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes. 4
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14 Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 44 = Fire Danger Rating

less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action

Updated September 1, 2004

(31)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 1 @ 135 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private / Crown NSI 38.11 W121 18.23	Forest District/Reg. Dist/City: 100 Mile House #2
Location: 802 Scenic Place - Trailer Park	Date: April 16/07

Factor	A	B	C
1 Thickness of duff or litter	Less than 5 cm 1	5-20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3 Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5 Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, ~~Mature~~, Immature Mix 6
6 Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7 Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, ~~Mature~~ Stand, No Pruning 4
8 Exposure (Aspect)	North 1	East 2	South or West 4
9 Slope	0-15 % 1	16-30 % 3	Over 30 % 6
10 Terrain	Flat 0	Rolling 2	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12 Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes. 4
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14 Special factor +4	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 44 = Fire Danger Rating
less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points ✓.. Extreme

Completed by: B Morrow

Remarks/Recommendations for further action

(32)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 2 @ 260 degrees

Plot 2 @ 275 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner:		Forest District/Reg. Dist/City: 100 Mile House #3	
Location: Airport N SI 38.52 W 12 18.26		Date: April 16/07	
Factor	A	B	C
1 Thickness of duff or litter	Less than 5 cm **1**	5 - 20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. **3**	Continuous branches and tops, etc. 6
3 Coarse debris (> 5 cm)	None or scattered logs **1**	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. **6**
5 Forest Type	None, deciduous **0**	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6 Crown Closure	0 to 20% **1**	20% to 50% 2	Crown closure > 50% 4
7 Ladder Fuels	None, elevated > 3 meters **0**	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8 Exposure (Aspect)	North 1	East 2	South or West **4**
9 Slope	0-15 % **1**	16-30 % 3	Over 30 % 6
10 Terrain	Flat **0**	Rolling 2	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development **0**	Lower to mid-slope. 2	Upper slope crest. 4
12 Values at risk.	No values **0**	Complete development, light development, no homes. 2	Incomplete development, sparse homes. 4
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None **4**
14 Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 21 = Fire Danger Rating

less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action: Deciduous type

Updated September 1, 2004

(30)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 3 @ 350 degrees

Plot 3 @ 340 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Sallows Cres - Industrial Park

Forest District/Reg. Dist/City: 100 Mile House #4

Location: N 51 39.15 W 121 19.17

Date: April 16/07

Factor		A	B	C
1	Thickness of duff or litter	Less than 5 cm **1**	5 - 20 cm 3	Over 20 cm 6
2	Fine debris (0-5 cm)	None **1**	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3	Coarse debris (> 5 cm)	None or scattered logs **1**	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4	Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. **6**
5	Forest Type	None, deciduous **0**	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6	Crown Closure	0 to 20% **1**	20% to 50% 2	Crown closure > 50% 4
7	Ladder Fuels	None, elevated > 3 meters **0**	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8	Exposure (Aspect)	North 1	East 2	South or West **4**
9	Slope	0-15 % **1**	16-30 % 3	Over 30 % 6
10	Terrain	Flat 0	Rolling **2**	Gullied 4
11	Position of development on slope	Valley bottom, flat, no development **0**	Lower to mid-slope. 2	Upper slope crest. 4
12	Values at risk.	No values 0	Complete development, light development, no homes. **2**	Incomplete development, sparse homes. 4
13	Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None **4**
14	Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 23 = Fire Danger Rating

less than 21 points .... Low (safe)

21-33 points .... Moderate

34-42 points .... High

43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action

Updated September 1, 2004

(20)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 4 @ 350 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: North Roads

Forest District/Reg. Dist/City: 100 Mile House #5

Location: N51 39.22 W121 24.7

Date: April 16/07

Factor		A	B	C
1	Thickness of duff or litter	Less than 5 cm 1	5 - 20 cm 3	Over 20 cm 6
2	Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3	Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4	Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5	Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6	Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7	Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8	Exposure (Aspect)	North 1	East 2	South or West 4
9	Slope	0-15 % 1	16-30 % 3	Over 30 % 6
10	Terrain	Flat 0	Rolling 2	Gullied 4
11	Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12	Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes. 4
13	Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14	Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 40 = Fire Danger Rating

less than 21 points .... Low (safe)

21-33 points .... Moderate

34-42 points .... High

43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action: Dense Fol type, multi-storied, heavy ladder fuels.

Updated September 1, 2004

(2)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 5 @ 40 degrees

Plot 5 @ 350 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner:	Forest District/Reg. Dist/City:
Crown - Powerline RoW	100 Mile House
Location: Ainsworth O/B N 51 39.2' W 121 22.70	**Date:** April 16/07

Factor		A	B	C
1	Thickness of duff or litter	Less than 5 cm **1**	5 - 20 cm 3	Over 20 cm 6
2	Fine debris (0-5 cm)	None **1**	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3	Coarse debris (> 5 cm)	None or scattered logs **1**	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4	Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. **6**
5	Forest Type	None, deciduous **0**	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6	Crown Closure	0 to 20% **1**	20% to 50% 2	Crown closure > 50% 4
7	Ladder Fuels	None, elevated > 3 meters **0**	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8	Exposure (Aspect)	North 1	**East 2**	South or West 4
9	Slope	0-15 % 1	**16-30 % 3**	Over 30 % 6
10	Terrain	Flat 0	**Rolling 2**	Gullied 4
11	Position of development on slope	Valley bottom, flat, no development **0**	Lower to mid-slope. 2	Upper slope crest. 4
12	Values at risk.	No values 0	Complete development, light development, no homes. **2**	Incomplete development, sparse homes. 4
13	Past Fuel Management	Meets fuel management standard **0**	Incomplete fuel mgmt, does not meet standard **2**	None 4
14	Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 21 = Fire Danger Rating

less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Murray

Remarks/Recommendations for further action ~30m wide corridor ~wooden power poles.

Updated September 1, 2004

(22)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 6 @ 180 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Crown	Forest District/Reg. Dist/City: 100 Mile House
Location: N51 39.65 W121 23.03 Dump Road	Date: April 16/07

Factor	A	B	C
1 Thickness of duff or litter	Less than 5 cm **1**	5 - 20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. **6**
3 Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. **3**	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. **6**
5 Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix **6**
6 Crown Closure	0 to 20% 1	20% to 50% **2**	Crown closure > 50% 4
7 Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning **4**
8 Exposure (Aspect)	**North** 1	East 2	South or West 4
9 Slope	**0-15 %** 1	16-30 % 3	Over 30 % 6
10 Terrain	Flat 0	**Rolling** 2	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development **0**	Lower to mid-slope. 2	Upper slope crest. 4
12 Values at risk.	No values **0**	Complete development, light development, no homes. 2	Incomplete development, sparse homes. 4
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	**None** 4
14 Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 36 = Fire Danger Rating

less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action Dead PI
Firewood cutting leaving heavy fuel loading along roadside.

Updated September 1, 2004

(23)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 7 @ 50 degrees

Plot 7 @ 50 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Cariboo RD? Crown	Forest District/Reg. Dist/City: 100 Mile House
Location: CRD Dump N51 39.41 W121 27.10 Landfill	Date: April 16/07

Factor	A	B	C
1 Thickness of duff or litter	Less than 5 cm 1	5 - 20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3 Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5 Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6 Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7 Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8 Exposure (Aspect)	North 1	East 2	South or West 4
9 Slope	0-15 % 1	16-30 % 3	Over 30 % 6
10 Terrain	Flat 0	Rolling 2	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12 Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes. 4
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14 Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = _____ = Fire Danger Rating

less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Marrow

Remarks/Recommendations for further action: Wood waste chop site adjacent to landfill + Fd timber...

Updated September 1, 2004

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 8 @ 290 degrees

Plot 8 @ 250 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private	Forest District/Reg. Dist/City: 100 Mile House #9
Location: Saunders + Gold N 51 41.00 W 121 18.32	Date: April 16/07

Factor		A	B	C
1	Thickness of duff or litter	Less than 5 cm 1	5 - 20 cm 3	Over 20 cm 6
2	Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3	Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4	Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5	Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6	Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7	Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8	Exposure (Aspect)	North 1	East 2	South or West 4
9	Slope	0-15 % 1	16-30 % 3	Over 30 % 6
10	Terrain	Flat 0	Rolling 2	Gullied 4
11	Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12	Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes 4
13	Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14	Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed	+3 Dead Pl	

Total = 43 = Fire Danger Rating
less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action Fdi. Pl At mix, trailers, houses, undeveloped forested lots. Heavy Pl dead to west of Highway.

Updated September 1, 2004

(25)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 9 @ 260 degrees

Plot 9 @ 350 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private - Birchwood Rd Fee

Forest District/Reg. Dist/City: 100 Mile House #10

Location: Gateway N 51 40.53 W 121 13.39

Date: April 16/07

Factor		A	B	C
1	Thickness of duff or litter	Less than 5 cm 1	5 - 20 cm 3	Over 20 cm 6
2	Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3	Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4	Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5	Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6	Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7	Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8	Exposure (Aspect)	North 1	East 2	South or West 4
9	Slope	0-15 % 1	16-30 % 3	Over 30 % 6
10	Terrain	Flat 0	Rolling 2	Gullied 4
11	Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12	Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes 4
13	Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14	Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 46 = Fire Danger Rating

less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action: Average Fd Ep (Pl), mostly undeveloped.

Updated September 1, 2004

(26)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 10 @ 90 degrees

Plot 10 @ 180 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private	Forest District/Reg. Dist/City: 100 Mile House #11
Location: House Lake Road N 51 37.53 W 121 16.67	Date: April 16/07

Factor	A	B	C
1 Thickness of duff or litter	Less than 5 cm **1**	5 - 20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. **3**	Continuous branches and tops, etc. 6
3 Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. **3**	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. **6**
5 Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix **6**
6 Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% **4**
7 Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning **4**
8 Exposure (Aspect)	North 1	East 2	South or West **4**
9 Slope	**0-15 %** 1	16-30 % 3	Over 30 % 6
10 Terrain	Flat 0	**Rolling** 2	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. **2**	Upper slope crest. 4
12 Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes. **4**
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	**None** 4
14 Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 44 = Fire Danger Rating

less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action: Ribbon development, undeveloped lots, cont. Fdpl behind homes.

Updated September 1, 2004

27

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 11 @ 20 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private

Forest District/Reg. Dist/City: 100 Mile House #12

Location: N51 36.75 W121 12.99 Horse Lake Road

Date: April 16/07

Factor	A	B	C
1 Thickness of duff or litter	Less then 5 cm **1**	5 - 20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. **3**	Continuous branches and tops, etc. 6
3 Coarse debris (> 5 cm)	None or scattered logs **1**	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. **6**
5 Forest Type	None, deciduous **0**	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6 Crown Closure	0 to 20% 1	20% to 50% **2**	Crown closure > 50% 4
7 Ladder Fuels	None, elevated > 3 meters **0**	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8 Exposure (Aspect)	North 1	East 2	South or West **4**
9 Slope	0-15 % 1	16-30 % **3**	Over 30 % 6
10 Terrain	Flat 0	Rolling **2**	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. **2**	Upper slope crest. 4
12 Values at risk.	No values 0	Complete development, light development, no homes. **2**	Incomplete development, sparse homes. 4
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None **4**
14 Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 30 = Fire Danger Rating

less than 21 points .... Low (safe)

21-33 points .... Moderate ✓

34-42 points .... High

43+ points .... Extreme

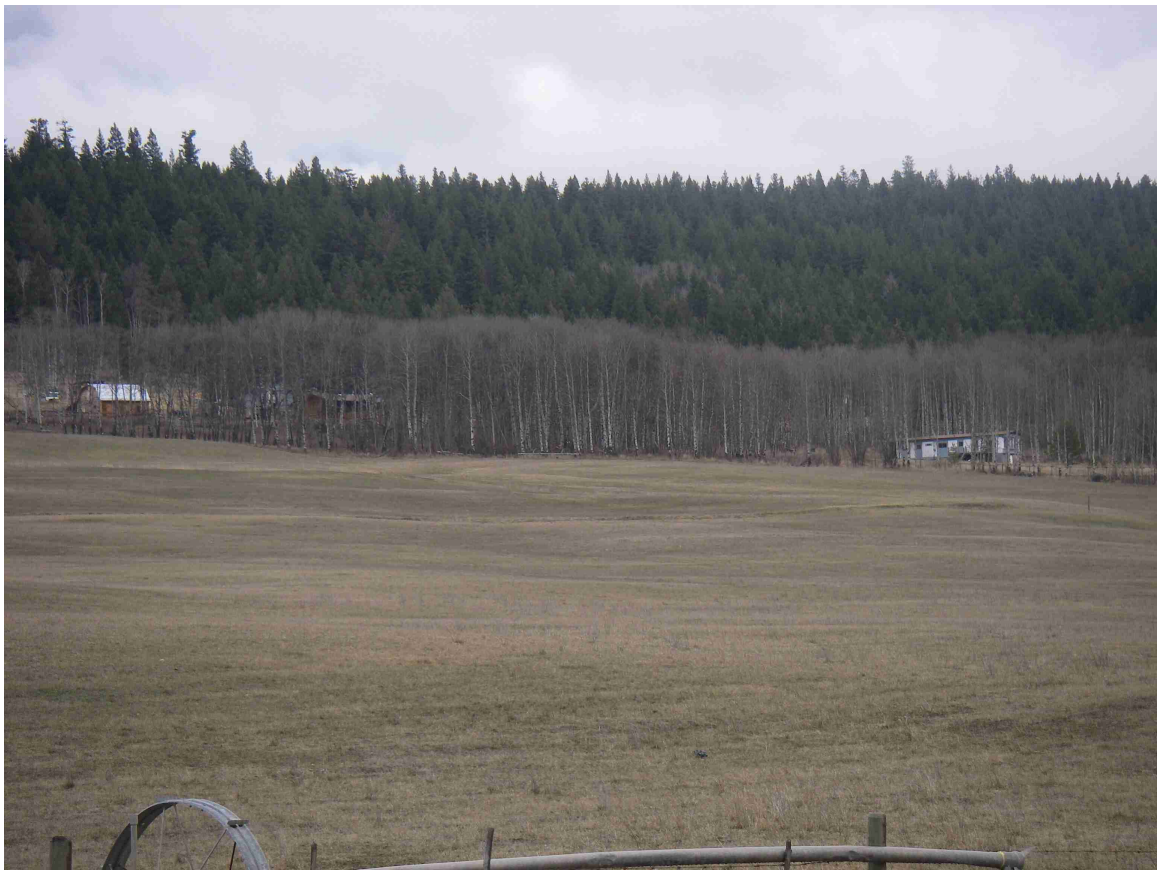
Completed by: B Morrow

Remarks/Recommendations for further action Deciduous stand, continuous grasses.

Updated September 1, 2004

(28)

Wildland/Urban Interface Wildfire Hazard Assessment



Plot 12 @ 40 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private		Forest District/Reg. Dist/City: 100 Mile House #13	
Location: Horse Lake Road N51 36.40 W121 11.86		Date: April 14/09	
Factor	A	B	C
1 Thickness of duff or litter	Less than 5 cm 1	5 - 20 cm 3	Over 20 cm 6
2 Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3 Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4 Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5 Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6 Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7 Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8 Exposure (Aspect)	North 1	East 2	South or West 4
9 Slope	0-15 % 1	~~15-30 %~~ 3	Over 30 % 6
10 Terrain	Flat 0	~~Rolling~~ 2	Gullied 4
11 Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12 Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes 4
13 Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14 Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 46 = Fire Danger Rating
less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... ~~Extreme~~

Completed by: B Marran

Remarks/Recommendations for further action PI removal underway
Dense Fd, Immature Scattered through community.

Updated September 1, 2004

(29)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 13 @ 355 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private

Forest District/Reg. Dist/City: 100 Mile House #14

Location: N½ 33-85 WN 21-59 93 Mile Frontage Rd

Date: April 17/07

Factor		A	B	C
1	Thickness of duff or litter	Less than 5 cm 1	5 - 20 cm 3	Over 20 cm 6
2	Fine debris (0-5 cm)	None 1	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3	Coarse debris (> 5 cm)	None or scattered logs 1	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4	Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. 6
5	Forest Type	None, deciduous 0	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6	Crown Closure	0 to 20% 1	20% to 50% 2	Crown closure > 50% 4
7	Ladder Fuels	None, elevated > 3 meters 0	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8	Exposure (Aspect)	North 1	East 2	South or West 4
9	Slope	0-15 % 1	16-30 % 3	Over 30 % 6
10	Terrain	Flat 0	Rolling 2	Gullied 4
11	Position of development on slope	Valley bottom, flat, no development 0	Lower to mid-slope. 2	Upper slope crest. 4
12	Values at risk.	No values 0	Complete development, light development, no homes. 2	Incomplete development, sparse homes 4
13	Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None 4
14	Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 34 = Fire Danger Rating

less than 21 points .... Low (safe)

21-33 points .... Moderate

34-42 points .... High

43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action: Homes set back from timber, active PI removal ongoing.

Updated September 1, 2004

(33)

Wildland/Urban Interface Wildfire Hazard Assessment

Plot 14 @ 230 degrees

Plot 14 @ 290 degrees

WILDLAND/URBAN INTERFACE WILDFIRE HAZARD ASSESSMENT

Property Owner: Private	Forest District/Reg. Dist/City: 100 Mile House #15
Location: N 51 34.24 W121 20.74 93 mile Frontage Rd	Date: April 17/07

Factor		A	B	C
1	Thickness of duff or litter	Less than 5 cm (1)	5 - 20 cm 3	Over 20 cm 6
2	Fine debris (0-5 cm)	None (1)	Scattered branches and tops etc. 3	Continuous branches and tops, etc. 6
3	Coarse debris (> 5 cm)	None or scattered logs (1)	Frequent logs, some grouped and crossed, less than 1 m high. 3	Frequent logs, grouped and crossed more then 1 m high. 6
4	Surface Vegetation	Infrequent wild grass, herbs, low shrub & immature trees. 1	Frequent wild grass patches, herbs, low shrubs, immature trees. 3	Continuous wild grasses, or other vegetation, immature trees. (6)
5	Forest Type	None, deciduous (0)	Mature Conifer, Deciduous/Conifer Mix 2	Coniferous, Mature, Immature Mix 6
6	Crown Closure	0 to 20% (1)	20% to 50% 2	Crown closure > 50% 4
7	Ladder Fuels	None, elevated > 3 meters (0)	Immature Stand, pruning < 3 meters 2	Dense Immature, Mature Stand, No Pruning 4
8	Exposure (Aspect)	North 1	East 2	South or West (4)
9	Slope	0-15 % (1)	16-30 % 3	Over 30 % 6
10	Terrain	Flat (0)	Rolling 2	Gullied 4
11	Position of development on slope	Valley bottom, flat, no development (0)	Lower to mid-slope. 2	Upper slope crest. 4
12	Values at risk.	No values 0	Complete development, light development, no homes. (2)	Incomplete development, sparse homes. 4
13	Past Fuel Management	Meets fuel management standard 0	Incomplete fuel mgmt, does not meet standard 2	None (4)
14	Special factor	This factor rates from -2 to +4 to cover unique or special situations not addressed		

Total = 21 = Fire Danger Rating

less than 21 points .... Low (safe)
21-33 points .... Moderate
34-42 points .... High
43+ points .... Extreme

Completed by: B Morrow

Remarks/Recommendations for further action: Open wetland between homes + forested land; Scattered dead Pl.

Updated September 1, 2004

(34)

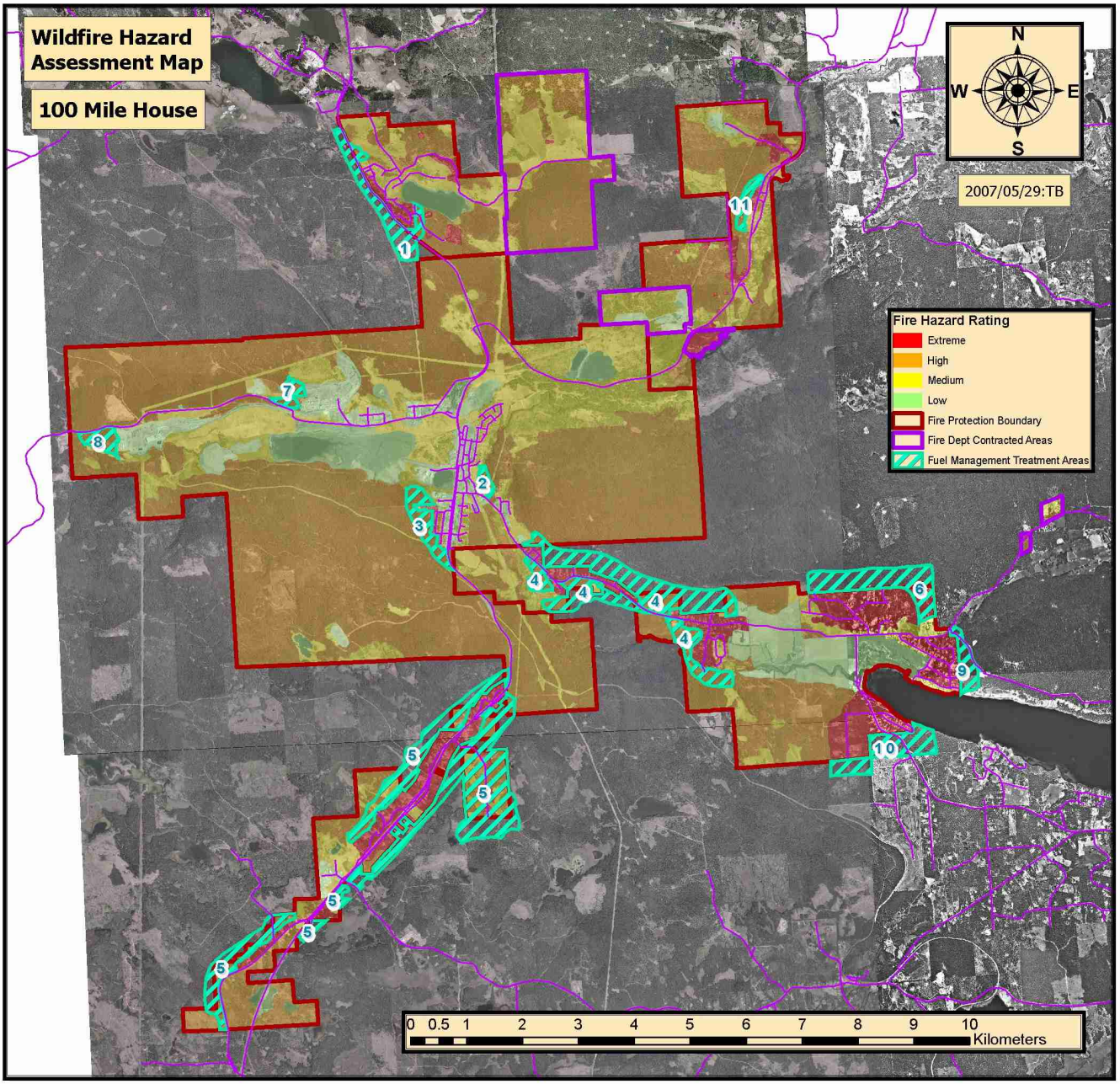
Wildland/Urban Interface Wildfire Hazard Assessment

Plot 15 @ 290 degrees

Plot 15 @ 260 degrees

APPENDIX G

TREATMENT AREA MAP


Wildfire Hazard Assessment Map
100 Mile House
N
W
E
S
2007/05/29:TB
Fire Hazard Rating
Extreme
High
Medium
Low
Fire Protection Boundary
Fire Dept Contracted Areas
Fuel Management Treatment Areas
0 0.5 1 2 3 4 5 6 7 8 9 10
Kilometers

APPENDIX H

DISTRICT OF 100 MILE HOUSE
WILDFIRE HAZARD ASSESSMENT MAP

APPENDIX I

DISTRICT OF 100 MILE HOUSE
OFFICIAL COMMUNITY PLAN
AND OCP REVIEW

APPENDIX J

DISTRICT OF 100 MILE HOUSE
BYLAW NO. 951 OPEN BURNING

APPENDIX K

CWPP REFERRAL LETTERS

6504 Barnhartvale Road, Kamloops, B.C. V2C 6V7

April 30, 2007

Band Administrator
Canim Lake Indian Band
Box 1030
100 Mile House, B.C.
V0K 2E0

Dear Sir or Madam,

Re: 100 Mile House Wildfire Hazard and Risk Planning

The Municipality of 100 Mile House has initiated a Community Wildfire Protection Plan (CWPP) that covers the Municipal Boundaries and their contracted Fire Protection Areas. A CWPP is a mapping and planning exercise that identifies the wildfire hazards in the Interface areas, where forests and homes come together. A hazard map is developed along with a report with recommendations for reducing that hazard through fuel management treatments or other options.

Bruce Morrow Forest Consulting Ltd of Kamloops, B.C. has been contracted to complete the CWPP in conjunction with the 100 Mile House Fire Chief Darrell Blades. Bruce Morrow, a Registered Professional Forester with twenty-five years of wildfire suppression and planning experience, is the contractor.

At this stage, the planning process is purely a paper exercise, no physical work is being conducted on private or Crown forested land, but the report will be identifying areas where fuel treatments could be conducted to reduce the wildfire hazard to adjacent developments and communities. When fuel management work is going to be conducted, either through site plans or salvage harvesting permits, full referrals will be conducted as per the Ministry of Forests procedures.

If you would like further information about the planning process, please contact Bruce Morrow at brucemorrow@shaw.ca or at (250) 573-6066. Darrell Blades, Fire Chief can also be contacted at dblades@dist100milehouse.bc.ca or (250) 395-2123.

Yours truly,

Bruce Morrow R.P.F.

6504 Barnhartvale Road, Kamloops, B.C. V2C 6V7

April 30, 2007

Band Administrator
Canoe Creek Indian Band
General Delivery
Dog Creek, B.C.
V0L 1J0

Dear Sir or Madam,

Re: 100 Mile House Wildfire Hazard and Risk Planning

The Municipality of 100 Mile House has initiated a Community Wildfire Protection Plan (CWPP) that covers the Municipal Boundaries and their contracted Fire Protection Areas. A CWPP is a mapping and planning exercise that identifies the wildfire hazards in the Interface areas, where forests and homes come together. A hazard map is developed along with a report with recommendations for reducing that hazard through fuel management treatments or other options.

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Yours truly,

Bruce Morrow R.P.F.

6504 Barnhartvale Road, Kamloops, B.C. V2C 6V7

April 30, 2007

Chief Fred Robbins
Esketemc First Nation
PO Box 4479
Williams Lake, B.C.
V2G 2V5

Chief Robbins,

Re: 100 Mile House Wildfire Hazard and Risk Planning

The Municipality of 100 Mile House has initiated a Community Wildfire Protection Plan (CWPP) that covers the Municipal Boundaries and their contracted Fire Protection Areas. A CWPP is a mapping and planning exercise that identifies the wildfire hazards in the Interface areas, where forests and homes come together. A hazard map is developed along with a report with recommendations for reducing that hazard through fuel management treatments or other options.

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Yours truly,

Bruce Morrow R.P.F.

6504 Barnhartvale Road, Kamloops, B.C. V2C 6V7

April 30, 2007

Band Administrator
High Bar First Nation
Box 458
Clinton, B.C.
V0K 1K0

Dear Sir or Madam,

Re: 100 Mile House Wildfire Hazard and Risk Planning

The Municipality of 100 Mile House has initiated a Community Wildfire Protection Plan (CWPP) that covers the Municipal Boundaries and their contracted Fire Protection Areas. A CWPP is a mapping and planning exercise that identifies the wildfire hazards in the Interface areas, where forests and homes come together. A hazard map is developed along with a report with recommendations for reducing that hazard through fuel management treatments or other options.

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Yours truly,

Bruce Morrow R.P.F.

APPENDIX L

ELEVEN FUEL MANAGEMENT TREATMENT AREAS

Area 1 103 Mile Subdivision

Property Ownership Private
Approximate Area 68.5 hectares

The 103 Mile subdivision is a mixture of large forested lots along its western perimeter beside Highway #97 and open city lots in the central and northern areas. The land west of Highway #97 is elevated above the highway and the subdivision. The forested land is a lodgepole pine/Douglas-fir mix. The pine is mostly dead due to recent pine beetle attack.

The most serious wildfire threat to this community comes from the continuous forest to the west of highway #97. A crown fire in this area would create spotting into the community. By treating the area immediately west of the highway, the highway becomes a more effective fuelbreak. Treatment could include:

1. Dead pine salvage harvesting.
2. Diameter limit harvesting of Douglas-fir component to remove the mid-size component of the stand, leaving the younger trees and veterans.
3. Retain the multi-aged stand structure within the Douglas-fir.
4. Reduction of the overall canopy to a level where the area will not support a crown fire.

The fuel management treatments would only be effective if the homeowners also completed Fire Smart landscaping and building maintenance efforts within the community itself.

Area 2 100 Mile House Campground and City Park area

Property Ownership District of 100 Mile House
Approximate Area 7.2 hectares

This area, immediately adjacent to the local hospital and seniors home, is a heavily used recreation area for bikers and hikers. It appears to be a corridor for young people heading to and from the High school and the downtown. The trails in this area start at the campground on the south end and extend along the creek, past the High School, to the City Park. A powerline right-of-way and high voltage lines also follow the creek in a north/south direction through the area.

This Douglas-fir dominated site has heavy grass surface fuels and very high recreational use which can lead to wildfire ignition. The west edge of the area abuts the hospital and seniors home. Treatments options on this site are varied, but could include:

1. Removal of a majority of timber between the hydro right-of-way and the hospital/seniors home.
2. Removal of all dead and downed surface fuels between the riparian area and the hospital/seniors home.
3. Intense spacing and pruning of the remaining timber to create a minimum of three meters of separation between the surface fuels and the forest canopy.

Area 3 Scott Road/Spruce Avenue Area

Property Ownership Private
Approximate Area 41 hectares

The Scott Road, Spruce Avenue and adjacent trailer court area is comprised of small city sized lots and trailer pads adjacent to continuous multi-aged Douglas-fir dominated forested land. The small lot size does not allow the homeowners to adequately separate their homes from the continuous forest land.

Fuel management treatment could include:

1. A fifty meter wide clearcut immediately behind the homes.
2. Diameter limit timber harvesting for a further 150 meters to remove the mid-sized forest cover.
3. Spacing and pruning regimes to reduce the fuel continuity of the forest fuels within the first fifty meters of the diameter limit harvesting area.
4. Encouragement of growth of native deciduous trees within the treatment area through planting or natural regeneration.

Area 3 has been identified as part of a future subdivision (Darrell Blades, personal communication) that could proceed in the next two to three years. Making FireSmart standards a requirement of the subdivision approval process will reduce the wildfire hazard to both the present and future developments.

Area 4 Horse Lake Ridge/Horse Lake Road

Property Ownership Crown land north of Horse Lake Road
Private land south of Horse Lake Road
Approximate Area 252 hectares

Area Four stretches along Horse Lake Road from Reita Crescent to the Mercer Road area, along both sides of the road. The treatment area follows a roadside ribbon development of individual homes up against forested land. The Mercer Road area is a subdivision with most development on the south side of Horse Lake Road.

The western end of Area Four is dominated by Douglas–fir. Horse Lake Ridge was the site of helicopter logging in the 2006/07 winter to control Douglas Fir Bark Beetle populations. The eastern end of the area is dominated by lodgepole pine, a majority of which has been recently killed by pine beetles.

Fuel management treatment in this area could include:

1. Diameter limit harvesting of multi-aged Douglas-fir on Horse Lake Ridge. Harvesting should retain multi-aged structure of the stand, veterans and some of the smaller understorey trees. A clearcut strip of up to 50 meters wide immediately adjacent to the private lots, at the toe of the slope, would provide adequate separation between the continuous forest and the structures.
2. Removal of all dead lodgepole pine trees within 300 meters of the private lots on the eastern end of the area. Small amount of diameter limit Douglas-fir harvesting would also be required, or some patch cuts, to reduce the overall

forest canopy. Full tree harvesting and skidding to a central landing to slash piling would minimize surface fuel loading build up.

3. Slope stability, mule deer overwintering range, archeological values, visual impacts, riparian issues and other considerations need to be addressed in any harvesting or site plan prescriptions.
4. A public information campaign directed at the homeowners in the area to conduct Fire Smart landscaping on their own properties to better protect their own homes.

Area 5 Highway #97 South

Property Ownership	Crown land outside the FPA Private land inside the FPA
Approximate Area	418 hectares

Area 5 stretches along Highway #97 from the 93 Mile Loop Road north to the end of the last acreages above 100 Mile House, along both sides of the highway, including the Barnett Road area. This area follows the perimeter of the contracted 100 Mile House Fire Protection Area. The forest and the acreages are dominated by beetle killed lodgepole pine. A component of Douglas-fir and Trembling Aspen is also present. Harvested or disturbed areas are dominated by Aspen trees.

Most of the acreages in the area are large enough that FireSmart treatments on the private property itself will reduce the wildfire hazard to acceptable levels. Fuel management treatments in the area could focus on:

1. Public information campaign encouraging homeowners to manage their own wildfire hazards on their acreages.
2. Encourage the homeowners to remove dead pine and manage the resulting slash to break the fuel continuity between the adjacent forest and their structures.
3. Encourage the homeowners to manage their properties to allow aspen trees to dominate the sites around their structures.
4. Consider the development of a fuelbreak, a clearcut of up to 100 meters wide along the crown side of the private land boundaries to further support FireSmart efforts by the landowners. This fuelbreak should be planted with deciduous trees or allow deciduous trees and shrubs to dominate the site. Such a fuelbreak will have limited value if the adjacent landowners don't treat their own properties in a FireSmart manner.

Area 6 North Perimeter of The Ranchettes on Horse Lake

Property Ownership	Crown
Approximate Area	102 hectares

Area Six is a Douglas-fir dominated south facing ridge immediately north of The Ranchettes acreages. The Ranchettes are small acreages with relatively continuous

forest cover with partial modified surface fuels. Limited numbers of green lawns and irrigated fields are established but untreated fine fuel continuity is present throughout the area.

The Ranchettes acreages are mostly large enough for landowners to create their own FireSmart landscapes, but the continuous fir-pine forest stand to the north will still pose a wildfire hazard.

Fuel treatments in the area could include:

1. Public information campaign encouraging homeowners to manage their own wildfire hazards on their acreages.
2. Encourage the homeowners to remove dead pine and manage the resulting slash to break the fuel continuity between the adjacent forest and their structures.
3. Encourage the homeowners to manage their properties to allow aspen trees to dominate the sites around their structures.
4. Consider the development of a fuelbreak, a clearcut of up to 50 meters wide along the crown side of the private land boundaries, and a further 100 or more meters of diameter limit harvesting in the fir and dead pine removal to further support FireSmart efforts by the landowners. Such a fuelbreak will have limited value if the adjacent landowners don't treat their own properties in a FireSmart manner.

Area 7 West of Weldwood Sawmill

Property Ownership Private
Approximate Area 16 hectares

Area 7 is a patch of dense, overstocked immature Douglas-fir immediately above the railway tracks and the heavily used access road to the Ainsworth Plant and the CRD Dump. It is also adjacent to the Weldwood Sawmill log decks. The dense Douglas-fir shows signs of moisture and competition stress, with small, narrow live crowns and poor annual growth. The stand density exceeds over 10 000 stems/hectare in patches. A wildfire started in this area would easily develop into a crown fire, directly threatening the Weldwood and Ainsworth plants.

Fuel management options to consider in this area include:

1. Removing a strip of timber along the eastern and southern edges of this area to separate the log decks and access road from the forested land.
2. Conduct a multi-entry spacing treatment on the remaining area to reduce the fir density and improve the health of the remaining trees by removing some of the moisture and competition stress. The tall, thin, small crowned trees cannot be aggressively spaced or they will likely succumb to wind or snow press.
3. Remove or burn on site all spacing debris.

Area 8 West of Ainsworth OSB Plant

Property Ownership Crown/Private
Approximate Area 22 hectares

Area 8 is a fir/pine type adjacent to the Ainsworth OSB Plant log decks to the west of the mill. A wildfire spreading from the west, with the prevailing winds, that ignited this area could easily ignite the adjacent log decks and threaten the mill itself.

To minimize the wildfire hazard to the mill and the surrounding forest:

1. Clearcut harvesting of at least a fifty meter wide strip along the log storage area and aggressive surface fuel treatment post-harvesting.
2. A further 50 meter wide strip of diameter limit harvesting and fuel management treatment area consisting of spacing, pruning and surface fuel removal.

Area 9 The Ranchettes - Between Lambley and Northshore Drive

Property Ownership Crown/Private
Approximate Area 28 hectares

Area 9 follows the southeastern corner of The Ranchettes subdivision. It is located between the houses along Lambley Road and Northshore Drive. This Douglas-fir dominated site has continuous fir/pine forest to the east, with scattered lakeside homes along the access road. The area is crisscrossed with biking trails and shows signs of heavy recreational use with motorized vehicles.

To minimize the wildfire hazards to the adjacent community, a harvesting plan should be considered that include:

1. Removal of all dead pine trees, except for some unique trees for wildlife values.
2. No harvest treatment along the Horse Lake Riparian Area. Spacing, pruning and surface fuel treatments to be investigated for this area.
3. Diameter limit harvesting in the Douglas-fir to maintain a multi-aged stand. Retention of high value wildlife trees a priority.
4. Reduction of the overall forest canopy to below 40% canopy closure or a similar measurement that limits crown fire potential.
5. Aggressive surface fuel treatment to reduce surface fire spread both along the private land boundaries on the west and Northshore Drive on the east, at least fifty meters in width.
6. Consider extending the treatment area at least fifty meters east of Northshore Drive to make the road a more effective fuelbreak.

Area 10 South of Acreages on Norman and Valhalla Road

Property Ownership Private
Approximate Area 70 hectares

Area 10 is private land outside the southeast corner of the 100 Mile Fire Protection Area. This pine/fir/aspen type borders onto small and medium sized acreages. The areas east and south of Area 10 is also acreages, outside the 100 Mile House FPA. Fuel treatment to reduce the wildfire hazard in this area could include:

1. Removal of all dead pine trees, except for some unique trees for wildlife values.
2. Diameter limit harvesting in the Douglas-fir to maintain a multi-aged stand. Retention of high value wildlife trees a priority.
3. Reduction of the overall forest canopy to below 40% canopy closure or a similar measurement that limits crown fire potential.
4. Minimal harvesting of Aspen trees, encouragement of aspen re-growth to minimize the long term wildfire hazard.

Area 11 Bisett – Anderson Road Area

Property Ownership Private
Approximate Area 15.5 hectares

Area 11 is located along the Canim Hendrix Lake Road, west of Anderson and Geraldine Roads. Small acreages are present both sides of the Canim Hendrix Lake Road. This area is a steep Douglas-fir covered hillside that leads to continuous forest land to the west.

Fuel management work in this area could include:

1. Removal through harvesting of all dead pine trees, except for some unique trees for wildlife values.
2. Diameter limit harvesting in the Douglas-fir to maintain a multi-aged stand. Retention of high value wildlife trees a priority.
3. Reduction of the overall forest canopy to below 40% canopy closure or a similar measurement that limits crown fire potential.
4. Consider extending the treatment area further west to minimize spotting potential of an approaching wildfire.