

COMMUNITY FOREST OF PRINCE GEORGE: MANAGEMENT PLAN



This document was prepared for the City of Prince George

by



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EXECUTIVE SUMMARY

The City of Prince George was invited to apply for a Probationary Community Forest Agreement in the spring of 2005. In light of the need to address the mountain pine beetle infestation the community responded favourably and an application was submitted to the Prince George Ministry of Forest 's and Range Regional Office on January 30, 2006.

The municipal boundary of the City of Prince George forms the boundary of the Prince George Community Forest. There is a variety of land ownership types within this boundary – private land occupies the largest area, with municipal lands, Crown lands and some federal reserve Crown lands as well. The forests consist of mixed conifer and deciduous types in the Sub-Boreal Spruce biogeoclimatic zone. Historically, the lands have been used for agriculture with some logging. In 1915, Prince George was incorporated; industrial, residential and other development soon followed.

The primary objective of resource management on Crown land within the City of Prince George is to create “fire smart” urban wildland interface areas and address the current mountain pine beetle infestation while at the same time ensuring the long-term health of our city’s forested ecosystems.

The City of Prince George will be the legal tenure holder of the Probationary Community Forest Agreement. The governance of the community forest is such that the Development Services Department of the City staffs the community forest. Individuals from the Environment Division oversee the day-to-day operations of the community forest. The Mayor and Council with the assistance of qualified experts (Community Forest Committee) link the community forest staff to the public. With the use of established reporting mechanisms, the public can among other things, raise concerns, ask questions, express opinions or make suggestions.

The Management Plan for the City of Prince George Probationary Community Forest Agreement provides strategic direction for the management and protection of the land and forest resources within the tenured area. This plan contains long-term management direction, although there will be a principal focus on the initial five-year term of the agreement.

This Management Plan addresses the community forest’s allowable annual cut of approximately 12,000m³/yr; provides details on the inventory for timber and non-timber values and discusses important management goals such as recreation trails and visual quality objectives. The purpose of alternative silviculture practices and the influence of these on the future forest are included along with future planning horizons.

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1.0 INTRODUCTION AND OVERVIEW

1.1 BACKGROUND

In response to the fires that swept through the interior of B.C. in 2003 the City of Prince George (CPG) initiated a plan to prepare for potential fire events. Prince George is a City within a forest, and the wildland/urban interface area is significant. The forests in and around the City carry a fuel load that has been exacerbated over the last several years by a mountain pine beetle epidemic. Under the right circumstances, the result for Prince George could be reminiscent of the hot, dry, fire-ravaged summer experienced by communities in the southern interior in 2003.

The wildland/urban interface is any area where structures (whether residential, industrial, recreational, or agricultural) are located adjacent to or among combustible wildland fuels (Figure 1). Increased fuel loads in these areas result from fire exclusion, and ecological time - growth, death and decay of the forests - and from such incidents as pest or insect outbreaks that kill their hosts in part or in whole.



Figure 1: Portrays a typical wildland/urban interface in the City of Prince George¹.
Photo was taken prior to the mountain pine beetle epidemic.

The CPG recognized the growing threat to the residents and infrastructure and took the initiative to responsibly assess and manage wildfire risk in and adjacent to its limits by

¹Photo Credit: resident of Prince George.

having a *Wildland/Urban Interface Wildfire Management Strategy* (2005) prepared by qualified professionals in 2005. This management strategy is a strategic level document that makes some broad site-level recommendations, and provides tools that aim to reduce the long-term wildfire risk within the urban/wildland interface.

The recommendations provided in the *Wildland/Urban Interface Wildfire Management Strategy* stem from two levels of wildfire risk mapping. The first is a landscape level “Wildfire Risk Analysis” which is a GIS based model that spatially quantifies and analyzes the relationships that exist between fire behavior potential, values at risk and constraints to suppression capabilities. The second level, a more detailed risk assessment, was completed using a “Fuel Hazard Ranking System” (FHRS) that was developed based on field reconnaissance around select urban interface areas. This ranking system was used to determine where fuel treatments will effectively reduce wildfire threat and to rank these areas for treatment. These two risk assessments provided a foundation for developing treatment strategies on both a broader landscape level as well as specific treatments for adjacent structures at risk. A *Wildland/Urban Interface Wildfire Management Strategy* which contains a treatment priority map and a detailed methodology can be found in Appendix 1.

As a direct result of a mountain pine beetle epidemic, and after an official task force review of the situation, the former Minister of Forests, Mike de Jong, invited the City of Prince George to apply for a Probationary Community Forest Agreement (PCFA) in April of 2005 (Figure 2). The PCFA carries with it an initial term of five years with an opportunity to apply for a longer term tenure approximately halfway through the initial term of operation. A community forest licence would not only allow the CPG to mitigate fire hazard and address mountain pine beetle damaged timber, it would allow for the opportunity to manage Crown lands in tandem with municipal lands. Rather than applying for multiple small “licences to cut”, the City would be able to operate under one licence and plan treatment/mitigation activities on blocks comprised of both land types more efficiently.



Figure 2: Lodgepole pine trees attacked and killed by mountain pine beetle along highway 16 West in Prince George (left) and in a resident’s back yard (right)².

² Photo Credit: City of Prince George.

The CPG also recognized the invitation to apply for a Community Forest Agreement as an opportunity to combine wildfire preparedness with mountain pine beetle mitigation while upholding the City's [Official Community Plan](#) (2001). The *Official Community Plan* establishes a framework for directing future growth and land use in the City. The mission statement for the City includes provisions for an excellent quality of life for residents. Strategies to meet this mission statement include: "Improving safety and security in the city." It emphasizes that a high quality of life is closely tied to the protection of the natural environment. These initiatives were supported by the prospect of a community forest agreement, and an application for a PCFA was submitted to the Province on January 30, 2006.

1.2 PURPOSE OF A MANAGEMENT PLAN

In compliance with section 43.3 of the [Forest Act](#), the Prince George Community Forest (PGCF) requires a plan for the management of its planning area, and the timber and non-timber resources within that area. This plan must be approved by the Regional Manager or the Regional Manager's Designate and it must meet the requirements of the Community Forest Agreement entered into between the City of Prince George and the Province.

The Prince George Community Forest: Management Plan is a strategic five-year plan that the City of Prince George must implement upon approval. This plan forms an integral part of the probationary community forest licence. The Management Plan defines the objectives for the Prince George Community Forest with regards to the future use of the land base, and the timber and non-timber resources within the community forest. The Management Plan is a community founded document that will provide strategic direction for the management and protection of the land and forest resources within the tenured area. Although this plan is outside of the legal realm of forestry legislation, it is consistent with existing policy and guidelines. Operations conducted under the Prince George Probationary Community Forest Agreement must therefore be consistent with the direction of this plan.

This Management Plan addresses the community forest's allowable annual cut of approximately 12,000m³/yr; provides details on the inventory for timber and non-timber values and discusses important management goals such as recreation trails and visual quality objectives. The purpose of alternative silviculture practices and the influence of these on the future forest are included along with future planning horizons.

1.3 GOVERNING LEGISLATION

1.2.1 The Forest Act

The *Forest Act*, among other matters, provides for the classification and management of forests and forest land, the regulation of cutting rates, the disposition of timber by the government, and the rights and obligations of tenure holders.

Part 3 Division 7.1 (Sections 43.1 to 43.53) of the *Forest Act* contains the legislation for Community Forest Agreements. The Community Tenures Regulation (July, 2004) defines eligible applicants and establishes criteria used to evaluate applications. Community forest legislation and regulations also set out the content of the Community Forest Agreement, links the agreement to key provisions in the *Forest Act*, enables the development of regulations related to the agreement, establishes provisions to award and evaluate agreements, and includes provisions for the possible replacement of the probationary agreements with long-term community forest tenures.

1.2.2 The Forest and Range Practices Act

Apart from Community Forest Tenure provisions in the *Forest Act*, the community forest's operations are governed by the [Forest and Range Practices Act](#) (FRPA) and accompanying regulations. The *Forest and Range Practices Act* provides for the regulation of forest and range operational planning and practices. It is intended to maintain high environmental standards with a focus on tenure holders' results and strategies. The key operational plan required by FRPA is called a "Forest Stewardship Plan" (FSP). The FSP is the only approvable operational plan under the FRPA. The FSP describes measurable and verifiable strategies and results that are consistent with objectives set by government.

The FSP is a 5-year plan that provides broad strategies and desired results for conserving and protecting timber and non-timber resources. The FSP is the primary instrument in the referral process for notifying the public, First Nations, and government agencies as to the location of Forest Development Units (FDU's) and the strategies and results that will apply to the respective FDU's. The FSP is intended to link government objectives with operational results and strategies. Community forest activities will be measured against the results and strategies defined in their FSP. The PGCF therefore has a legal obligation to manage to the requirements of the FSP. The FSP for the Prince George Community Forest will be available on the [community forest website](#), hosted by the City of Prince George.

1.2.3 Stumpage

At the time this plan was written, a substantial amendment was made to the *Interior Appraisal Manual* that would affect the stumpage paid to the government by the community forest in the first few months (at least) of operation.

As per **Amendment No. 9** (effective January 1, 2006) of the *Interior Appraisal Manual*, and supporting letter from Jim Langride (Director: Resource tenures and Engineering Branch), stumpage rates for all active community forest agreements will be tabular for a term ending on December 31, 2006. Tabular rates are stumpage rates that are established in the Coast and Interior Appraisal Manuals and are applicable to timber scaled from agreements specified in those manuals. During this period, stumpage rates for Community Forest Agreements will be a percentage of the District average sawlog by species table rate and that percentage will be established in the Interior Appraisal Manual for the Prince George Community Forest. This rate structure applies to all harvest from Community Forest Agreements and associated road permits until December 31, 2006, and means that for this period of time community forests will be paying a reduced stumpage rate.

A timber cruise will not be required when using tabular rates, however the acquisition of cutting and road permits are required for cutting timber on Crown land.

After December 31, 2006, the CFA stumpage rates and legal obligations will be revisited.

1.4 LOCATION AND DESCRIPTION OF THE COMMUNITY FOREST

The City of Prince George, often referred to as the *Northern Capital*, is situated on the plateau where the Fraser and Nechako Rivers meet. The Prince George Community Forest is unique in that the boundary for the Probationary Community Forest Agreement is the official City of Prince George boundary (Figure 3) – a total area of approximately 33,000 hectares. Provincial community forests are typically apportioned from the timber harvesting land base and located outside of municipal jurisdictions. The main land ownerships within this boundary are divided between the CPG, the Crown and private land. The probationary tenure applies to approximately 4,879 hectares of Crown land within the boundary. This Crown land is currently not contributing to the provincial timber harvesting land base³.

³ Personal communication with the Ministry of Forests and Range, December 2005.

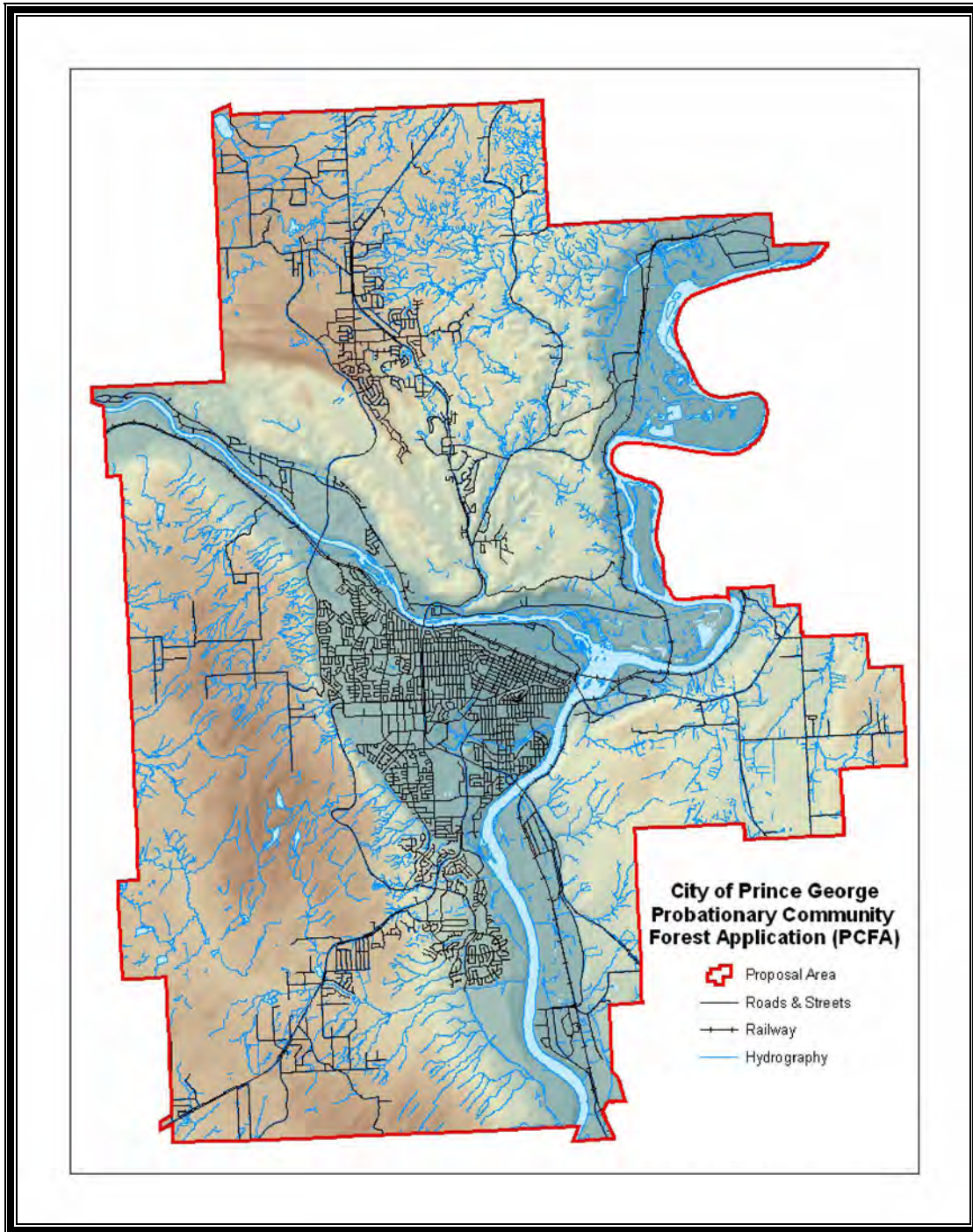


Figure 3: Boundary of the Probationary Community Forest Agreement for the City of Prince George. The tenure agreement applies only to Crown land within this boundary.

1.4.2 Land and History

The confluence of the Nechako and Fraser Rivers were traditionally used and occupied by the Carrier Sekani people. The Lheidli T’enneh is but one member of the Carrier Nation.

They continue to occupy their traditional lands in and around the City of Prince George and have important cultural foundations in the area. Lheidli T'enneh literally translates as “people from where the two rivers meet.” The Lheidli T'enneh’s lands and cultural heritage in Prince George is of utmost significance, which is discussed further in later sections of this document.

Simon Fraser was one of the first explorers to recognize the potential for trade in the Central Interior. In 1807 Fraser established a trading post at Fort George as the two rivers formed natural travel routes to the coast. Nearly 100 years later, the Grand Trunk Pacific Railway was built through the small trading post and subsequently spurred agriculture settlement and later residential development. The City of Prince George was incorporated on March 6, 1915.

Since that time, Crown land within the city limits has been used for commercial and industrial development, agricultural and recreation land use, as well as limited timber harvesting. Other areas have not been developed and remain forested. These forested areas in turn provide habitat and biodiversity and support recreation pursuits. A municipal zoning map and a long-range land use overview map are included in Appendix 2.

Lands that fall within the proposed boundary are divided into the types of ownership summarized by area (ha) in Table 1. ‘Other’ refers to areas such as street right-of-ways, and hydrologic corridors. Even though the Crown and municipal forest lands will be managed jointly under the PCFA, it is only the Crown land portion that is governed by the community forest tenure. Additionally, the Crown land classification is further subdivided based on government land use decisions and planning. Overlapping rights or tenure that occur on Crown land may take precedence over the community forest tenure.

Table 1: Land ownership classification by amount of area (ha) in the City of Prince George.

Classification ⁴	Area (ha)
Other	3,145
Private	22,605
Municipal	1,077
Provincial Crown Land	5,443
Total	32,270

The areas provided in Table 1 refer to the general land ownership overview map presented in Appendix 3.

Treatment of beetle-killed lodgepole pine began in Prince George on municipal lands and city parks in 2000. The City retained local consultants ([TDB Consultants Inc.](#)) to sanitize selected municipal lands. Three sites were treated in 2000, and another 18 sites the following year. To date more than 10,000 cubic meters of beetle-killed lodgepole pine have been

⁴ There are no identified Federal Lands within the City limits.

removed. The Environmental Services Division of the City undertook reforestation of the parks in the spring and summer of 2005 (Figure 4). The success of seedling establishment will be assessed in the spring of 2006. Additional silviculture activities are scheduled to continue.



Figure 4: Volunteer planters assisting with the 2005 reforestation of city parks.

1.4.2 Existing Rights, Title and Tenure

First Nations

As discussed previously, the Lheidli T'enneh's asserted traditional territory includes lands in and around Prince George. The primary community of the Lheidli T'enneh is located on the Fort George (Shelley) Indian Reserve #2 approximately 16 kilometers northeast of Prince George. This Reserve is split by the Fraser River and referred to as North Shelley and South Shelley. The Lheidli T'enneh presently has an Agreement-In-Principle (AIP) with the government, and at the time this Management Plan was written, they were in [Stage 5](#) of treaty negotiations with the governments of Canada and British Columbia. The AIP forms the basis of a final agreement that will clarify and define the rights and obligations of the Lheidli T'enneh First Nation. The treaty package outlined in the AIP deals with land, capital and resources. Stage 5 of negotiations means that Lheidli T'enneh are close to signing and formally ratifying a treaty. There are parcels of Crown land identified in the Agreement in Principle that fall within the community forest boundary.

The Nazko First Nation has also been identified as a group that holds interests in the Prince George area. The Nazko are currently involved in treaty negotiations with the Provincial and Federal governments, and it is yet to be determined whether they will impact Crown use decisions within the proposed community forest boundary. The Nazko Treaty Office entered the treaty process in November 1994; a framework agreement between the Nazko, Canada, and the Province was signed in 1999. They are now in Stage 4 of the six-stage process, negotiating an agreement in principle. The Ministry of Forests will continue to consult with the Nazko in this regard, and provide the City of Prince George with pertinent information.

Consultation with the local First Nations is further addressed in Section 3.0 of this Management Plan.

Tenure Holders

B.C. Timber Sales holds a Section 21 (Forest Act) licence that has been in part allocated to harvest volume within the City limits. This licence expires on October 30, 2006. The Ministry of Forests and Range has confirmed that there are no other existing replaceable forest tenures, or range tenures. Two trap lines exist within City limits. These trap lines are divided by the Nechako River and extend beyond the boundaries of the community forest. The portions of the trap lines that exist within the community forest are inactive. Two guide tenures border the City limits, one on the northeast boundary and one on the southeast boundary. Should prepared community forest activity infringe on these tenured areas appropriate consultation will take place.

Integrated Land Management Bureau (Land and Water BC)

The Integrated Land Management Bureau (the Bureau) shares an interest in the Crown land areas within the City of Prince George. Many parcels of Crown land are subject to sale to prospective buyers, and often the timber on the land is of interest to the buyer. However, the sales process can sometimes be lengthy and administratively complex. The PCFA objective remains the primary interest of the City on Crown lands within the area. Therefore, an arrangement or agreement is critical to achieving these goals.

The process of developing a working arrangement that will satisfy the Bureau's mandate to sell Crown land, as well as achieve a lowered wildfire hazard within City limits has been initiated. Discussions with the Manager of Crown Land Partnership and Sales, and the Section Head of Crown Land Adjudication for the region have begun and priorities for each were developed. The City will work within a currently established process in which the Bureau provides information regarding pending land sales to the City for our opportunity to comment. As well, plans for fire hazard fuel treatment operations will be shared with the Bureau to avoid any conflicts, or unnecessary costs.

1.4.2 Climate and Ecology

The ecology in the Prince George area is diverse and the land base productive. Prince George is in the center of the largest climate region in the province. The term "central interior" refers to the expansive area of subalpine forest that occurs in the geographical center of the province and has been termed the Sub Boreal Spruce Biogeoclimatic Zone (SBS). The SBS has a continental climate with characteristic extreme temperatures. Summers tend to be short, but warm and moist. Thunderstorms frequent the area, creating a fire hazard that is somewhat tempered by the moist climate. Winter occurs from November to March, covering the region with snow and dropping temperatures below -10°C for extended periods. Extreme winter temperatures can exceed -40°C.

Three biogeoclimatic (BGC) subzones are found within the community forest: the dw (dry warm), mk (moist cool) and mh (moist hot) (Figure 5).

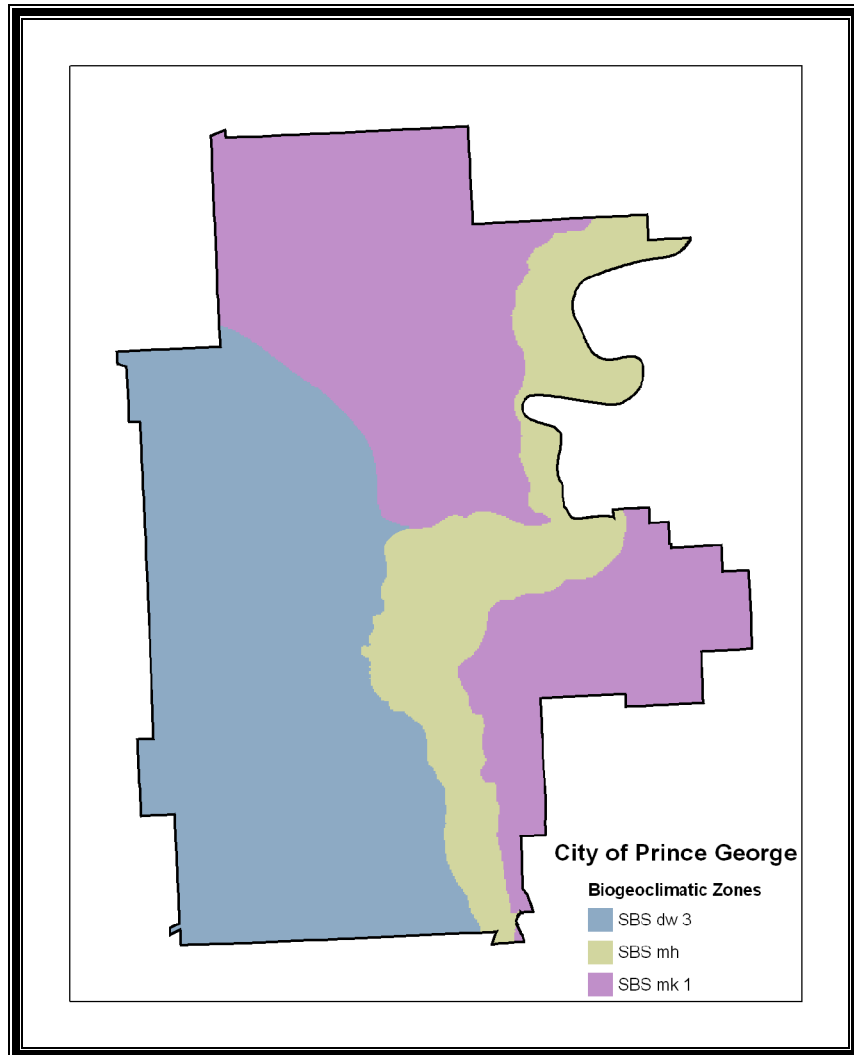


Figure 5: Biogeoclimatic subzones/variants located within the community forest boundary.

The climate of Prince George is predominately influenced by Pacific air masses. The City of Prince George is located in a transitional zone of the continental climate, from the dry warm climate of the west plateau to the wet cool climate of the east mountains.

The SBSmh subzone mainly occurs in the bowl area of the city at the lowest elevation (Figure 5). This BGC unit is mainly found in the valley of the Fraser River and its major tributaries and has the warmest climate with the highest number of growing degree days in the region.

SBSdw3 is mainly found in College Heights (west) and the North of the city (Figure 5). This BGC subzone covers a large geographic area over the west plateau, stretching from as far west as Francois Lake to Trembleur Lake in the north. The City of Prince George is located on the east end of this extent with wetter than average climate compared to typical climate of the SBSdw3.

The SBSmk1 subzone is found in the Hart Highlands (north) and south of the city (Figure 5). This BGC subzone covers an immense geographic area in the region and is found mainly in lower elevations of the plateau in the east - transitional areas to wet mountainous zones. Within the city, the area covered by SBSmk1 is generally cooler with relatively longer snowy winters, compared to the areas covered by SBSmh and SBSdw3.

1.4.3 Vegetation

Climate, combined with the geology and topography of an area result in differing vegetation assemblages, and consequently different habitat and wildlife species. Climax tree species for the Sub Boreal Spruce Biogeoclimatic Zone include hybrid white spruce (*Picea engelmannii x glauca*) and subalpine fir (*Abies lasiocarpa*). Early seral species, those that occupy an area immediately following a disturbance (such as wildfire), include lodgepole pine (*Pinus contorta var contorta*), paper birch (*Betula papyrifera*), and trembling aspen (*Populus tremuloides*). Douglas-fir (*Pseudotsuga menziesii*) is also common and usually more abundant on dry, warm, rich sites. Forests of black cottonwood (*Populus trichocarpa*) with minor amounts of spruce occur occasionally on the active floodplains of the Fraser and Nechako Rivers. The dominant vegetation, tree species and soils associated with each subzone are fully described in the [“Field Guide for Site Identification and Interpretation for the Southeast Portion of the Prince George Forest Region.”](#)

A recently completed Vegetation Resources Inventory (VRI) objectively describes site productivity and species composition of the forested lands within the community forest. Much of the forest surrounding the urban areas in Prince George consists of dense, uneven-aged pure coniferous, pure hardwood and mixed wood stands. With the exception of fire exclusion these forests to date have received no management treatment. Non-forested areas are dominated by brush, marshes and/or grass. These forests are comprised of a range of ages, densities and site potential stemming from various past disturbances including land clearing and historic wildfire. An age class distribution map can be found in Appendix 4 and a species composition map can be found in Appendix 5.

1.5 LICENCE HOLDER AND ADMINISTRATION

1.5.1 Governance Structure

Figure 6 summarizes the framework for the management of the community forest. The City of Prince George (CPG) is the legal tenure holder of the Community Forest Agreement. The Environment Division of the Development Services Department will be responsible for the day-to-day operations and legal obligations of the community forest. This department will receive guidance from Mayor and Council, who in turn will seek knowledge from a committee of qualified experts.

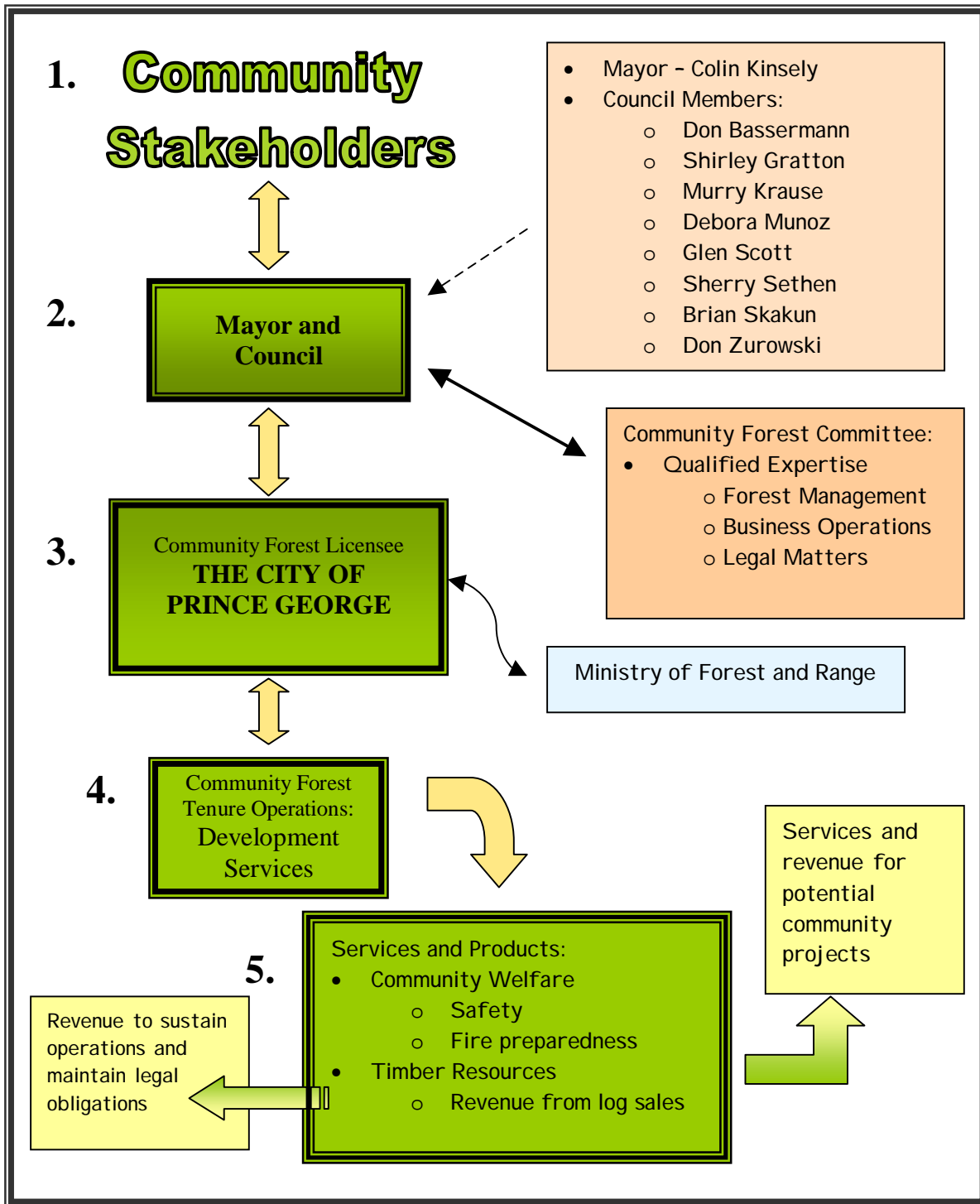


Figure 6: Management framework for the Prince George Probationary Community Forest Agreement.

The Development Services Department is responsible for park lands, solid waste services, urban forests, and other environment-related issues such as water bodies and wildlife. This

department is staffed with the resources and prepared to fulfill the objectives and obligations of the tenure agreement. Technical services and professional forestry consultants will be sought on an as needed basis.

The Mayor and City Council are elected officials, and as such they remain accountable to the public. The Mayor and Council for Prince George serve as the link between the administrative body and the public. They will continue in this capacity as they connect the residents of Prince George to the operations of the community forest. When matters arise that are outside of the Mayor and Council's area of expertise, an independent body such as a Community Forest Committee will conduct research and provide technical and/or legal advice and expertise to the Mayor and Council so that they may honourably fulfill their role. The members of a Community Forest Committee will be accountable to the public through the advice they provide to City Council.

A Community Forest Committee will be comprised of members of the community that are in good standing with the community and have a history of representing the community's interests, or possess the experience necessary to work with the Mayor and City Council or another Council Committee. Individuals that will serve on this committee will be appointed in a manner that ensures that the interests of the individual do not come into conflict with those of the community. Appointments will be made with consideration of balancing the needs of the community forest with the needs of the public. It is anticipated that Community Forest Committee volunteers will be limited to serving for no more than six consecutive 2-year terms. Consultation with Council members is discussed in Section 3.0 of this plan.

The following representations are suggested for committee members:

- First Nations
- Licensee from the Prince George Forest District
- Local Recreation Organization
- Registered Professional Forester (2 private citizens)
- Educational Institution - UNBC, CNC
- Local Business

The City of Prince George [Committees, Commissions, and Boards Procedures Manual](#) will govern the procedures and operation of the committee created for the community forest.

1.5.2 Roles and Responsibilities

The individuals who are responsible for community forest operations and their roles are outlined in Table 2.

Table 2: Staffing for the community forest from the City of Prince George’s Development Services Department.

Name	Role	Qualifications
Mark Fercho	Manager of the Environment Division	<ul style="list-style-type: none"> § Ministry of Environment/Parks Management § Environmental Science/Resource Management § Experience in all aspects of forest resources management § City and Crown forest management experience
Kim Menounos, RPF	Urban Forester, Project Coordinator for the community forest	<ul style="list-style-type: none"> • B.S.F in Forest Resources Management • Experience in mixedwood management, silviculture, mountain pine beetle and ground-based harvesting. • Public communications

1.5.3 Volunteers

It is evident from communications with other community forests that volunteers have proven indispensable. The community forest will seek the assistance of volunteers to help with such activities as open houses, public education seminars and general information dissemination. Individuals wishing to provide volunteer services can find contact information at City Hall or on the [community forest website](#).

2.0 COMMUNITY FOREST VISION, GOALS AND GUIDING PRINCIPLES

This plan contains long-term management direction; however there will be a principal focus on the initial five-year term of the agreement. The wildland/urban interface areas within the community forest have been significantly impacted by mountain pine beetle, and require immediate intervention to address fire hazards close to residential and commercially developed areas. The underlying premise of the following vision, goals and guiding principles however, is that the probationary community forest agreement will ultimately be extended into a long-term tenure.

2.1 VISION

Our vision is to develop and maintain a safe and successful community forest, practice ecologically appropriate forestry, remain accountable to the community, foster healthy forest ecosystems and explore innovative concepts in the future.

The resource challenges facing society inspire the need for innovation. The CPG is committed to exploring new management techniques in order to improve resource use on our limited land base and to advance resource technology. An innovative management approach is key to ensuring sustainability on such a unique land base as the Prince George Community Forest. Our intentions to be innovative will be reflected in our management strategies. Examples of the innovation that we wish to explore are to 1. use our community forest tenure to achieve and maintain our wildland/urban interface goals, and 2. develop forest management practices that can be used for the production of biomass as a form of renewable energy for Prince George.

Imbedded in the vision for the community forest is the following Mission Statement.

Mission Statement

To enhance the forest environment surrounding the urban areas of Prince George for the long term safety of its residents, forest health, and biodiversity by managing forest lands in a manner consistent with current best forestry practices and wildfire hazard mitigation.

2.2 COMMUNITY FOREST GOALS

Goals are central to developing and operating any community forest. They provide the basis for formulating and evaluating management and operations. The statements described below are consistent with good forest management and will guide the stewardship and management for the Prince George Community Forest.

2.2.1 Immediate

The primary goal of resource management in the first five years is to proactively minimize the risks and potential impacts of wildfire within wildland/urban interface areas. These areas are identified in the City of Prince George *Wildland/Urban Interface Wildfire Management Strategy* (Appendix 1). Inherent with this objective is public safety, the clean up of mountain pine beetle killed timber and the health and sustainability of the City's forested ecosystems. The community recognizes the tangible benefits that trees provide to the environment. Healthy trees reduce air and noise pollution, provide energy-saving shade and cooling, furnish habitat for wildlife, enhance aesthetics and property values, and are an important contributor to community image, pride, and quality of life.

2.2.2 Future

The CPG envisions a community forest that will provide economic and educational opportunities for the Prince George community. The current situation does not necessarily warrant the traditional vision of community forestry in that the first five years are directed specifically at an unsustainable harvest - the first five years will be focused on mitigation of

wildfire hazard and the salvage of trees killed by mountain pine beetle. The maintenance of fire preparedness and public safety is however, sustainable. The CPG intends to apply for a longer term licence to address the issue of sustainability as well as alternative ventures. They will work with the Ministry of Forests and Range to locate an additional area of land outside of the City boundary that can be managed for a long-term sustainable timber supply and other community ventures. With a long-term licence the CPG can uphold its commitment to wildfire preparedness, forest health and public safety. The community forest can then pursue economic stability whether it is within or external to the proposed boundary depending upon the location and possibility of additional lands.

Summary of Goals

A community forest licence for the City of Prince George will permit integrated management of crown and municipal lands to meet the primary goal. The CPG will work with the Ministry of Forests and Range to explore the option of expanding the land base of the existing community forest. As per Section 43.4 of the *Forest Act* and Section 5 of the *Community Tenures Regulation*, approximately halfway through the probationary term, the licensee will submit a first assessment report to the Ministry of Forest and Range. At this time the licensee will indicate its wishes to not only expand the duration of the community forest licence, but the area that it occupies. In the first five years, the specific management objectives of the PGCF for these lands will be to:

1. Facilitate fire preparedness in the wildland/urban interface; and
2. Remove beetle killed trees.

Progress toward meeting the primary goals will be assessed and the Management Plan will be reviewed prior to the submission of an application for a long term tenure in year two of operation. Goals and guiding principles will be updated as necessary to reflect the appropriate change in tenure – if any. The goals for the PGCF described here refer to goals outside of the legislative results and strategies required by FRPA that are addressed in the FSP. These goals express the desires of the Prince George community and are intended to guide community forest activities.

2.3 COMMUNITY FOREST GUIDING PRINCIPLES

Community forest operations will be consistent with the City of Prince George's *Official Community Plan*, the *Wildland/Urban Interface Wildfire Management Strategy*, the *Urban Forest Management Plan*, and where appropriate, the *Prince George Land and Resource Management Plan (LRMP)*. Policy directives and other higher level plans that impact social, economic, or environmental objectives will be incorporated into operational plans that guide management of the community forest. The following encapsulates the guiding principles for the community forest respective of visions for present and future generations.

1. Objectives described in this document refer to goals outside of the legal FRPA objectives and those documented in the FSP. Probationary Community Forest

Agreement objectives will be **consistent** with the City of Prince George's *Official Community Plan*, the *Wildland/Urban Interface Wildfire Management Strategy*, the *Urban Forest Management Plan*, and the *Prince George Land and Resource Management Plan (LRMP)*.

2. Policy directives and higher level plans that impact **social, economic, or environmental** objectives will be considered in operational plans that guide management of the community forest.
3. **Safety** is paramount. Forest operations will be carried out in and around residential, recreational and commercial areas; planning and implementation of these activities will be done with the utmost regard for human welfare and safety.
4. **Ecologically** sound forest practices are vital to ensuring the health and well being of our lands and water. The best available information will be used in the planning and decision making processes.
5. The administration and management of the business will be conducted in a professional manner that strives for **economic efficiency** while promoting social and environmental values.
6. Community **consultation** will be facilitated through Mayor and Council and the PGCF. Appropriate conflict resolution measures will be followed when conflict arises.
7. **Local employment** will be considered first in order to facilitate the growth of local business and community involvement.
8. **Stakeholder participation** will be endorsed through an array of methods such as community events, local advertisement and partnership opportunities.
9. The City of Prince George will be the legal tenure holder (licensee); operations will be **compliant** with Provincial forestry legislation and regulation. Annual rent, stumpage, and other applicable fees payable to the Crown will be managed appropriately and submitted as required.

3.0 CONSULTATION AND PUBLIC INVOLVEMENT

3.1 OVERVIEW OF PUBLIC CONSULTATION

The City of Prince George and the Mayor and Council view their responsibility to provide adequate, effective venues for constructively involving the public as critical to the success of the community forest. Prior to the application of the PCFA, the City of Prince George initiated a formal consultation process. This involved newspaper articles, open houses, and

letters asking for support, surveys, and the establishment of an informative [community forest website](#).

Because Prince George residents and their interests are highly diverse the PGCF intends to involve a broad representation of the community. The CPG will give careful consideration to involve the public in community forest planning activities. Information included in public consultation will be relevant, and synthesized in a way that addresses the community's concerns and levels of understanding.

The overall objectives of our public participation process are to:

- involve the community on a meaningful consultative and participatory basis, in planning and operating the Probationary Community Forest Agreement;
- enable the public to review and comment at the strategic planning level;
- seek effective ways of public participation and communication;
- educate the public with respect to community forest issues;
- incorporate public values and knowledge into the decision making process;
- build trust; and
- reduce conflict.

The CPG has well-established public feedback mechanisms in place, and will continue to inform the residents of Prince George through publications about community forest activities. In order to successfully implement harvesting plans within City limits, continued public communication is key. The communication process is intended to identify community stakeholders and other organizations that may be affected or interested in the policies and procedures of the community forest. In order to realize this goal, the PGCF will develop an annual plan. The plan will include venues that can be used to notify the public of harvesting activities and silviculture operations as well as invite the public to participate in particular events. Additionally the plan will include providing opportunities for public comment, contact information for the Community Forest Committee members, along with the outcomes of meetings, decisions, and other such activities. The CPG will advertise and host significant public events such as a review of this document and the FSP. Proposed communication mechanisms include, but are not limited to the following forms of media:

- maintaining a community forest website;
- information displayed at City Hall;
- the Forest Stewardship Plan consultation process;
- open houses;
- a semi-annual newsletter delivered with utility notices;
- a newspaper supplement or feature in the *Prince George Citizen*, the *Free Press* and *PG This Week*;
- local radio announcements;
- advertisement on the Shaw cable community channel;
- focus groups; and
- Community Associations.

The CFA staff will remain in contact with the community through periodic open houses and focus group sessions, which will be advertised in advance. Comments and suggestions from the public are always welcome and can be submitted on-line through the community forest section on the [City of PG website](#).

In general, there are many avenues for the public to express their opinions, wishes and desires as well as dissatisfaction to the Mayor and Council. Councillors' contact information can be found on the City's website, and is also available at the City's Service Centre. Council meetings take place regularly and are open to the public. Other than direct contact with Councillors, complaints and contacts received by the City are logged in a City-wide database. Often, this is the first step in addressing an issue, or bringing it to the attention of City staff. If the matter is not resolved, it can be brought to the highest level – the Mayor very quickly. Due to the nature of a municipal government, accountability to the public is high priority for everyday operations, policy directives and exercises. The community forest will benefit from this established link between the public and the governing body. At the time an application for a long-term agreement is submitted, and should the governance change, the accountability will be easily transferred because it is well established.

3.2 FIRST NATIONS INVOLVEMENT

As previously discussed, the aboriginal groups with land claims in the Prince George Community Forest Agreement area have been identified with the help of Ministry of Forests Prince George District staff. In order to ensure that all lands that are potentially being considered in the Treaty Negotiations Process are identified, City staff will continue to work closely with the bands themselves, as well as representatives of the B.C. Ministry of Aboriginal Relations and Reconciliation. A positive working relationship is being developed between community forest (City) staff and the Lheidli T'enneh band through the mutual desire to achieve results and to act in good faith. A consultation process will be developed in conjunction with the band themselves to satisfy the needs of both parties. During the public consultation phase of the Forest Stewardship Plan, all bands with an interest in the area lands will have the opportunity to comment and provide input on the plan.

3.3 CONFLICT RESOLUTION PROCESS

The community of Prince George is generally passionate about the land base. It is also a large populace with very diverse ideas and desires. Good conflict management methodology and dispute resolution skills are important to resolving conflict successfully in an environment of differing values. Disagreements are a natural part of working toward a common goal. Realizing this truth is the first step toward preparing the foundation for the development of the methods and principles essential for dispute resolution. City of Prince George staff is in the process of developing conflict resolution guidelines that will be followed in the administration of the community forest. Through time and continuous improvement these guidelines are intended to assist with fluid decision-making, and permit each disagreement to be approached with the intent of finding a solution. Additionally, the

CPG is in the process of joining the [B.C. Community Forest Association](#), which will provide access to a larger body of community forests and their managers who have already worked through a multitude of problems and are willing to share their solutions.

4.0 GENERAL LIABILITIES

4.1 FIRE

Fire liabilities are a concern for any tenure holder. Fuel volatility through beetle infested timber only increases this concern, hence the primary objective of the community forest. The City of Prince George will ensure that community forest operations are consistent with the appropriate legislation and accompanying regulation.

Management tools such as fuel management standards, and fire preparedness procedures will be used to educate employees of potential hazards and responsible work habits.

4.2 TRESPASS

The CPG is aware that not all Crown or private lands within the City limits have been adequately surveyed, and there is a potential to inadvertently trespass on to private land or lands deemed **not** part of the community forest tenure. All reasonable precautions will be undertaken to avoid this type of infraction.

All Crown land proposed for harvesting will have legal status confirmed prior to harvest commencement. Legal boundaries will be identified prior to harvest activity or other management action.

The CPG will ensure that it has the most up-to-date land ownership data, and make concerted efforts to contact neighbouring property owners with regard to boundary specifics. Discrepancies will be investigated via the appropriate provincial standards.

4.2 PUBLIC SAFETY

The public's safety is of utmost concern. When operations occur close to residential areas, parks, highways or other frequented locations, precautions will be taken to ensure public safety. All reasonable actions will be taken to ensure that trees posing a potential hazard are not retained where the public's safety is remotely at risk.

Appropriate signage will be used, traffic controllers will be employed when necessary, and operation's employees will be trained in safety and educated as to potential risks involving the public.

Additionally, timber close to town may contain hazardous materials such as nails or spikes stemming from such activities as past construction, signage or children's fort building. Workers will be aware of this danger and timber will be appropriately scanned for metal materials.

5.0 RESOURCE INVENTORIES

Spatially accurate and detailed resource inventories are critical to sustainable forest management. To properly manage the community forest landbase, the CPG's community forest managers need to know what resources they have – timber and non-timber - how much they have, where those resources are, and how they are distributed across the landscape. It is also pertinent that the resource information remains up-to-date.

5.1 CURRENT INVENTORIES

The City of Prince George realizes that good quality resource inventory is a component of sustainable management, which is pertinent to a long-term tenure. Existing inventories for the City of Prince George are described below.

5.1.1 Vegetation Resource Inventory Data

A Vegetation Resources Inventory (VRI) was completed for the City of Prince George in 2004. A VRI is a two-phased, photo-based, vegetation inventory technique that is guided by standards and procedures set by the provincial Resources Inventory Standards Committee (RISC). Photo interpretation takes place in phase one, followed by a ground sampling exercise in phase two. Vegetation Resource Inventory Data depicts where resources are located and provides an indication of how much of a particular resource is within an inventory unit. For example the VRI for the Prince George Community Forest can be queried to determine where stands of lodgepole pine are located and determine what volume is contained within those stands.

5.1.2 Lodgepole pine forests within city limits

As described in the above example, in 2004 the City's 2003 25cm colour aerial photography, supplemented with the VRI, was used to create an inventory of lodgepole pine within the City limits in order to determine the potential impact imposed by the mountain pine beetle outbreak.

5.1.3 Distance of forest stands to roads, trails, water and terrain steepness

The ability to act quickly and suppress a wildfire is dependent on numerous factors, including accessibility, terrain characteristics, and the availability of suppression resources. A GIS based exercise was used to determine wildland/urban interface areas' proximity to roads and to water sources and steepness of terrain. These factors influence initial attack time, and this inventory provides a basis for allocating resources and planning how to respond to a wildfire - should one occur - in a given area.

5.1.4 Sensitive habitat features

The *Official Community Plan* for Prince George identifies several habitat features that are considered to be sensitive to development. Included in these features are, ungulate and waterfowl habitat and sensitive slope inventories. These habitat features were inventoried in 2000. Average slope and sensitive slope data were derived from the City's digital elevation model.

5.1.5 Land Ownership

The ownership information for Prince George includes the following classifications:

- § School property areas;
- § Parks;
- § Municipal boundary;
- § Municipal owned areas;
- § Non-municipal owned land (including private); and
- § Crown land.

5.1.6 Prince George fire interface hazard

The *Wildland/Urban Interface Wildfire Management Strategy* was completed and submitted to the City of Prince George in 2005. The foundation of the strategy was the proximity of wildlands to residential and commercial areas/infrastructure. An inventory of forested stands in close proximity to urban areas was completed so that priority could be assigned to areas that required fuel treatment.

5.1.7 Long range land use planning areas and types

The City of Prince George has a prosperous and astute vision for the community. Long range planning based on particular types of land use is necessary to guide prospective development and allocate parcels of land toward their 'best' use.

5.2 FUTURE INVENTORIES

The level of inventory required for the Community Forest of Prince George will be determined by the various capabilities of the forest and non-forest resources, the level of use of the resources, and the types of decisions related to the use of the resources. The CPG is committed to maintaining current resource inventories. Up-to-date inventories will assist with reporting requirements and provide a mechanism for monitoring progress toward creating fire-safe interface zones.

6.0 TIMBER SUPPLY ANALYSIS

At the time the City of Prince George was invited to apply for a community forest licence the Minister of Forests offered an allowable annual cut (AAC) of 12,000 m³/yr. During the preparation of the application, Timberline Forest Inventory Consultants was contracted to assess this AAC against the priority setting of the *Wildland/Urban Interface Wildfire*

Management Strategy. This analysis found that there are 528,000 m³ of coniferous volume in stands currently classified as having either VERY HIGH or HIGH fire hazard rating. The following describes the methods and rationale used to explore an AAC that would meet the community forest's primary goal.

Timber supply analysis is the process of assessing the rate of harvest that an area can support over a particular period of time. Provincially, timber supply analysis is generally conducted using a timber supply model that projects a sustainable harvest over a number of years (generally 250+ years) while considering estimates of stand growth, and the preservation of non-timber values. Timber supply analysis is one of many inputs that go into the determination of provincial AAC.

A timber supply analysis was conducted as part of the original PCFA application. Based on the short-term objectives of the CPG, and consultation with Ministry of Forest and Range (Branch, Regional and District) staff, this timber supply analysis is focused on assessing the level of cut required to adequately meet these objectives and as such, an "inventory assessment" approach to timber supply analysis was taken as opposed to a model-based analysis.

A number of factors were considered in exploring an AAC for this CFA including:

1. The area identified as having a high and very high fire hazard rating on crown lands within the city limits and the estimated volume in these stands;
2. The amount of area currently or likely to soon be infested with mountain pine beetle and the estimated volume of lodgepole pine on these stands; and
3. The AAC proposed for the PCFA will not impact the AAC of the Prince George Timber Supply Area.

Timber supply for the Crown and municipal lands within the City of Prince George was assessed by combining the layers of inventory information listed in Section 4.0 above into a single, spatially explicit resultant database. Using this database the area of crown forest that is available for treatment was defined by removing areas identified as either non-forested or non-productive forest based on the type identity attribute from the VRI. The area remaining is classified as Crown productive forest and is available for treatment. Table 4 shows the area removed as non-forested and non-productive from each of the Crown and municipal lands. In total there is potentially as much as 848,000m³ million m³ of merchantable volume currently existing on 4,879 ha of Crown productive forest. It is assumed that deciduous volume will be retained wherever possible in order to maintain aesthetics and due to its capacity for reduced fire hazard.

Table 3: Area of Crown and municipal land and associated inventory volumes.

Land Classification	Area (ha)	Total Merchantable Conifer Volume (m ³)
Total Crown	5,443	
Crown Non-Forested	543	
Crown Non-Productive	20	
Crown Productive Forest	4,879	848,147
Total Municipal	1,077	
Municipal Non-Forested	204	
Municipal Non-Productive	0	
Municipal Productive Forest	873	90,594

The distribution of the Crown productive forest volume by species group and fire hazard rating is presented in Figure 6.

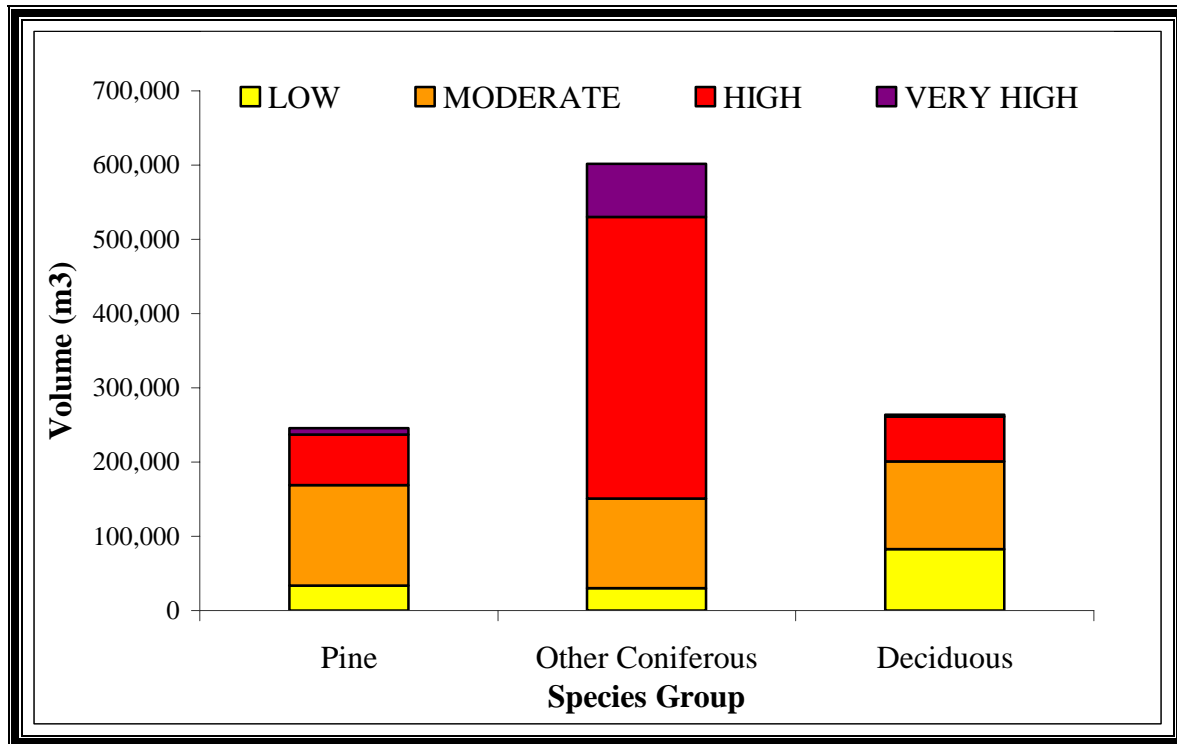


Figure 6: Distribution of volume by species and fire hazard rating

Table 5 provides a breakdown of the areas and volumes shown in Table 4 and Figure 6. A more detailed breakdown is included in Appendix 6. There is approximately 528,000 m³ of coniferous volume on Crown land within the city limits identified as having either a HIGH (446,990 m³) or VERY HIGH (81,227 m³) fire hazard rating. It is anticipated that fire hazard abatement treatments will utilize a partial retention-type prescription whereby between 40% and 60% of the existing volume will be retained. This will vary depending on species

composition, site specific hazard abatement objectives and most significantly, the proportion of dead lodgepole pine in the stand.

In addition to overall fire hazard abatement there is an additional 168,661 m³ of lodgepole pine volume that exists on areas with a LOW and MODERATE fire hazard rating. Many of these stands have already been killed by MPB. Those that have not been killed have a high likelihood of being killed in the next five years.

Table 4: Fire hazard area and volume summary – Crown land

Total Volume within Fire Hazard Rating	Productive Forest Area (ha)	Lodgepole Pine Volume (m ³)	Other Conifer Volume (m ³)	Deciduous Volume (m ³)	Total Volume (m ³)
VERY HIGH	265	8,999	72,228	2,693	83,919
HIGH	1,954	68,082	378,908	59,792	506,783
MODERATE	1,767	135,205	120,732	118,112	374,049
LOW	894	33,456	30,537	82,984	146,977
CROWN LAND	4,879	245,742	602,405	263,581	1,111,728

Municipal lands although not governed by the tenure agreement will be managed within the same organizational structure as the Crown lands within the PCFA and therefore, will affect the amount of volume on Crown land that the CPG can reasonably administer and manage. Table 6 shows a similar summary for the municipal lands within the city limits. (Appendix 6 contains a more detailed breakdown). Treatment of municipal lands to date has been focused on the areas with greatest fire hazard and the removal of MPB-killed trees. It is anticipated that this strategy will continue throughout the initial five-year term of this PCFA.

Table 5: Fire hazard area and volume summary – Municipal land

Total Volume within Fire Hazard Rating	Productive Forest Area (ha)	Lodgepole Pine Volume (m ³)	Other Conifer Volume (m ³)	Deciduous Volume (m ³)	Total Volume (m ³)
VERY HIGH	73	2,529	13,644	2,236	18,409
HIGH	204	8,662	23,511	8,559	40,732
MODERATE	335	15,158	17,783	15,969	48,911
LOW	261	4,762	4,545	20,454	29,762
MUNICIPAL LAND	873	31,112	59,483	47,219	137,813

6.1 ALLOWABLE ANNUAL CUT

Resource analysis, while used to explore a potential AAC is also used to understand the quantity and characteristics of the timber inventory present on a given landbase. The above analysis provides detailed information on the current status of the timber resource on both Crown and municipal lands in the PCFA area.

Based on the following factors an AAC of **12,000m³/yr** was been awarded to the PCFA:

1. The estimated cost of treatment of these stands to reduce fire hazard;
2. The safety of Prince George residents;
3. The amount of annual volume that the CPG can logistically administer and manage within the scope of its current resources; and
4. Limited lands within the PCFA will be allocated toward a treaty settlement with the Lheidli T'enneh.

The allotted volume will be harvested over the next five years. The cut will be focused on treating the areas that pose the greatest interface fire hazard. Approximately 40,000 m³ will be directed at treating all of the VERY HIGH hazard areas. The remaining 20,000 m³ will be focused on treating the HIGH hazard areas that pose the greatest risk to public safety.

The CPG has made a commitment to the community of Prince George to use the timber harvest to mitigate interface fire hazard. Reducing fuel loading and modifying stand structure to reduce fire hazard will achieve this goal. As the PCFA begins operations it will work with the provincial government to develop a strategy to continue addressing the fire hazard abatement and mountain pine beetle management that the current AAC is unable to address. Potential options include a temporary uplift in AAC for the proposed tenure, the issuance of additional tenure to the PCFA (i.e. licence to cut), or the incorporation of these objectives into an application for a long-term community forest tenure.

7.0 COMMUNITY FOREST MANAGEMENT

The management objectives in the near term and for the current community forest land base are intended to guide us toward our primary goal of reducing the interface fire hazard. It is through planning and operations that the PCFA wishes to demonstrate the best possible forestry practices appropriate to the community, the environment (ecology) and the economy.

7.1 WILDLAND/URBAN INTERFACE MANAGEMENT

Wildfire is a fundamental and natural process in our forested ecosystems. Challenges created in the wildland-urban interface relate to changing biodiversity, wildfire protection and mitigation, invasive species movement, and increased forest fragmentation, among others. The mountain pine beetle infestation has exacerbated the fuel loading within our interface zones; without minimizing the importance of the other urban interface issues, the critical problem of potential fire in the interface was chosen to be the primary objective of the community forest tenure. While the risk of wildfire cannot be eliminated, effective preparation in fire-prone areas can reduce fire behavior potential. *The Prince George Wildland Interface Wildfire Management Strategy* will be used to guide treatment prescriptions, and monitoring and maintenance scheduling within the community forest respective of other identified values.

7.2 TIMBER RESOURCE MANAGEMENT

As discussed in Section 4.0 above, the approved AAC for the community forest is currently 12,000m³/yr over the next 5 years and will be harvested at the rate in Table 7. Key assumptions of the rationale that determined the AAC were that:

1. Harvest would be focused on treating the very high and high fire hazard areas.
2. Partial cutting would be utilized in the majority of blocks.
3. Harvest would not be sustainable for the current area or goal (s).
4. The net operable Crown land base is 4,879 ha.
5. Live lodgepole pine would continue to be attacked and killed by mountain pine beetle.
6. Costs associated with fire fighting outweigh the costs of forest fuel reduction treatments.

Table 6: Proposed AAC (m³/yr) for Crown land and the anticipated cut (m³/yr) from municipal land.

	2006	2007	2008	2009	2010
Total Crown	20,000	10,000	10,000	10,000	10,000
Total Municipal	2,000	5,750	5,750	5,750	5,750

Due to the urgency of the wildland/urban interface issue, the actual harvest is expected to vary considerably, especially in the first 2 years of operation.

7.3 PUBLIC EDUCATION

The CPG realizes that the undertaking of fuel treatment in close proximity to residents and infrastructure requires good communication and effective public education. The CPG will strive to inform the public of activities, and to involve the public whenever possible.

Our duty to inform the public is included in our commitment to consult with the residents of Prince George. As discussed in Section 3.0 above, local newspapers, and our website will be common venues for broad information dissemination. Appropriate signage and other necessary safety precautions will be used for site specific notification (such as leaflets delivered to residents in areas where harvesting is scheduled to take place).

Direct community involvement will be sought for public forums and activities like reforestation, as mentioned previously.

In addition to general public education, partnering with the College of New Caledonia and the University of Northern British Columbia will be promoted where feasible to explore research prospects and facilitate educational and training opportunities.

7.3.1 Operations

All forestry operations are governed by the Forest and Range Practices Act and the regulations. Site Plans and harvesting operations will be carried out in accordance with the goals and strategies in our Forest Stewardship Plan, this management plan and our *Wildland/Urban Interface Wildfire Management Strategy*. The PGCF will also acquire and utilize pertinent information from additional sources when necessary in order to achieve the highest quality stewardship possible. For example, in order to conserve an identified value, species specific knowledge may be required at a particular site.

The CPG will hire contractors to develop Site Plans and to carry out harvesting activities. Site Plans will be developed by qualified professions and will address the primary objective of mitigating fire hazard. This will be accomplished through a competitive bidding process whereby contractors are invited to bid on specific tender packages which includes the sale of timber with the harvest. The tender process will be guided by the City's *Purchasing and Disposition Policy* (#070402)⁵. Qualified contractors (consultants) will be responsible for Site Plans and cutting permits in accordance with the fore mentioned legislation and management plans. An appropriate registered professional will review potential contractors' qualifications.

7.3.2 Harvesting

As mentioned in Section 1.4.2, the City of Prince George (Development Services Department) previously retained local consultants to carry out small scale sanitation treatments in the City on municipal lands. The harvesting systems used for these treatments involved small, low impact ground based equipment (Figure 7). These particular ground based systems have an ecologic advantage considering the mild topography in and around the town site, and providing they remain economically viable, they will continue to be used where appropriate. In the event that this method is limited by sensitive terrain or slope, the options to discontinue harvesting or seek alternative methods will be reviewed. In order to realize economies of scale, and remain economically conscious, harvesting that takes place

⁵ http://www.city.pg.bc.ca/cityhall/policies/purchasing_policy.pdf - accessed January 10, 2006.

away from the residential and commercial areas may employ more traditional ground based systems. Harvesting will take place during the appropriate winter months and during summer months when the ground is conducive to logging.



Figure 7: Harvesting operations in Rainbow Park during the summer of 2005.

The high number of dead and dying lodgepole pine trees within the community forest boundary will be addressed throughout the PCFA area. Treatments will consist of partial retention, or where necessary, clearcut with reserves harvesting systems that minimize the impact of the loss of mature forest cover in visually sensitive areas, and to private property values.

Site specific fuel treatment has been identified as one of the most effective way to reduce the fuel loading in interface areas while maintaining biodiversity, habitat structure, visual quality, and in some instances retaining a “stocked” stand. Additionally, these systems minimize the impact of the loss to private property values. Commercial thinning may also be an option, which will be identified at the stand level during reconnaissance surveys, and subsequently in Site Plans.

No single retention strategy is appropriate for all sites, but where appropriate, harvesting will aim to protect suitable, healthy residual trees and advanced regeneration. Currently our goals include removing the mature lodgepole pine component of a stand, and then examining the resulting density and species composition to determine further tree removal. Retention will be mindful of wildlife tree potential with a focus on non-pine conifers, deciduous trees, and quality seedlings and saplings. A certified Wildlife/Danger Tree Assessor will inspect potentially dangerous trees.

7.3.3 Waste management

Debris piles are typically burned after logging operations and prior to planting. This method, due to the potential of fire escapement, as well as smoke pollution and airborne particulates, cannot be used within the City limits. To date, debris removal has been a function of diameter. Debris that is less than 3 inches in diameter has been trucked to the local landfill and composted. Debris that is greater than 3 inches in diameter must be chipped prior to

delivering it to the compost site. A portion of the debris that is chipped is spread back over the harvested site as mulch, which will break down over time, returning nutrients to the soil.

Future considerations for waste management include the use of debris as an energy source in a biomass program.

7.3.4 Seed and Seedlings

Seed and seedling acquisition will be carried out in compliance with Section 169 of the *Forest and Range Practices Act* (FRPA), which establishes the Chief Forester's Standards for Seed Use; effective April 1, 2005. These standards outline the requirements for utilizing tree seed when reforesting Crown land in British Columbia. These standards include the requirements for registering, storing, selecting and transferring tree seed used to establish free growing stands.

For the first few years of operation, the Prince George Community Forest will purchase sufficient seed to supply the projected seedling requirements; seedlings will be grown under contract by private nurseries. Local licensees and nurseries have in the past demonstrated a willingness to contribute to the City of Prince George's reforestation program and may continue to do so. In the future, the CPG will however establish the correct mechanisms for collecting, registering and storing tree seed.

7.3.5 Reforestation

The typical purpose of a silviculture program is to promptly reforest harvested sites to produce desired crop trees within specific time frames. The purpose of the PGCFA however is not the production of timber. A proactive approach to future pest outbreaks includes creating mixed species stands; fire prevention techniques consist of decreasing the number of stems per hectare in a stand as well as incorporating a deciduous component. Therefore, alternative stocking standards for the Community Forest are contained within the FSP.

The most unique provision in these alternative standards is an increased stand composition of deciduous trees. In order to reduce the fire hazard in interface areas, the stocking standards include a deciduous component. Deciduous species have been identified as less flammable than coniferous trees. Living deciduous leaves tend to have higher moisture content than conifer leaves. Paper birch, trembling aspen and black cottonwood have been identified as acceptable species, and in some instances preferred species for retention and restocking. Figure 8 provides examples of existing mixed deciduous/coniferous landscapes in close proximity to downtown Prince George.

Density requirements in interface zones may be lowered in order to assist with limiting fuel loading in the urban interface zones.

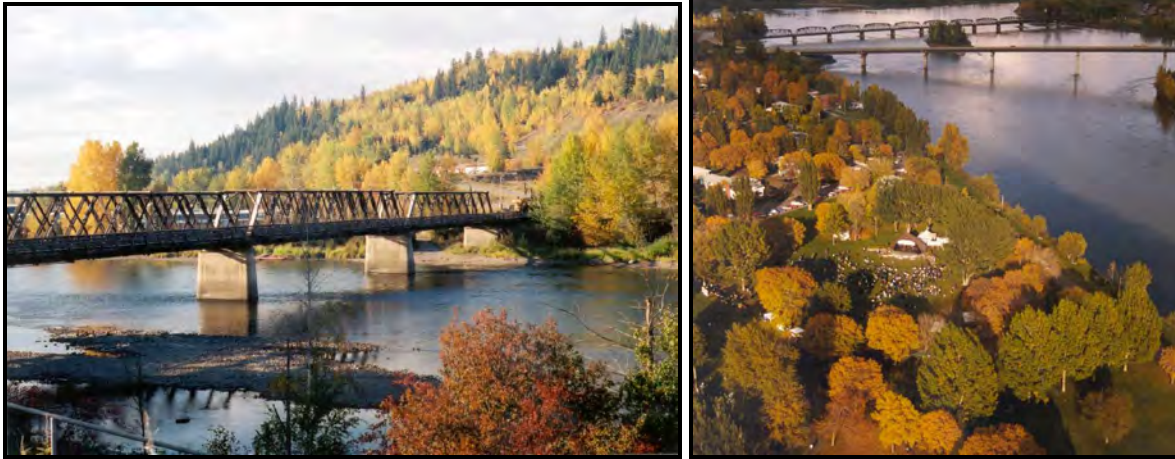


Figure 8: View of the Cameron Street Bridge and overlooking Fort George Park.

The objectives of our planting prescriptions are to remain cognizant of the following:

- § Reduction of wildfire potential in the wildland/urban interface;
- § Ecologic appropriateness of planting stock including forest health concerns;
- § Density and species composition of post harvest retention;
- § Habitat potential; and
- § Visual quality.

Site preparation is not an anticipated activity. Should it be necessary however to ensure the establishment and subsequent growth of planted stock, the most appropriate form of site preparation will be identified in the Site Plans.

7.3.6 Forest Health

Various disease and pest agents affect all forest ecosystems. At endemic levels, these agents can help create habitat, add to biodiversity and return biomass to the nutrient cycle. Pests that are common to the community forest include bark beetles, tissue feeders, defoliators, root diseases and stem rusts. Each agent requires a unique monitoring program, and management regime.

The Community Forest Agreement provides an opportunity to manage forest health and biodiversity issues in a manner consistent with the primary objective of interface fire hazard management. As forest health issues arise, they will be managed in keeping with sound forest management practices for the continued health of the forest. As discussed in prior sections, harvesting and silviculture strategies will, as much as possible, seek to maintain a distribution of seral stages, and stand types across the PCFA area employing alternative practices such as our alternative reforestation standards.

The value of trees within the Community Forest cannot be overstated; they have environmental, social, aesthetic, and economic values. Regardless of the current mountain

pine beetle epidemic, forest health is important. The right trees planted or retained on the right sites and that are properly maintained, are less likely to become stressed and are more resistant to insect pest and disease problems.

Once an area has been harvested and remains ‘stocked’ or has been planted to achieve desired stocking, the health and growth of trees will be monitored through regeneration and reconnaissance surveys. Stand tending treatments will be prescribed as necessary to maintain forest health and interface safety. Fill planting will be prescribed as necessary to meet our planting prescription objectives.

Should control techniques become necessary to handle a particular disease or pest agent they will be conducted in accordance with a plan developed by the CPG. Qualified professionals will be consulted to ensure that best management practices are carried out.

7.3.7 Surveys

Surveys will be used to help maintain forest health and interface safety, and carried out at various stages of a stand’s life. They will be used to assess such factors as post harvest stand condition, seedling establishment, density, species composition, forest health, and wildlife/danger trees.

The following surveys will be conducted as required in accordance with the applicable legislation and regulations:

1. **Reconnaissance Surveys** – “Recces” or walk through surveys may be employed prior to the development of tender packages. These surveys will be used to document site specific details and if necessary to ensure that contractors address identified issues in the Site Plan. Reconnaissance surveys may also be used as a form of monitoring.
2. **Land Title Survey** – Because Crown land in many instances is located immediately adjacent to private land, a land title survey may be required to properly discern the Crown portion. Boundaries will be assessed on a block by block basis, and if deemed necessary a qualified professional land surveyor will be used to determine an accurate boundary prior to harvest operations.
3. **Terrain Stability Field Assessment** – These assessments will be carried out by qualified personal as required in order to *describe the terrain conditions within a proposed cutblock or along a proposed section of road; evaluate the likely effect of timber harvesting or road construction on terrain stability; and recommend site-specific actions to reduce the likelihood of post-harvesting or road-related landslides including a recommendation not to locate or construct trails on areas where the likelihood of a landslide will be significantly increased or there is a moderate or high likelihood of landslide debris entering fish streams or streams in community watersheds, or cause damage to private property or public utilities.*
4. **Post Harvest Survey (~1 plot/ha)** – These surveys may be used to assess residual stand structure, impacts incurred by logging operations, plantable spots and ensure that the Site Plan remains accurate. They may also be used to devise suitable planting programs.

5. **Regeneration Survey (~1 plot/ha)** – These types of surveys will be carried between 1 and 5 years after harvest; they will be used to assess regeneration performance, the establishment of planted stock, the survival and health of residual stock, windthrow occurrences and to prescribe additional silviculture or stand tending needs.
6. **Free Growing Survey** – These surveys will be carried out in accordance with the community forest’s requirements under FRPA to ensure satisfactory tree height, age, species composition, density and health.
7. **Stand-tending Survey** – These types of surveys may be carried out at least 10 years post harvest. They will be used to assess such things as stand structure, species composition and wildlife/danger trees.
8. **Road Survey** – Where roads have been deactivated, surveys may be carried out to ensure the integrity of the deactivated area. Deactivated roads will be assessed to ensure that signage remains intact, and that unwanted erosion is not occurring and that there are no obvious dangers to the public.
9. **Wildlife/Danger Tree Assessment** – While wildlife trees are recognized as a valuable habitat in forest stands, some trees present potential hazards for Prince George residents. A certified Assessor will carry out Wildlife/Danger Tree Assessments post harvest.

NOTE: At such time that the CPG’s Community Forest Agreement is extended, and awarded additional forest land, survey types and their purposes will be reviewed.

7.3.8 Forest Road Systems

Lands adjacent to the Nechako River, Highway 97 north of the Nechako River, and within the bowl area and from the bowl westward to Vanderhoof are well roaded. The balance of the City is sparsely roaded; in particular, lands south of College Heights and west of UNBC. The amount of roading required to carry out the near term community forest objectives is yet to be determined. Road construction however will be kept to a minimum to meet environmental and safety objectives.

Access management

Building (construction of roads and spur roads) or maintaining roaded access will be carried out in accordance with our Forest Stewardship Plan. Our FSP shows how road construction, modification and deactivation will be carried out to protect, or mitigate impacts on known resources or sensitive areas while maximizing the efficacy of forest resource development.

8.0 PROTECTION AND CONSERVATION OF NON-TIMBER RESOURCES

Several non-timber resources have been identified as having particular importance to the residents of Prince George and therefore community forest operations. These resources are discussed in detail below.

8.1 WATER RESOURCES

The City of Prince George is located where the Nechako and Fraser Rivers merge; many smaller streams, lakes and wetlands are found within the Community Forest boundary. These aquatic resources and their adjacent riparian areas host important habitat and biological richness. The CPG has the following objectives relating to the maintenance of aquatic and riparian integrity:

- § identify and classify the resource in Site Plans;
- § protect fish habitat where it exists;
- § preserve stream bank stability, and
- § prevent sedimentation and erosion from occurring as a result of forestry operations.

8.2 BOTANICALS

The role of botanical forest products will be assessed prior to applying for a long-term community forest agreement to determine options and resource potential.

8.3 RECREATION

Prince George residents have identified recreation as the number one priority for maintenance and for future development. Activities in which residents partake include cross-country skiing, hiking (walking), running, bicycling, sightseeing, canoeing, and picnicking. The CPG is committed to recognizing areas of interest to the community and undertaking opportunities to enhance recreation where possible. Forest management planning will also respect existing community recreational areas, by minimizing interference as much as possible to these areas.

Numerous recreation features exist within the PCFA boundary, some of which are on Crown lands. These include the Otway Ski Centre, the Cranbrook Hill Greenway Trail, Forests for the World, the McMillan Creek Regional Park and Moore's Meadow Park. The Otway Ski Centre, the Greenway Trail, and parts of Forests for the World are under lease to the City of Prince George from the Crown. The land is subsequently subleased to the organization. Other favorite municipal destination parks include Cottonwood Island, Connaught Hill, Fort George, and Rainbow. The City's website hosts a complete list of [Prince George parks](#) and their locations as well as pertinent [Bylaws](#) to the use of parks and other relevant activities such as animal control.

The mountain pine beetle has impacted local area parks and recreation destinations by killing many valuable lodgepole pine trees, which provided among other things, aesthetic value, bird habitat, shelter and privacy. The City has been and will continue to be committed to addressing this issue by removing beetle killed trees, retaining healthy understory vegetation and seedlings and reforesting with new trees. By managing in this manner, it is hoped that the impacts from the mountain pine beetle in local area parks and recreation sites will be short

lived, and these ecosystems will continue to provide positive outdoor opportunities to Prince George residents and visitors.

8.4 VISUAL

The forests in Prince George and surrounding area provide a scenic quality that is valued by residents. The CPG anticipates that the use of partial cut harvesting systems and the establishment of mixed species stands will assist with maintaining or improving the visual resource value.

8.5 WILDLIFE AND BIOLOGICAL DIVERSITY

Wildlife habitat conservation is a community-identified priority. Wildlife habitat issues in the community forest will be managed with the unique ecological and environmental principles in mind that are consistent with an urban interface area. In many cases, wildlife habitat management will be very different in an interface area, than in wildland forest resources management. The health and safety of wildlife close to the City of Prince George is near and dear to the hearts of residents. The CPG will strive to maintain good wildlife trees and stand structure while at the same time designing safe and effective urban interface zones.

8.6 AIR QUALITY

The CPG is committed to maintaining air quality; a new [Clean Air Bylaw](#) has been in effect since 2005. This Bylaw deals with air quality matters such as open burning, wood burning appliances, recreational burning, and dust control. Additionally, the City of Prince George and its partners created an Anti-idling Program to “meet their environmental objectives in the areas of greenhouse gas emission reduction, smog control, energy use conservation, noise reduction and efficient resource use.” The CPG endorses this endeavor, and aims to participate actively.

Consistent with the City’s commitment to clean air quality, the decision to not burn logging debris has been made as this activity has the potential to create unwanted and unnecessary air pollution. Chipping logging debris and spreading a portion of it back over the landbase and/or chipping and composting it can make better use of this resource. Eventually being able to incorporate a portion of the logging debris into a biomass/biosolid program would increase the utilization of this resource.

9.0 MONITORING AND REPORTING

9.1 REQUIREMENTS FOR A PROBATIONARY AGREEMENT

The licence holder of a Community Forest Agreement has reporting obligations to the Provincial government. The main objectives for monitoring PCFAs are to:

1. Determine whether a PCFA will be extended, replaced with a long term CFA, or would expire at the end of the probationary term.
2. Assist the PCFA holder in monitoring their accomplishments and identifying areas of improvement.
3. Assist the government in measuring the success of its commitment toward community forests province wide.

Assessment criteria are defined by the Ministry of Forests and Range's Community Forest Agreement Program (October 2004). The first assessment report will be due approximately halfway through the probationary term of five years. In addition to the standard reporting requirements, the CPG will report on its progress toward meeting the wildland/urban interface goal, and on any contributions that it makes to the community.

9.2 MONITORING AND EVALUATION – CONTINUOUS IMPROVEMENT

Planning is closely linked to monitoring and adaptive management. The CPG will undertake strategic planning on a continuous basis. Documentation processes for all community forest related activities will be developed.

The Prince George Community Forest is committed to attaining its primary goal. Treatment priorities have been identified in the *Wildland/Urban Interface Wildfire Management Strategy*. Progress toward meeting wildfire hazard reduction will be tracked through the amount of high and very high fire hazards area treated and volume removed.

Through the use of established standard operating procedures, the CPG community forest operations will be routinely assessed to ensure that best management practices are being followed to achieve safety goals and environmental stewardship.

Contributions to the community such as the addition or improvement of recreation trails will be reported on case by case.

Community input/concerns/feedback can be tracked through the City Service Centre and the community forest website as well as through attendance at open houses and participation in surveys and community forest activities.

10.0 FUTURE PLANNING/DIRECTION

As implied in various sections of this management plan, there are several priority objectives for future initiatives. These include educational opportunities (research and training), community involvement programs, creation of partnerships, and the exploration of biomass as an energy source.

10.1 PARTNERSHIPS

Educational opportunities can be created through negotiated partnerships with the College of New Caledonia, Forest Technology Program; the University of British Columbia, Natural Resources and Environmental Studies; and School District 57's Careers program. Two of these institutions offer instruction in forest resources management as well as wildlife management (UNBC). High school students could gain valuable work experience prior to making long-term career and educational decisions. The presence of a functional community forest in close proximity to these educational facilities would be beneficial to students, instructors and researchers alike. Partnerships with the local college and university may also provide tangible opportunities to incorporate sound science into operational plans that will in turn enhance the future of the community forest. There may also be opportunities for cooperation on work experience and project management.

The CPG is interested in working with other organization such as First Nations and recreation groups to fulfill its primary goal and explore innovative opportunities for the community and the community forest.

10.2 LONG TERM COMMUNITY FOREST AGREEMENT

The first five years will be focused on mitigation of wildfire hazard and the salvage of trees killed by mountain pine beetle. The underlying premise of this resource management plan is that the Probationary Community Forest Agreement will ultimately be extended into a long-term tenure.

The maintenance (sustainability) of fire smart urban interface zones and public safety on Crown land is a long term objective that can only be completely fulfilled through a long term tenure. Additionally, the CPG would like to invest in a community forest that can produce a sustainable harvest. In order to realize this investment, the community forest requires both an extension and additional lands.

With a long-term tenure the CPG can uphold its commitment to wildfire hazard reduction, forest health and public safety. The community forest can then pursue an economically self sustaining CFA, whether it is within or external to the proposed boundary depending upon the location and possibility of additional lands.

In year two of operations, the community forest plans to consider applying to the Province for a longer term tenure and to work with the Ministry of Forests and Range to optimistically locate additional lands.

10.3 BIOMASS/BIOSOLID PROGRAM

Forests produce a highly renewable source of biomass in the form of organic matter – leaves, branches, logs, stumps, twigs etc. Because it is renewable, this biomass can be used as a form of ‘green’ energy.

The community forest can realize the use of biomass as a form of fuel in a number of ways. For example, waste matter (logging debris) is a potential source of material for a biomass/biosolid program. Also, growing plantations of alternative faster growing species, such as aspen or birch (over coniferous species) is another way to produce biomass for fuel. The community forest of Prince George hopes to explore these and other opportunities.

APPENDICES



**APPENDIX I WILDLAND/URBAN INTERFACE WILDFIRE
MANAGEMENT STRATEGY AND MAPS**



**APPENDIX II MUNICIPAL ZONING AND LONG-RANGE LAND USE
OVERVIEW MAPS**



APPENDIX III LANDOWNERSHIP OVERVIEW MAP



APPENDIX IV AGE CLASS DISTRIBUTION MAP



APPENDIX V SPECIES COMPOSITION MAP



**APPENDIX VI TABLE 1 PRIORITY/SPECIES BREAKDOWN CROWN
TABLE 2 PRIORITY/SPECIES BREAKDOWN MUNICIPAL**



Table 1: Fire hazard area and volume summary – Crown land

Fire Hazard Rating	Leading Species	Productive Forest Area (ha)	Lodgepole Pine Volume (m ³)	Other Conifer Volume (m ³)	Deciduous Volume (m ³)	Total Volume (m ³)
VERY HIGH	Sub-Alpine Fir	17	38	3,841	124	4,003
VERY HIGH	Douglas Fir	67	1,181	21,818	396	23,396
VERY HIGH	Lodgepole Pine	14	1,466	528	116	2,110
VERY HIGH	Black Spruce	0	-	2	-	2
VERY HIGH	White Spruce Hybrid	166	6,314	46,038	2,057	54,408
VERY HIGH Total		265	8,999	72,228	2,693	83,919
HIGH	Sub-Alpine Fir	483	4,513	99,181	8,418	112,112
HIGH	Douglas Fir	309	5,104	69,162	9,894	84,159
HIGH	Lodgepole Pine	202	23,775	8,743	6,991	39,508
HIGH	Black Spruce	56	-	6,479	985	7,464
HIGH	White Spruce Hybrid	849	32,798	193,116	27,240	253,154
HIGH	Cottonwood	16	-	337	2,934	3,271
HIGH	Aspen	32	1,862	1,807	2,563	6,233
HIGH	Paper Birch	7	30	84	767	880
HIGH Total		1,954	68,082	378,908	59,792	506,783
MODERATE	Douglas Fir	226	17,507	50,392	2,544	70,443
MODERATE	Lodgepole Pine	550	108,443	35,189	8,054	151,686
MODERATE	White Spruce Hybrid	56	40	6,753	4,718	11,511
MODERATE	Cottonwood	103	-	1,713	20,691	22,403
MODERATE	Aspen	533	6,379	17,776	48,519	72,674
MODERATE	Paper Birch	300	2,836	8,910	33,585	45,331
MODERATE Total		1,767	135,205	120,732	118,112	374,049
LOW	Douglas Fir	27	1,399	4,785	1,055	7,239
LOW	Lodgepole Pine	128	23,798	3,709	1,182	28,690
LOW	White Spruce Hybrid	7	-	854	603	1,456
LOW	Cottonwood	49	-	742	7,037	7,779
LOW	Aspen	433	5,671	12,943	45,442	64,056
LOW	Paper Birch	250	2,588	7,505	27,665	37,757
LOW Total		894	33,456	30,537	82,984	146,977
CROWN LAND Total		4,879	245,742	602,405	263,581	1,111,728

Table 2: Fire hazard area and volume summary – municipal land

Fire Hazard Rating	Leading Species	Productive Forest Area (ha)	Lodgepole Pine Volume (m ³)	Other Conifer Volume (m ³)	Deciduous Volume (m ³)	Total Volume (m ³)
VERY HIGH	Sub-Alpine Fir	24	-	4,151	1,349	5,499
VERY HIGH	Douglas Fir	18	498	3,892	311	4,702
VERY HIGH	Lodgepole Pine	8	1,302	259	192	1,754
VERY HIGH	Black Spruce					
VERY HIGH	White Spruce Hybrid	23	729	5,342	384	6,454
VERY HIGH Total		73	2,529	13,644	2,236	18,409
HIGH	Sub-Alpine Fir	16	-	2,535	1,081	3,616
HIGH	Douglas Fir	20	997	3,834	471	5,302
HIGH	Lodgepole Pine	20	3,180	1,385	474	5,039
HIGH	White Spruce Hybrid	78	2,811	12,771	1,474	17,056
HIGH	Cottonwood	4	53	106	575	735
HIGH	Aspen	46	1,458	2,596	2,531	6,585
HIGH	Paper Birch	19	161	283	1,954	2,398
HIGH Total		204	8,662	23,511	8,559	40,732
MODERATE	Cottonwood	6	35	267	674	977
MODERATE	Aspen	130	1,723	1,291	5,938	8,951
MODERATE	Paper Birch	64	234	1,177	7,635	9,046
MODERATE	Douglas Fir	14	1,221	2,911	203	4,335
MODERATE	Lodgepole Pine	115	11,889	11,887	1,309	25,084
MODERATE	White Spruce Hybrid	5	57	251	210	517
MODERATE Total		335	15,158	17,783	15,969	48,911
LOW	Cottonwood	4	6	216	443	665
LOW	Aspen	160	3,026	2,144	9,325	14,495
LOW	Paper Birch	88	1,001	1,689	10,576	13,266
LOW	Douglas Fir	1	56	158	3	216
LOW	Lodgepole Pine	7	670	319	103	1,091
LOW	White Spruce Hybrid	0	5	19	4	28
LOW Total		261	4,762	4,545	20,454	29,762
MUNICIPAL LAND Total		873	31,112	59,483	47,219	137,813