# Management Plan #3

## Burns Lake Community Forest

## Community Forest Agreement K1A

Submitted: January 31, 2016

| | |
|---|---|
| I certify that I personally prepared or supervised the content of this document in consultation with other professionals and with guidance from the Burns Lake Community Forest Board of Directors to standards acceptable of a Registered Professional Forester. | |
| Gordon E. Lester RPF | Kerry Martin<br>Burns Lake Community Forest |

# Table of Contents

## List of Tables



## List of Figures

## List of Appendices



## Acknowledgements

This Management Plan was developed by Gordon Lester RPF and Karen Gelowitz, under contract to the Burns Lake Community Forest. We would like to thank the following individuals for their support and input into the Management Plan:

- Kerry Martin, Burns Lake Community Forest
- Mike Werrell, Burns Lake Community Forest
- Jim McCormack RFT, Burns Lake Community Forest Board of Directors
- Ron Zayac, Burns Lake Community Forest Board of Directors
- Jim Thrower PhD RPF, Sophostats Data
- Kyle Simpson RPBio, Keystone Wildlife Research
- Keith Simpson RPBio, Keystone Wildlife Research
- Mary Lester RPF, Certes Applied & Natural Sciences

# 1. INTRODUCTION

## 1.1 BACKGROUND

The Burns Lake Community Forest (BLCF) was established in July 2000 when the Ministry of Forests granted Burns Lake Community Forest Ltd. a Pilot Community Forest License that consisted of 23,325 ha of Crown land. This Agreement reflected the values of the community and provided opportunities for the residents.

The BLCF has undergone several expansions since that time and now consists of 92,062.5 ha of Crown Land.

In April 2005 Burns Lake Community Forest Ltd. was awarded a 25-year Community Forest Agreement (designated K1A), the first of its kind in the province. This Agreement was revised and renewed on October 1, 2014 for a further 25 years.[1]

For further details on the history of the BLCF refer to Appendix 1.

The first 15 years we witnessed the rapid expansion of the Community Forest area, the establishment of new partnerships with the First Nations Communities, devastating attacks of the Mountain Pine Beetle (MPB), the explosion and destruction of the local sawmill, and the disbursement of significant funds into the local community through jobs, purchases, profit sharing and donations. Through this time, public involvement and support for the Community Forest has evolved. In the early days of the BLCF, there were lots of opinions of what was needed, what and whose values represented the community, and how those values would be considered. The MPB attack, which started in 1999 and peaked in 2005, produced new challenges as almost all long-term forest management planning was set aside in what became a race to salvage the dead lodgepole pine (Pl) stands and recover the economic value.

Table 1 – BLCF 15 Years of Achievements

| 2000-2015 | |
|---|---|
| Area logged | 11,463 ha |
| MPB wood salvaged | ~2,300,000 $m^3$ |
| # of truckloads MPB salvage | ~49,000 |
| Area planted | 10,730 ha |
| Trees planted | 12,672,905 |
| Millionth tree planted | 2005 |
| 5 millionth tree planted | 2009 |
| 10 millionth tree planted | 2011 |
| Donations to Community | $2,398,214 |
| Backlog NSR | 0 ha |
| Regen delay | 2.6 yrs |
| Employment | 31 FTE (2015) |

A short summary of our key accomplishments in the last 15 years is included in Table 1.

During the period of Management Plan 3, forest management planning will shift again as the transition to the end of shelf-life for the dead Pl occurs. We have committed funding for a new

[1] Ministry of Forest Lands and Natural Resource Operations. Community Forest Agreement K1A. Dated October 1, 2014.

forest management program that will focus “Beyond the Beetle” and work to ensure the BLCF stays financially viable.

The purpose of Management Plan 3 is to identify and propose for approval by the Ministry of Forest Lands and Natural Resource Operations (FLNRO), the management objectives and strategies for achieving these objectives for the timber and non-timber resources within Community Forest Agreement. The objectives of this Management Plan are:

- To outline plans for management of the Community Forest to reflect community and First Nations values.
- To ensure management goals and objectives are consistent with legislated land management requirements and tenure provisions.
- To outline how the Community Forest will be managed to support the 8 objectives of the Provincial Community Forest Agreement Program.
- To outline how the Community Forest will focus on mitigating a shortfall in the mid-term timber supply while ensuring a balance of environmental, cultural and social values, including setting of an Allowable Annual Cut (AAC) that provides the economic returns.

The Management Plan is developed in 3 major sections:

1. Management Objectives and Linkages.
2. Transitioning to the Mid-term (“Beyond the Beetle”).
3. Current Forest Operations.

### *1.1.1 Management Plan 3 Review Process*

During the development of Management Plan 3, we provided the following notification:

- Advertising the Management Plan in the local paper and requesting public and First Nations input.
- Sending letters and information packages to First Nations, local Government, Community Associations, and registered non-timber users of the Community Forest.

For further details, see Appendix 2.

## 1.2 LOCATION AND DESCRIPTION OF BLCF

The Community Forest covers a diverse area of 92,062.5 ha. Centered around the Village of Burns Lake, it extends west to Maxan Lake, north to the Augier Main Road, east to Priestly Hill and south to the north shore of Francois Lake. It is effectively bisected by both Highway 35 (which runs north-south) and Highway 16 (which runs east-west).

The Village of Burns Lake is located in the heart of northern British Columbia, about 222 km west of Prince George on Highway 16. The Village has a diverse population of 3,614 residents and serves a surrounding area of approximately 10,000 residents of the Regional District of

Bulkley-Nechako. With two local First Nations communities located within municipal boundaries, Burns Lake has a strong sense of culture and incredible local talents to showcase.[2]

Tree species on the Community Forest include lodgepole pine (Pl), hybrid spruce (Sx), subalpine fir (Bl), a minor component of Douglas- fir (Fdi) and black spruce (Sb), as well as trembling aspen, cottonwood and birch. Elevation in BLCF ranges from 700 to 1400 meters in the SBSdk, SBSmc2, SBSdw3 and ESSFmc biogeoclimatic subzones.

Wildlife includes moose, mule and white-tailed deer, black and grizzly bear, as well as many other fur-bearing animals. Bird species are diverse and their habitat is provided in the riparian areas, streams and lakes.

Numerous guide outfitters and trappers rely on the landbase for their income.

Outdoor recreational pursuits include skiing, snowmobiling, mountain biking, all-terrain vehicle use, hunting, fishing, boating and hiking.

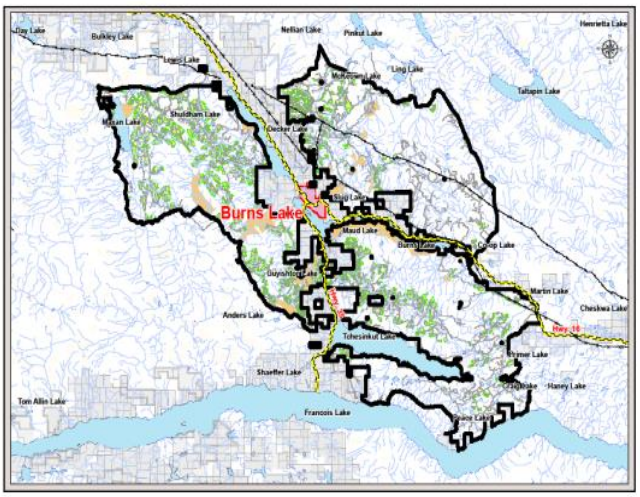



Figure 1 – Map of the Burns Lake Community Forest

### 1.3 First Nations

The Community Forest area overlaps the traditional territories of eight First Nations:

- Wet'suwet'en First Nation
- Office of the Wet'suwet'en Hereditary Chiefs
- Burns Lake Band
- Lake Babine Nation
- Stellat'en First Nation
- Skin Tyee Band
- Yekooche First Nation
- Nee Tahi Buhn Band

For additional information on these First Nations see Appendix 3.

[2] http://office.burnslake.ca/

The Burns Lake Band, the Wet'suwet'en First Nation and the Office of the Wet'suwet'en Hereditary Chiefs are actively involved in the BLCF. The Office of the Wet'suwet'en Hereditary Chiefs was one of the original signatories on the Community Forest Pilot Agreement and both the Wet'suwet'en First Nation and Burns Lake Band contributed tenure to the Community Forest. Each of these three First Nations organizations hold a designated seat on the BLCF Board of Directors.

See Section 3.0 for further information on First Nations and the Community Forest.

### 1.4 LICENSE HOLDER AND ADMINISTRATION

The BLCF is managed by Burns Lake Community Forest Ltd., which is 100% owned by Comfor Management Services Ltd. (CMSL). The Village of Burns Lake is the sole shareholder of CMSL.

Burns Lake Community Forest Ltd. is governed by a six-member Board of Directors, which also sit as the CMSL Board of Directors. CMSL is governed by the Board of Directors and provides accounting and administrative support to Burns Lake Community Forest Ltd.

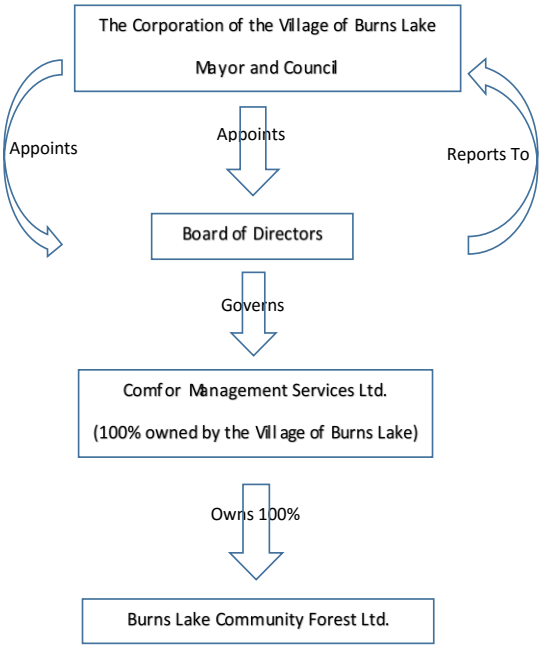



Figure 2 – BLCF Administrative Structure

The CMSL Board of Directors includes 3 reserved seats: (one each) Burns Lake Band, Wet'suwet'en First Nation, and the Office of the Wet'suwet'en Hereditary Chiefs. The other 3 board members are chosen from the community-at-large and appointed by the Village of Burns Lake.

Under the Community Forest Agreement, Burns Lake Community Forest Ltd. agrees to provide the Wet'suwet'en First Nation and the Burns Lake Band each 18% of the after taxes net profit.

BLCF staff manage the day-to-day business and carry out the forest management functions. Harvesting and silviculture activities are generally contracted out to local companies. The goal is to maximize local employment and economic benefit in the community.

Operations, profit-sharing, and community donations are funded through the proceeds of log sales. High priority is placed on sales to local facilities at fair market value.

The public has input through a regularly scheduled annual public meeting, as well as an "open door policy". Public delegations are welcome to attend monthly meetings to make presentations to the Board of Directors. We carry out regular discussions with First Nations, trappers, guide-outfitters, range tenure holders and other stakeholders.

The BLCF lies within the Nadina Forest District and the FLNRO District Office is located in Burns Lake.

## 2. LINKING COMMUNITY VALUES TO MANAGEMENT OF BLCF

Community values and public concerns regarding the BLCF have changed since the inception of the Community Forest in 2000. Management Plan 1 dealt with early community involvement, objective setting and community values. Management Plan 2 addressed the MPB epidemic and salvage program.

Management Plan 3 is intended to address the transition to the era "Beyond the Beetle". This includes the continuation of the salvage program, improving resource inventories, improving communication to the community, expanding First Nations involvement, adapting log sales strategies, developing an operational strategic plan, and defining roles & responsibilities.

The shift in management focus for Management Plan 3 and the era "Beyond the Beetle" has required the Board of Directors to revise their Vision, Mission, and Guiding Principles.[3] The following Vision, Mission Statements and Guiding Principles reflect the changing values of the community, allowing a pathway to link community values to the management of the Community Forest.

### 2.1 BLCF VISION

CMSL will be the top performing community forest in British Columbia:

1. In operating safely and profitably.
2. In providing benefits to the Province, our shareholders, partners, First Nations, and residents of the Lakes Timber Supply Area.
3. In providing opportunities for local employment to residents and First Nations.
4. In increasing forest productivity in an innovative and environmentally sustainable manner.

[3] Vision, Mission, and Guiding Principles amended and approved by the Board of Directors on January 11, 2016.

5. In supporting opportunities for integrated use.
6. In ensuring the public and stakeholders are provided with opportunities for input into how the community forest is managed in an open and transparent manner.

### 2.2 BLCF MISSION STATEMENT

Comfor Management Services Ltd. (CMSL) and subsidiary (Burns Lake Community Forest Ltd.) manage and operate the Community Forest K1A License Agreement in a safe, profitable, and innovative manner that enhances the forest resource while respecting the principles of integrated use, environmental stewardship, and public consultation. The corporation's harvesting, silviculture, and forest management activities provide benefits for the Province of British Columbia, the Village of Burns Lake, First Nations partners, all residents of the Lakes Timber Supply Area, and local and regional wood processing facilities in a sustainable manner.

***Values***

1. *Profitable*
2. *Innovative*
3. *Enhance the forest resource*
4. *Integrated use*
5. *Environmental stewardship*
6. *Public consultation*
7. *Benefits to the Province, Village, First Nations, and residents*

### 2.3 BLCF GUIDING PRINCIPLES

1. Safety will be the highest priority for BLCF, its employees, contractors, and consultants while conducting work for and on behalf of BLCF. In addition, the safety of the public will be paramount within the BLCF tenure area.
2. BLCF will pursue opportunities to realize the best return from timber harvesting, provide sufficient revenue to pay for management of the CF and provide a financial return to the Province, shareholders, stakeholders, and the community.
3. BLCF, in conducting its communication, planning, operational, and silviculture activities, will seek innovative approaches and solutions to these activities.
4. BLCF will strive to continually enhance all forest resources, including timber, wildlife, cultural recreational, aquatic, and aesthetic within the community forest area.
5. BLCF, while conducting its activities, will strive to consider and incorporate other forest uses within the community forest area.
6. BLCF will incorporate sound science-based information recommendations in its forest management activities.
7. The province, First Nations, local governments, stakeholders and the community will be consulted regarding proposed activities within the community forest area.
8. Taxes, royalties, rents, disbursements, donations, and other benefits will be distributed to the province, local government, shareholders, stakeholders, and the community from

the profits generated from the community forest. Goods, labour, and services will be sourced from the local area to the extent it is available and cost effective to do so.

## 2.4 ROLES & RESPONSIBILITIES

| Position | Responsibilities |
|---|---|
| Board of Directors | • Develop Vision, Mission Statement, and Guiding Principles for the BLCF. These statements will reflect the community's values and will be revised as values and management issues shift. |
| Operations Manager | • Ensure that all operations on the BLCF are consistent with the Vision, Mission, and Guiding Principles.<br>• Communicate these statements and values to all staff and contractors working on the BLCF. |
| Community Forest Staff | • Understand the BLCF Vision, Mission and Guiding Principles and their role in supporting these statements.<br>• Communicate these statements and values to contractors/consultants working on the Community Forest and the general public. |
| Contractors/Consultants | • Understand the BLCF Vision, Mission and Guiding Principles and implement them as requested. |

## 2.5 LINKAGE OF PROVINCIAL COMMUNITY FOREST PROGRAM OBJECTIVES TO MANAGEMENT OBJECTIVES AND STRATEGIES

FLNRO provides direction to Community Forests by establishing 8 Community Forest Program Objectives. Section 6.02(i) of the Community Forest Agreement states that we will develop management objectives based on these Provincial objectives. The Provincial objectives are:

1. Provide long-term opportunities for achieving a range of community objectives, values and priorities.
2. Diversify the use of and benefits derived from the Community Forest Agreement area.
3. Provide social and economic benefits to British Columbia.
4. Undertake community forestry [economic, social, & ecological] consistent with sound principles of environmental stewardship that reflects a broad spectrum of [BLCF] values
5. Promote community involvement and participation.
6. Promote communication and strengthen relationships between Aboriginal and non-Aboriginal communities and persons.
7. Foster innovation.
8. Advocate forest worker safety.

Table 2 outlines how we will work to achieve the Community Forest Program objectives. For each Community Forest Program objectives, we have outlined the BLCF higher level objectives and strategies to be used to achieve these objectives.

Table 2 – Provincial Community Forest Objectives and BLCF Objectives & Strategies

| **Provincial Community Forest Management Objectives** | **BLCF Management Objectives and Legal Requirements** | **BLCF Operational Programs and Strategies** |
|---|---|---|
| 1. Provide long-term opportunities for achieving a range of community objectives, values and priorities. | | |
| ***BLCF Values*** | | |
| Safety | • Ensure all activities on the BLCF are undertaken in safe and secure manner. | • Encourage all contractors and consultants working on behalf of the BLCF to be SAFE Certified. In cases where they are not SAFE Certified, BLCF will conduct assessments of the company's safety program prior to commencement of work.<br>• Maintain a safety program for company employees.<br>• Ensure all active roads are signed and road channels are clearly marked.<br>• Ensure all "active hauling" signs are kept current.<br>• Incorporate an "active hauling" warning on the BLCF website. |
| Profitable | • Manage the Community Forest in a manner to produce a continuous flow of logs and revise the harvesting strategies as necessary due to changing operating conditions. | • Revise the harvesting and marketing strategy for the era when harvesting priorities will shift away from salvage.<br>• Explore new market opportunities for sawlogs, bioenergy fibre, and pulp logs.<br>• Continue to use an annual operational plan.<br>• Develop and revise 5 and 10 year plans based on information from a spatially explicit forest estate modelling tool such as Patchworks. |
| Innovative | • Develop a more complete and current set of indicator species to identify options to meet biodiversity objectives.<br>• Modify silviculture regimes to address forest management changes in the Community Forest.<br>• Explore utilization of the deciduous timber resource.<br>• Support implementing the FireSmart program in the community, in conjunction with the provincial, regional, local governments and First Nations.<br>• Improve the quality of resource management inventories.<br>• Explore options to improve market opportunities. | • Complete wildlife habitat modeling to examine different management options.<br>• Assess the impact of MPB attack on biodiversity.<br>• Identify areas with the highest biodiversity value or potential to focus protection and recovery programs.<br>• Identify options to enhance resources valued by the community.<br>• Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program.<br>• Develop silviculture regimes to include:<br>  ○ understory protection harvesting;<br>  ○ climate change;<br>  ○ forest health factors; and<br>  ○ non-timber values.<br>• Utilize the deciduous timber resource to meet timber and non-timber values. |

| Provincial Community Forest Management Objectives | BLCF Management Objectives and Legal Requirements | BLCF Operational Programs and Strategies |
|---|---|---|
| | | • Use improved data such as LiDAR for operational planning and to improve inventory information.<br>• Build analytical forest-level tools to design a secondary salvage program and a fibre value model for marketing. |
| Enhance the forest resource | • Maintain a basic silviculture program that complies with forest legislation and ensures prompt and appropriate restocking of productive forestland.<br>• Modify silviculture regimes to address forest management changes in the Community Forest.<br>• Complete a MPB Mitigation Plan for the Community Forest. | • Propose silviculture regimes to include understory protection harvesting and:<br>  ○ Undertake a demonstration area or trial area to test the regimes.<br>  ○ Identify candidate stands for understory protection harvesting and undertake sensitivity analysis to determine the impacts on the timber supply.<br>  ○ Pending successful conclusion of understory protection trials and sensitivity analyses, undertake understory protection logging of candidate stands.<br>• Propose silviculture regimes to address non-timber values.<br>• Implement the MPB mitigation plan for the Community Forest.<br>• Undertake treatments on free growing stands that increase forest growth, reduce losses to pests and diseases, and/or improve timber quality in the future.<br>• Take advantage of external funding for enhanced silviculture programs such as fertilization, improved resource inventories, or ecosystem restoration. |
| Integrated use | • Have a strong commitment to managing land for all resource values.<br>• Consult with other licensed users and First Nations during planning and operations within BLCF.<br>• Use visual landscape planning principles and design in harvest planning.<br>• BLCF will ensure public recreational access is maintained | • Consult with other forest users during operational planning and consider their needs. These users include guide outfitters, trappers, range tenure holders, mining tenure holders, and outdoor recreational users.<br>• Provide maps and engage with active trappers and guide outfitters on the planned annual activities prior to September 1st of each year.<br>• Explore alternative visual landscape planning approaches and update the visual landscape database.<br>• Explore developing a new web-based tool to improve the maps and resource information provided to the recreational users and the public by the BLCF.<br>• Continue to support local organizations in maintaining and improving recreation sites, trails and access. |
| Environmental stewardship | • Given the impact of forest health factors, use forest management and harvest planning strategies that will sustain the long term productivity of the working forest | • Encourage diversity of tree species and age classes across the landscape. |

| **Provincial Community Forest Management Objectives** | **BLCF Management Objectives and Legal Requirements** | **BLCF Operational Programs and Strategies** |
|---|---|---|
| | while minimizing impact on non-timber resources including fish, wildlife, recreation, biological diversity, wilderness and water.<br>• Protect biological diversity on the BLCF.<br>• Explore ecosystem restoration in areas impacted by the MPB.<br>• Explore alternative approaches to meet environmental protection.<br>• Define biodiversity objectives that are both consistent with regional plans but specific to the BLCF boundaries taking into consideration the impacts of the MPB. | • Explore funding sources and implementation of ecosystem restoration in areas impacted by the MPB.<br>• Improve the use of PEM in forest management planning.<br>• Improve stream inventory and classification.<br>• Complete wildlife habitat modeling for important species and modeling of rare and sensitive ecosystems for use in forest management.<br>• Support a fire management plan in the urban interface area (FireSmart) in conjunction with local government, First Nations, and the Wildfire Management Branch.<br>• Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program<br>• Identify options to meet biodiversity objectives “Beyond the Beetle”.<br>• Classify area best able to meet biodiversity objectives using ecological mapping, wildlife habitat modeling, and updated forest inventories. |
| Public consultation | • Improve **communication** to the public by providing open and accessible information regarding the management and operations of the Community Forest.<br>• Continue to improve and provide **consultation** opportunities to the public on the management and operations of the BLCF.<br>• Continue to engage the public and stakeholders in the management of the Community Forest. | • Conduct at least one formal public meeting each year to inform the general public of the activities of the Community Forest.<br>• Provide an annual report on the BLCF performance to shareholders, stakeholders, First Nations, and the general public.<br>• Hold an annual general meeting of the company as required by the articles of incorporation.<br>• Maintain a bulletin board in the local mall.<br>• Maintain a weekly column in the local newspaper.<br>• Maintain an “open door” policy.<br>• Continually improve the BLCF website to incorporate more information and make it easier for the public and stakeholders to use.<br>• Explore developing a new web-based tool to improve the maps and resource information provided to the recreational users and the public by the BLCF.<br>• Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program<br>• Develop a communications strategy to better engage the public and stakeholders. |

| **Provincial Community Forest Management Objectives** | **BLCF Management Objectives and Legal Requirements** | **BLCF Operational Programs and Strategies** |
|---|---|---|
| Benefits to the Village, First Nations and residents | • Support the Provincial Government's agreement with Hampton Affiliates by offering timber to the local mill.<br>• Support local mills whenever feasible by maintaining an inventory of logs "for sale" for local mills.<br>• Favor local suppliers, customers, consultants and contractors.<br>• Support First Nations and Community involvement in the governance and supervision of the BLCF through membership on the Board of Directors.<br>• Support community involvement in management of the Community Forest through public input.<br>• Continue to provide opportunities for public recreational use at the current level and to explore opportunities for increase and enhancement in the future.<br>• Continue to engage the public, stakeholders and First Nations in the management of the Community Forest. | **Village**<br>• Distribute a portion of the Community Forest profit to the Village to support Community priorities when the financial performance of the Community Forest warrants it.<br>• Support jobs for local residents.<br>• Continue to contribute to local organizations that maintain and enhance recreation facilities in the BLCF and Lakes TSA.<br>• Maintain Community representation on the BLCF Board of Directors.<br>**First Nations**<br>• Continue profit sharing to participating First Nations as per the Community Forest Agreement.<br>• Support jobs for local First Nations.<br>• Maintain First Nations representation on the Board of Directors.<br>• Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program.<br>**Residents**<br>• Continue donations for local community organizations and functions.<br>• Support jobs for local residents.<br>• Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program.<br>• Continue to contribute to local organizations that maintain and enhance recreation facilities in the BLCF and Lakes TSA. |
| 2. Diversify the use of and benefits derived from the community forest agreement area | • Provide support for diverse economic opportunities as they are proposed.<br>• Have a strong commitment to managing land for all resource values.<br>• Continue to provide opportunities for public recreational use at the current level and to explore opportunities to increase and enhance this in the future. | • Achieve Forest Certification.<br>• Maintain a salvage program to remove and reforest as much of the MPB impacted forest as possible.<br>• Find a market to sell pulp logs.<br>• Explore options for producing pulp chips from whole logs or logging residue.<br>• Continue to contribute to local organizations that maintain and enhance recreation facilities in the BLCF and Lakes TSA. |
| 3. Provide social and economic benefits to British Columbia | **Social**<br>• Continue to provide opportunities for public recreational use at the current level and to explore opportunities for increase and enhancement in the future. | **Social**<br>• Provide job opportunities for local residents and contractors.<br>• Continue to contribute to local organizations that maintain and enhance recreation facilities in the BLCF and Lakes TSA. |

| Provincial Community Forest Management Objectives | BLCF Management Objectives and Legal Requirements | BLCF Operational Programs and Strategies |
|---|---|---|
| | • Contribute to economic stability for local industry and community groups to enhance social values.<br><br>**Economic**<br>• Recommend an AAC which reflects the timber producing capacity of the landbase, the needs of non-timber resource users, and the social and economic values related to BLCF.<br>• Support local mills whenever feasible by offering logs "for sale" to local mills. | • Continue donations for local community organizations and functions.<br><br>**Economic**<br>• Provide job opportunities for local residents and contractors.<br>• Continue to pay stumpage, royalties, rents and taxes as required under the statutes of the Province of BC<br>• Develop a plan for BLCF to mitigate timber supply impacts.<br>• Support the Provincial Government's agreement with Hampton Affiliates by offering timber to the local mill.<br>• Continue to provide fibre to local processing facilities. |
| 4. Undertake community forestry [economic, social, & ecological] consistent with sound principles of environmental stewardship that reflects a broad spectrum of [BLCF] values<br><br>Values:<br>• Safety<br>• Profitable<br>• Innovative<br>• Enhance the forest resource<br>• Integrated use<br>• Environmental stewardship<br>• Public consultation & engagement<br>• Benefits to Village, First Nations, and residents | **Economic**<br>• Manage the forest in a manner to produce a continuous flow of logs and revise the harvesting strategies as harvesting priorities shift away from salvage operations.<br>• Obtain Forest Certification for the BLCF.<br><br>**Social**<br>• Continue to provide opportunities for public recreational use at the current level and to explore opportunities for increase and enhancement in the future.<br>• Favor local suppliers, customers, consultants and contractors.<br><br>**Ecological**<br>• Manage the BLCF according to environmentally sound integrated resource use principles and land-use plans within the context of government regulations and the impact of the MPB on the BLCF resources.<br>• Provide a diversity of habitat capable of supporting a viable wildlife population.<br>• Provide a diversity of habitat capable of supporting viable populations of native fish.<br>• Protect biological diversity on the BLCF.<br>• Explore ecosystem restoration in areas impacted by the MPB.<br>• Explore alternative approaches to meet environmental protection. | **Economic**<br>• Achieve Forest certification.<br>• Explore new market opportunities for sawlogs, bioenergy fibre, and pulp logs.<br>• Develop a harvesting and marketing strategy for the era when harvesting priorities will shift away from salvage.<br><br>**Social**<br>• Provide a portion of the Community Forest profit to the Village to support Community priorities.<br>• Support jobs for local residents.<br>• Continue to contribute to local organizations that maintain and enhance recreation facilities in the BLCF and Lakes TSA.<br>• Continue profit sharing to participating First Nations as per the Community Forest Agreement.<br><br>**Ecological**<br>• Develop a MPB mitigation plan for BLCF.<br>• Improve stream inventory and classification.<br>• Explore funding sources and implementation of ecosystem. restoration in areas impacted by the MPB.<br>• Improve the use of PEM in forest management planning.<br>• Complete wildlife habitat modeling for important species and modeling of rare and sensitive ecosystems for use in forest management.<br>• Design, construct, and maintain roads in accordance with all applicable FLNRO requirements. |

| **Provincial Community Forest Management Objectives** | **BLCF Management Objectives and Legal Requirements** | **BLCF Operational Programs and Strategies** |
|---|---|---|
| | • Use harvest methods that best suit the onsite conditions and that allow access to all areas of the timber harvesting landbase.<br>• Maximize conifer timber utilization.<br>• Define biodiversity objectives consistent with regional plans but specific to the BLCF boundaries taking into considering the impacts of the MPB. | • Respond promptly to road-induced erosion hazards in order to minimize environmental damage.<br>• Deactivate roads in accordance with all applicable FLNRO requirements.<br>• Propose options to meet biodiversity objectives "Beyond the Beetle".<br>• Classify area best able to meet biodiversity objectives using ecological mapping, wildlife habitat modeling, and new forest inventories. |
| 5. Promote community involvement and participation | • Improve communication to the public by providing open and accessible information regarding the management and operations of the Community Forest.<br>• Continue to improve and provide consultation opportunities to the public on the management and operations of the BLCF.<br>• Support implementation of the FireSmart program in the community, in conjunction with the provincial, regional, local governments and First Nations. | • Support community based recreation initiatives.<br>• Maintain an "open door policy".<br>• Maintain First Nations representation on the BLCF Board of Directors.<br>• Develop a communications strategy to better engage the public and stakeholders.<br>• Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program<br>• Explore developing a new web-based tool to improve the maps and resource information provided to the recreational users and the public by the BLCF.<br>• Continually improve the BLCF website to incorporate more information and make it easier for the public to use. |
| 6. Promote communication and strengthen relationships between Aboriginal and non-Aboriginal communities and persons | • Maintain First Nations representation on the Board of Directors.<br>• Work to improve communications and foster a cooperative relationship between the BLCF and all interested First Nations.<br>• Develop a First Nations' outreach program to include all First Nations communities.<br>• Protect cultural heritage resources. | • Maintain the designated seats on the Board of Directors for the 3 First Nations members.<br>• Explore developing new tools to improve the maps and resource information provided to the public and First Nations by the BLCF.<br>• Explore opportunities for extension work with the other Community Forests.<br>• Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program<br>• Provide presentations to First Nations Band Councils regarding the operations and management of BLCF.<br>• Respect the confidentiality of First Nations' and other stakeholder information and data. |
| 7. Foster innovation | • Develop a more complete and current set of indicator species to identify options to meet biodiversity objectives. | • Complete wildlife habitat modeling for resource allocation and forest management.<br>• Assess the impact of MPB attack on biodiversity. |

| **Provincial Community Forest Management Objectives** | **BLCF Management Objectives and Legal Requirements** | **BLCF Operational Programs and Strategies** |
|---|---|---|
| | • Modify silviculture regimes to address forest management changes in the Community Forest.<br>• Explore utilization of the deciduous timber resource.<br>• Support implementing the FireSmart program in the community, in conjunction with the provincial, regional, local governments and First Nations.<br>• Explore options to improve market opportunities.<br>• Improve the quality of resource management inventories. | • Identify areas with the highest biodiversity value or potential to focus protection and recovery programs.<br>• Identify options to enhance resources valued by the community.<br>• Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program.<br>• Develop silviculture regimes to include:<br>  ○ understory protection harvesting;<br>  ○ climate change;<br>  ○ forest health factors; and<br>  ○ non-timber values.<br>• Utilize the deciduous timber resource for timber and non-timber values.<br>• Use improved data such as LiDAR for operational planning and to improve inventory information.<br>• Build analytical forest-level tools to design a secondary salvage program and a fibre value model for marketing. |
| 8. Advocate forest worker safety | • Ensure all activities on the BLCF are undertaken in safe and secure manner. | • Encourage all contractors and consultants working on behalf of the BLCF to be SAFE Certified. In cases where they are not SAFE Certified, BLCF will conduct assessments of the company's safety program prior to commencement of work.<br>• Maintain a safety program for company employees.<br>• Ensure all active roads are signed and road channels are clearly marked.<br>• Ensure all "active hauling" signs are kept current.<br>• Incorporate an "active hauling" warning on the BLCF website. |

# 3. FIRST NATIONS AND THE COMMUNITY FOREST

## 3.1 BACKGROUND

The Community Forest area overlaps eight First Nations traditional territories (Appendix 3).

- Wet'suwet'en First Nation
- Burns Lake Band
- Stellat'en First Nation
- Yekooche First Nation
- Office of the Wet'suwet'en Hereditary Chiefs
- Lake Babine Nation
- Skin Tyee Band
- Nee Tahi Buhn Band

The vast majority of the BLCF area overlaps the traditional territories of the Wet'suwet'en First Nation and the Burns Lake Band. The Office of the Wet'suwet'en Hereditary Chiefs focuses on Resource Development activities in the traditional territory of the member bands, including the Wet'suwet'en First Nation.

First Nations communities have a long history in the forests of the Burns Lake area and the forest industry. Since 1974, six of the local First Nations bands have held an ownership stake in Babine Forest Products Ltd. through the umbrella organization, Burns Lake Native Development Corporation. This organization has its own evergreen logging contract with Babine Forest Products Ltd. and has a long history of community engagement and economic development.

From its inception, the Community Forest has had a strong representation from its First Nations partners. The steering committee that was formed to negotiate the original Community Forest Pilot Agreement had strong representation from the Office of the Wet'suwet'en who were signatories on the original Community Forest Pilot Agreement and have had a representative on the BLCF Board of Directors from the start.

In 2004, the local FLNRO District Office approached us with an opportunity to expand the boundary of the Community Forest and increase the cut accordingly. In 2005, the Burns Lake Band contributed tenure associated with the Forest and Range Opportunity Agreement which resulted in the expansion of the Community Forest landbase and an increase of 12,000 $m^3$ in the AAC.

In 2007, the Wet'suwet'en First Nation contributed a similar tenure to us which resulted in another boundary expansion and AAC uplift. The Wet'suwet'en First Nation contributed 16,000 $m^3$ to the Community Forest license. At the same time, the tenure allocation associated with the Burns Lake Band was enlarged to equal the Wet'suwet'en First Nation contribution.

In 2014 the Board of Directors approved a policy to distribute net profits, beyond a floor net margin amount, equally to all partners including the Burns Lake Band, Wet'suwet'en First Nation and the shareholder, Village of Burns Lake.

In October 2014, the new Community Forest Agreement was signed resulting in both the Burns Lake Band and the Wet'suwet'en First Nation being allocated 18% net profits respectively. Both First Nations receive an annual profit distribution based on the overall performance of the Community Forest instead of being based on the original contribution of AAC. This arrangement has simplified and streamlined the calculations of profit distribution and made things fair and equitable for both First Nations.

We continue to offer contracts for a majority of the work subcontracted from the company with a preference for local and First Nations organizations. We have consistently offered forestry and logging work and have provided a monetary premium to some contractors who provide training opportunities to indigenous workers while subcontracted for work on the Community Forest. Recently we signed a multi-year contract to source seedlings from a local First Nations in partnership with an established nursery.

Roles and relationships have grown over the years and today representatives from the Burns Lake Band, Wet'suwet'en First Nation, and the Office of the Wet'suwet'en Hereditary Chiefs have designated seats on the Board of Directors.

### 3.2 CONSULTING AND COMMUNICATION

Under Section 6.02(h) of the Community Forest Agreement we are required to consult openly with and provide information to all First Nations people whose traditional territory overlaps the Community Forest.

We consult with First Nations organizations by:

- Sending letters (including maps and digital data), emails and follow-up letters inviting affected First Nations groups to view and comment on the Forest Stewardship Plan, the Management Plan, and annual planned development (blocks and roads).
- Giving affected First Nation organizations a specific chance to comment on planned harvesting blocks and roads prior to the approval of Cutting Permits or Road Permits.
- Meeting with First Nations whenever meetings are requested.

The Board of Directors is developing a new Communication Strategy that will revise and improve how we communicate and consult with First Nations, the public and non-timber users. This strategy will include features like scheduled meetings with Band Councils, participating in First Nations community events to engage community members, and the use of the internet or other tools for engagement to name a few. Over time we expect these strategies will be tailored to each First Nation Community as we implement the Strategy.

### 3.3 CULTURAL AND HERITAGE RESOURCES

Cultural and heritage resources will be managed in a manner that is consistent with the *Heritage Conservation Act,* the *Forest and Range Practices Act,* and the *Forest Planning and Practices Regulation*, as amended from time to time.

Historic trails such as the Maxan Trail and the Old Babine Trail cross the BLCF. Burns Lake was also central to the "grease trail" that linked south to north. Rivers and lakes served as transportation corridors and were the most heavily used areas in the Community Forest.

Historic village sites have been identified on both Burns Lake and Maxan Lake. We have also carried out Level 1 culturally modified tree surveys in numerous locations across the BLCF. Archeological Impact Assessments (AIAs) have been conducted by certified archeologists in the area adjacent to Maxan Lake, Eagle Creek/Opal bed area, and Kager Lake area. To protect these culturally significant areas long-term Wildlife Tree Patches (WTPs) are in place by Guyishton Lake, Kager Lake, around Eagle Creek/Opal Bed, and on the east and west sides of Maxan Lake.

If additional First Nations cultural sites and values are discovered within the Community Forest we will work to conserve, or, if necessary, protect these cultural heritage resources. Operational strategies are outlined in the Forest Stewardship Plan[4] and include information sharing with First Nations prior to and during operations, conducting Cultural Heritage Resource Reviews, providing all cultural heritage information to the Nadina District annually, and providing all cultural heritage information to First Nations groups. The locations of identified archeological sites will remain confidential and will only be shared between the BLCF, Nadina District, and First Nations.

Strategies are also in place regarding Cultural Heritage Resources in the Community Forest Safety and Environmental Handbook[5]. These strategies outline the procedures to follow if cultural resources are found during forest management operations.

### 3.4 IMPROVING FIRST NATIONS INVOLVEMENT IN THE COMMUNITY FOREST

In this Management Plan and in future operational planning, we will consider all available information on known culturally significant features and aboriginal traditional use areas, where identified in or (where relevant) adjacent to the Community Forest.

We are committed to collaborating with First Nations on the use of the Community Forest for traditional use activities. We commit that First Nations will not be subject to fees or other

[4] BLCF Forest Stewardship Plan – June 22, 2015.
[5] Burns Lake Community Forest Safety and Environmental Handbook - January 2016 Version

charges related to the collection and use of non-timber forest products for personal use relating to traditional use activities.

We are also committed to maintaining the confidentiality of First Nations Cultural Heritage Resources.

During Management Plan 3, we will explore with all 8 First Nations communities:

- Providing presentations on the management and operations of Community Forest to First Nations Band Councils (or other appropriate band committees).
- Supporting opportunities where possible to create jobs for local First Nations.
- Continuing to work with local First Nations to identify culturally significant areas in the Community Forest and to protect these areas during forest operations.

### 3.5 ROLES AND RESPONSIBILITIES

| Position | Responsibilities |
|---|---|
| **Board of Directors** | • Develop a Communication Strategy to revise communications and consulting practices with First Nations, public and non-timber users.<br>• Implement and monitor the Communication Strategy. |
| **Operations Manager** | • To ensure that contractor/consultant contracts contain a clause that explains the BLCF policy and their responsibilities regarding it.<br>• To ensure that all contractors and employees know their responsibilities under this policy.<br>• Ensure that the local communities know there is an “open door” policy. |
| **Community Forest Staff** | • To understand the BLCF policy and their responsibilities regarding it.<br>• Ensure that cultural heritage resource information is kept confidential |
| **Contractors/Consultants** | • To understand the BLCF policy and their responsibilities regarding it. |

## 4. CONSULTING WITH AND ENGAGEMENT OF THE PUBLIC

### 4.1 BACKGROUND

The BLCF was born out of a desire by the people of Burns Lake to have more influence in forest management decisions that affect their community. Over the past 15 years through public meetings, annual reports and other communications, the people of the area have had their input into the management of their local Community Forest.

Over time, public input has diminished somewhat, but that does not mean that it is not desired or not listened to. The Community Forest is owned by the Village of Burns Lake and has 3 community members appointed to the Board of Directors.

#### *4.1.1 Employment*

We are committed to supporting local employment and sourcing goods for local providers, and will continue to offer the majority of work contracted to local and First Nations’ organizations. In 2015, the Community Forest provided approximately 31 full time equivalent positions of employment.

### *4.1.2 Donations*

We have provided financial and in-kind support to over 83 organizations and events throughout the Lakes District in the last 15 years. A summary of financial donations can be found in Table 3.


Table 3 – BLCF Donations 2000-2105

| Organization/Event | Donation |
|---|---|
| Schools | $67,300 |
| Community Halls | $33,300 |
| Sports Teams/Events | $111,360 |
| Recreation | $914,099 |
| Clubs/Societies | $240,018 |
| First Nations[1] | $703,850 |
| Other | $328,287 |
| Total | $2,398,214 |

A portion of the Community Forest's profits will continue to be donated to the local community.

## 4.2 GENERAL PUBLIC COMMUNICATION AND CONSULTATION

Under Section 6.02(h) of the Community Forest Agreement we are required to consult openly with and provide information to the Community members.

Ongoing communication to the general public is necessary to encourage community awareness and community participation in Community Forest activities and opportunities. We actively communicate with the general public and inform them of opportunities to provide input in forest management on the Community Forest through:

- Ads in the local newspaper.
- A bulletin board at the local mall that displays notification of public review, open houses, and information on operations on the Community Forest.
- A weekly insert in the Lakes District Newspaper that highlights BLCF news and activities.
- Announcements posted on the BLCF Website.

We also maintain an "open-door" policy for all community members.

Annual Reports have been and will continue to be produced for the public. The Annual Reports are distributed internally within the BLCF, as well as to the Village of Burns Lake, First Nations Communities, and members of the public (if requested). Copies of the Annual Reports are also on display at the BLCF office and available on the BLCF website. A summary of previous Annual Reports is included in Appendix 4.

A formal public meeting has been held each year and will continue to be held annually with the purpose of informing the general public of the activities undertaken on the Community Forest. The annual public meetings are required under the Community Forest Agreement.

We maintain a website[6] that contains information on the Community Forest area, recreation opportunities on the Community Forest, community support initiatives, BLCF public reports, and log sales details.

### 4.3 IMPROVING COMMUNICATION AND ENGAGEMENT OF GENERAL PUBLIC

Work will continue with the local community to determine the values the community places on the Community Forest area and to support community use of the Community Forest.

As stated in Section 3.2, we are currently working on a Communication Strategy for the Community Forest to better engage the public and stakeholders. Improvements that will be includes are outlined below.

**Annual Report**

The Annual Report format will be revised to provide further details to the public on the management and operations of the Community Forest. Revisions will include:

- The Management Plan commitments and details on how the BLCF has worked to achieve these commitments.
- A summary of BLCF operational harvesting and silviculture activities and any outcomes achieved.
- A summary of how BLCF management relates to the 8 Provincial Community Forest Objectives.

**Annual Public Meeting**

The Annual Public Meeting will be scheduled once the Annual Report is available for distribution and will be used to promote ongoing public awareness on the BLCF activities. BLCF performance with respect to the objectives outlined in the Management Plan will also be reported on during this meeting. The information produced for the Annual Public Meetings will be available on the BLCF website for those who were unable to attend the public meeting. Community members will also have the opportunity to provide comments or may set up specific meetings if desired.

**Website**

We are committed to continually improving our website to include more information and make it easier for the public to use. The website will be improved to provide information about the Community Forest operations, road conditions, and the location of active hauling.

[6] www.blcomfor.com

### Web-based Map and Resource and Tool

In addition to the existing recreation maps available for the Community Forest, we are exploring a web-based environment to improve maps and resource information provided to recreational users and the general public. This may include updated road maps and information, locations of recreational areas, fire hazard ratings and more.

### FireSmart

Financial and in-kind support will be provided to local organizations and First Nations to support the implementation of the FireSmart Canada program on the Community Forest. This program is an important tool for local residents, government, firefighters and industry to reduce the impacts of wildfire.

### 4.4 ROLES AND RESPONSIBILITIES

| Position | Responsibilities |
|---|---|
| **Board of Directors** | • Make public involvement a priority.<br>• Develop a Communication Strategy to revise communications and consulting practices with First Nations, public and non-timber users.<br>• Implement and monitor the Communication Strategy. |
| **Operations Manager** | • Ensure all communications commitments are completed, documented and posted to the website.<br>• Develop and implement a web-based tool to improve maps and resource information for the general public. |
| **Community Forest Staff** | • Keep Active hauling status up to date<br>• Ensure logging and trucking contractors know of the key Community Forest initiatives so they can represent the BLCF to the public.<br>• Work to improve communications with the public. |
| **Contractors/Consultants** | • Work to improve communications with the public. |

## 5. CONSULTING AND COMMUNICATION WITH NON-TIMBER FOREST USERS

Under Section 6.02(h) of the Community Forest Agreement we are required to consult openly with and provide information to non-timber users of the Community Forest.

### 5.1 RECREATION PARTNERS

Recreation is a key value for the Community Forest and the local residents, and in the 15 years since the inception of the Community Forest recreation has played a major role. Over $900,000 of Community Forest funding has been provided to recreation over the years. In 2015, 7 km of new recreation trails were completed for a total of 72.3 km of trails on the Community Forest.

Recreational partners with the Community Forest are advised of the opportunity for review and input through advertisements in the local newspaper.

### *5.1.1 Burns Lake Mountain Bike Association*

The Boer Mountain Recreation Site tenure area (approximately 4,000 ha in size), is completely within the Community Forest boundary and is administered under a ten-year agreement by the Burns Lake Mountain Biking Association.

We have, and will continue to, donate funds and in-kind service annually to the Burns Lake Mountain Biking Association for trail maintenance.

Since the Burns Lake Mountain Biking Association is located on the Community Forest, we send letters to this group for engagement on forest operations and management.

### *5.1.2 Omineca Ski Club Trails*

The majority of the Omineca Ski Club Trails are encompassed by, but outside the tenure area of Community Forest. We have constructed short connector trails on the Community Forest for the ski club, contributed to the construction of a biathlon range, and are cooperating with the club for trail expansion using roads no longer required for harvesting operations on the Community Forest.

We have, and will continue to, donate funds and in-kind service annually to the Omineca Ski Club.

### *5.1.3 Burns Lake Paintball Association*

We have an Agreement with the Burns Lake Paintball Association to lease land to the Association. The Agreement allows the Association to use the land for their operations and make any improvements to the area.

### *5.1.4 Burns Lake Snowmobile Club*

We have also partnered with the Burns Lake Snowmobile Club in the construction of snowmobile trails north of Burns Lake. Approximately 10 km of new the snowmobile trail constructed in 2009 are within the Community Forest.

### *5.1.5 Lakes Outdoor Recreation Society*

The Lakes Outdoor Recreation Society is mandated to maintain local recreation sites and trails. There are two Recreation Sites with established objectives within the Community Forest area, the Bear Dens Recreation Trail and the Guyishton Lake Recreation Trail. Additional recreation sites and trails within the Community Forest are Agate Point, Maxan Lake, Eagle Creek, and Kager Lake Recreation Sites, and Bear Dens, Star Lake, Kager and Guyishton Recreation Trails.

We have, and will continue to, donate funds and in-kind service annually to the Lakes Outdoor Recreation Society to maintain recreation sites and trails across the Lakes TSA.

### 5.2 NON-COMMERCIAL RECREATIONAL ACTIVITIES

The Community Forest is used extensively for non-commercial recreational activities (Table 4). Consulting with non-commercial recreational users is covered through engagement with the general public (see Section 4).

Table 4 – Non-Commercial Recreational Activities

| Activity | Location and Comments |
|---|---|
| Fishing | Burns, Decker, Tchesinkut, Guyishton, Maxan, and Fish Lakes are all within the Community Forest. These lakes and numerous other small, unnamed lakes are used regularly for fishing. |
| Hunting | Hunting (deer, moose, grizzly bear, black bear, and cougar) takes place. A small amount of grouse and migratory bird hunting also takes place. |
| Hiking | Hiking opportunities are numerous. |
| Canoeing and Kayaking | Many local lakes are used for both canoeing and kayaking. |
| Wildlife Viewing | The forested land and riparian habitat offer a variety of wildlife viewing opportunities. |
| Sightseeing | Views are excellent from the logging roads and Highways 16 and 35. |
| Mountain Biking | Mountain biking is popular in the Boer Mountain Recreation Site. The Burns Lake Bike Park property (private) is leased from BLCF by the Burns Lake Mountain Biking Association. Mountain biking elsewhere in Community Forest is light. |
| Snowmobiling | Snowmobiling has been a popular recreation activity for many years. Old roads are used regularly by snowmobilers, and newly constructed snowmobile trail will likely result in increased use. |
| Cross-country skiing | Some cross-country ski trails cross the Community Forest from the Omineca Ski Club trails |
| Backcountry Skiing | Backcountry ski opportunities exist although use is still light. |

### 5.3 LICENSED TRAPPERS AND GUIDE OUTFITTERS

There are numerous licensed trappers and guide outfitters working on the Community Forest (Appendix 5).

We will continue to actively consult with local trappers and guide outfitters and will provide maps and information on planned annual activities and operating areas prior to the September 1 each year. Meetings will be scheduled when proposed harvesting and/or road building activity is deemed to warrant additional discussion. We will also send letters and information packages (if requested) to trappers and guide outfitters for review and comment on Management Planning.

### 5.4 RANGE TENURE HOLDERS

The east and west portions of the Community Forest have active range use and objectives for range management are outlined in the Forest Stewardship Plan.

We will continue to actively consult with range tenure holders on operational planning and management planning. Referral letters and information packages will be sent, and meetings scheduled when proposed operations are deemed to warrant additional discussion.

## 5.5 OIL AND GAS

There is one existing oil and gas pipeline on the Community Forest that is operated by Pacific Northern Gas. As well, there are three proposed pipelines operated by Pacific Trails Pipeline, TransCanada Coastal, and Enbridge. We have agreements in place for the Pacific Trails Pipeline and TransCanada Coastal.

We will continue to develop agreements with oil and gas companies for the pipelines active and proposed on the Community Forest.

## 5.6 MINING

There are numerous mining claims that exist on the Community Forest, however, there are currently no active mining operations or proposed operations.

## 5.7 OTHER COMMUNITY GROUPS

There are various Community Groups that use the Community Forest. The most notable group is the Burns Lake Fire Training Society. We have an Agreement with the Fire Training Society to lease land to them. This Agreement allows the Fire Training Society to use the land for their operations and to establish facilities as needed.

Community Groups are advised of the opportunity for review and comment through advertisements in the local newspaper.

## 5.8 GOVERNMENT AND GOVERNMENT AGENCIES

### *5.8.1 Local Government*

Opportunities for local government to provide review and input on management planning are provided.

Letters requesting review and input are sent to The Regional District of Bulkley Nechako and an information package will be provided if requested.

Consulting with the Village of Burns Lake for Management Planning will be revised and the Village will receive a letter requesting review and input, and an information package. Annual meetings will be held with the Village Council and an update will be provided on the performance of the BLCF in respect to the objectives outlined in the Management Plan at the Comfor Management Services Ltd. Annual General Meeting.

### *5.8.2 Provincial & Federal Government*

Referral letters and information packages on forest management planning are provided to FLNRO and Recreation Sites and Trails BC[7].

Referral letters and information packages on forest management planning will also be provided to the Federal Department of Fisheries and Oceans.

### 5.9 ROLES AND RESPONSIBILITIES

| Position | Responsibilities |
|---|---|
| **Board of Directors** | • Make communication with non-timber users a priority.<br>• Develop a Communication Strategy to revise communications and consulting practices with First Nations, public and non-timber users.<br>• Implement and monitor the Communication Strategy. |
| **Operations Manager** | • Responsible for ensuring all communications commitments are completed, documented and posted to the website<br>• Develop and implement a web-based tool to improve maps and resource information suitable for non-timber resource users. |
| **Community Forest Staff** | • Work to improve communications with the public and other users.<br>• Keep Active hauling status up to date<br>• Ensure logging and trucking contractors know of the key Community Forest initiatives so they can represent the BLCF to the public. |
| **Contractors/Consultants** | • Work to improve communications with the public and other users. |

## 6. BOTANICAL FOREST PRODUCTS

Botanical Forest Products or Non-Traditional Forest Products, as they are also known, have been defined as “all plant and fungal and associated services of the forest other than conventional wood products” and may include “food, floral greenery, crafts and arts, medicinal herbs, and nutraceuticals, horticulture and restoration, tourism/education, etc” [8]

Botanical forest products represent an important part of First Nations’ culture expressed through an increasing interest in non-timber forest products or more specifically, culturally important botanical species as a means to maintain and enhance their cultural practices, as well as for treaty purposes to illustrate their past and present use of these species. First Nations communities may also have concerns over the impacts of commercial harvesting of botanical forest products on their traditional harvesting rights and practices.

[7] Recreation Sites and Trails BC is a Provincial Government Branch with the mandate to develop, maintain, and manage a network of recreation sites and trails to provide safe, quality recreation opportunities to the public. http://www.sitesandtrailsbc.ca/

[8] Tim Brigham MA. Centre for Livelihoods and Ecology, Royal Roads University. A symposium on Non-Timber Forest Products. August 2010, Clearwater, BC.

Botanical forest products in the Community Forest are also used by local non-First Nations residents. There may be some local small scale commercial operations using the botanical forest products to which we are unaware.

The harvesting of botanical forest products for commercial or personal use is currently unregulated and will continue to be until such a time that:

- Undesirable impacts, caused by the unregulated harvest of botanical forest products are identified.
- First Nations identify specific areas of cultural values which may require some degree of protection or adjustment to forest operations. Information on First Nations culturally significant botanical forest products will be kept confidential and will only share with designated First Nations to minimize impacts on these species and the ecosystems that support them.
- A number of small commercial operations start up using botanical forest products and it becomes necessary to provide a permit to avoid conflicts.

# 7. TRANSITIONING TO THE MID-TERM AND "BEYOND THE BEETLE"

The objective of this section is to describe the current situation, the proposed short-term AAC request and rationalize this proposed level of cut relative to the current situation and plans for a more detailed forest management program. The new forest management program will include a new Management Plan and proposed AAC based on significantly improved data, modelling, and analyses.

## 7.1 SHELF-LIFE

Understanding shelf-life and the scope of uncertainty that we operate under during the transition "Beyond the Beetle" is an important part of managing the Community Forest today.

### *7.1.1 Understanding Timelines and Sawlog Shelf-life*

Shelf-life under one definition is "the length of time before moisture content, wood density and fibre quality deteriorate to a point at which primary or secondary processing is uneconomic"[9]. Others include the economic impact of world lumber markets and our local lumber manufacturers' ability to market the attacked wood. If they can continue to manufacture and sell MPB killed Pl, then the shelf-life can be extended; if they can't, then the shelf-life will be shorter.

On the Community Forest, the MPB epidemic started in 2003, peaked in 2005 and was effectively over by 2008. Today, we are 13 years into biological shelf-life on the earliest attack, 11 years for the peak attack and 8 years for the last part of the attack.

[9] After the beetle: How long is the wood good? 2006-09 Forestry Innovation Investment Ltd.

There were many shelf-life studies and projections undertaken in the early years of the MPB epidemic, but none are known that tracked the projections with actual results. Therefore, 13 years after the attack, we are still struggling to understand shelf-life and how long the wood will be suitable for lumber, pulp and biomass.

Figure 3 shows a commonly held view of shelf-life which is based upon the harvesting of dead Pl over the last 10 years. It closely tracks anodal information from the Community Forest's staff and others in the business. These projections are very sensitive to changes in the marketplace.

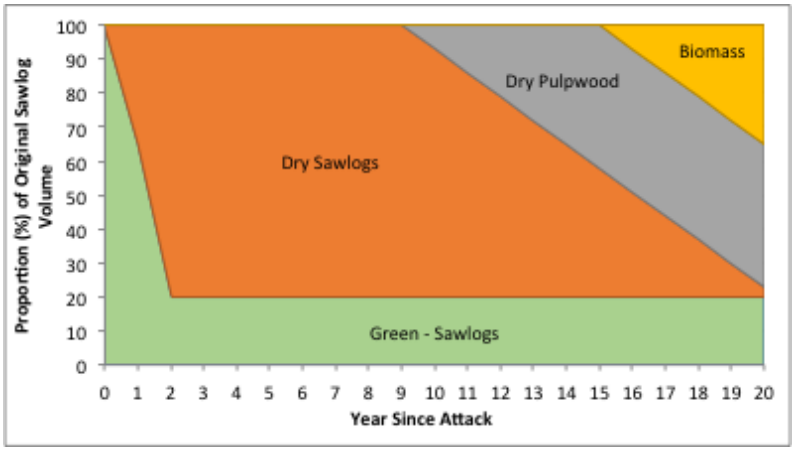



Figure 3- BLCF Log Grade Shelf Life Assumptions

### *7.1.2 Role of Pulp Logs*

In early 2015 there was an important change in the marketplace as some buyers would no longer accept the poorer grades of dead Pl. If this change continues and expands in the marketplace it could have serious impacts on our operations.

Efforts to predict sawlog shelf-life also address pulp logs. At the time dead Pl is no longer suitable for lumber production, it can be very suited to pulp production.

As market loggers, the role and importance of pulp logs sales has been clearly identified and that without pulp log sales, our revenue picture and ability to reforest the MPB attacked areas will suffer significantly.

The challenge for our operation is the find markets for our pulp, which is a key part of our transition strategy.

## 7.2 MEETING WITH FLNRO

Management Plan 3 was initially submitted, with the supporting timber supply analysis, to FLNRO in July 2015. On October 15, 2015 we received a letter from FLNRO stating the Management Plan required substantial change.

The Board of Directors met with the Director, Forest Analysis and Inventory Branch, and the Nadina Stewardship Officer on October 29, 2015 to discuss Management Plan 3, the supporting timber supply analysis, and results from our recently completed inventory work.

In that meeting, FLNRO presented their perspective and concerns over Management Plan 3, the amount of harvesting completed to date, the need for an increased salvage effort, and deficiencies of the recent timber supply analysis report. We also presented preliminary results of the Pl inventory project that relates to the AAC request.

From that meeting it was agreed that:

1. Management Plan 3 would be revised and re-submitted by January 31, 2016.
2. BLCF would make a request for a short-term AAC uplift.
3. FLNRO would address a short term AAC request.
4. BLCF would continue our new forest management initiatives with the goal of submitting a revised Management Plan and timber supply analysis focused on the mid-term timber supply ("Beyond the Beetle").

### 7.3 AAC PROPOSAL FOR THE TRANSITION PERIOD

Under "normal" conditions, our proposed AAC in the Management Plan would be based on a timber supply analysis that included new information, updated inventory, and critical examination of forest management issues. An AAC request would be made to the District Manager, similar to what the Chief Forester requires through Section 8 of the Forest Act for TFLs and TSAs.

However, that is not the case at this time. The Community Forest is at the cusp of the transition from salvaging MPB killed timber to a new operating environment that is different from both the pre-MPB conditions and the current salvage conditions. Our new forest management program and analysis will address this transition.

For details on the current timber supply analyses see Appendix 6.

#### *7.3.1 Harvest Level*

In a letter sent to the Director, Forest Analysis and Inventory Branch dated November 30, 2015 (see Appendix 7)[10] we requested a sawlog cut of 300,000 $m^3$ annually. This AAC will allow us to achieve our goals and is based on focusing on the two Pl stand types (described below). The estimated distribution of volume by species and grade is given in Table 5. Our quantitative approximation process indicates a cut of 277,050 $m^3$/year for five years, however, this slightly higher AAC would allow room for some flexibility in the front end of the period over which these estimates are based.

#### *7.3.2 Term*

In the letter to the Directory, Forest Analysis and Inventory Branch we request a short-term (three year) AAC that we believe is appropriate to help us achieve our vision and strategy. With

[10] Burns Lake Community Forest Ltd. Letter to Director, Forest Analysis and Inventory Branch November 30, 2015. Requesting Short-term AAC Uplift.

this level of cut we can maximize the value of the remaining dead wood. During this period, we will be fully engaged in completing our new forest management program analyses, which includes a detailed forest level analysis of timber supply and other resource values. This analysis will use state-of-the-art modeling, growth and yield, and inventory methods and data that will help us in the effort to identify an appropriate level of harvest in the post-MPB era.

### *7.3.3 Harvest Strategy*

The primary strategy behind this request is to recover as much dead Pl as possible while it is still economically recoverable. This short-term strategy will be revisited under the context of the new forest estate modeling results. We believe this is a low risk strategy that has many positive implications to the forest and to the community. This short-term strategy focuses on two stand types:

1. *Accelerate Salvage in 70%+ Pl Stands*

We believe we can accelerate the salvage of dead Pl in the still considerable areas of stands with 70%+ Pl. However, it is clear that the shelf-life of this wood to yield sawlogs is rapidly expiring and may only last 4-6 years, and this could be shorter if sawmills increase their log quality specifications.

We estimate there is approximately 2.4 million $m^3$ of dead wood remaining in the 70%+ Pl stands in the THLB.[11] Below is an estimate of how we could maximize the remaining value of the dead wood in these stands (using a five-year period for the example):

- Assume accelerated salvage for 5 years – using clearcut and planting/natural regeneration.
- Total area of 70%+ Pl stands is ~8,100 ha containing 2.4 million $m^3$ (about 90% Pl).
- Assume we recover 60% of that volume (2.4 million x 0.6 = 1.44 million $m^3$). This is 288,000 $m^3$/year from ~650 ha (assuming targeted stands have higher than average volume – thus 60% of volume is 40% of area).
- Assume Pl sawlog recovery is 65% and non-Pl sawlog recovery is 90%.
- This requires a sawlog AAC of 194,400 $m^3$, which could generate an additional 93,600 $m^3$ for Grade 4 credit.

2. *Strategy Component 3: New Salvage in Pl 30-70%+ Stands*

We believe there is also a significant opportunity to recover dead Pl from the large area (~8,000 ha) of mixed-species stands on the BLCF. This salvage can be done by partial cutting implemented as an intermediate cut (i.e., thinning), or a preparatory or final cut in shelterwood systems. However, as with the 70%+ Pl stands, the opportunity is disappearing quickly in these mixed types as the shelf-life for sawlogs expires.

[11] Based on the Ecora TSR resultant file for the THLB (using March 2014 VRI), and estimated harvest in 70%+Pl stands 2014 and 2015. Includes age class 5+.

In late October 2015, we completed an inventory in those stands with a 30-70% Pl component. A summary of major results from that inventory is:

- Net merchantable volume 263 $m^3$/ha (2 Standard Error 8%). The VRI indicated 300 $m^3$/ha.
- Total volume 2.1 million $m^3$ on 7,989 ha in the THLB (all species).
- Species composition (net merchantable) Pl 50%, Sx 40%, Bl 10% (almost no deciduous).
- Thus 132 $m^3$/ha Pl on average with 1.1 million $m^3$ total.
- Dead volume: Pl 94%, Sx 18%, Bl 22%.
- Deadfall volume: Pl 16%, Sx 12%, Bl 10%.
- Pl standing dead: 85% estimated to have some sawlog recovery.
- Pl fallen dead: 63% estimated to have some sawlog recovery.

Below is an estimate of how we could maximize the remaining value of the dead wood in these stand types.

- Assume salvage for 5 years (partial cutting and understory protection).
- Total area of 30-70%+Pl stands is ~8,000 ha containing 2.4 million $m^3$ (50% Pl).
- Assume we salvage 50% of the area (8,000 ha x 0.5 = 4,000 ha which is 800 ha/year).
- Assume average volume 290 $m^3$/ha (higher than the overall average).
- Assume remove 50% of stand volume (on average) in partial cutting.
- Thus 145 $m^3$/ha x 800 ha = 116,000 $m^3$/year.
- Assume recovered volume is Pl 75% Sx 25% and Pl sawlog recovery 65% and Sx 90%.
- This would require 82,650 $m^3$ sawlog AAC and generate 33,350 $m^3$ for Grade 4 credit.

Table 5 - Quantitative approximation of cut required to focus on the two Pl stand types and distribution of volume ($m^3$) by species type and log grade.

| **70%+Pl Stands** | Total Volume | | SL% | Sawlog Volume | | Grade 4 Volume | |
|---|---|---|---|---|---|---|---|
| Pl | 259,200 | 90% | 65% | 168,480 | 87% | 90,720 | 97% |
| Non-Pl | 28,800 | 10% | 90% | 25,920 | 13% | 2,880 | 3% |
| | 288,000 | 100% | | 194,400 | 100% | 93,600 | 100% |
| **30-70%+Pl Stands** | | | | | | | |
| Pl | 87,000 | 75% | 65% | 56,550 | 68% | 30,450 | 91% |
| Non-Pl | 29,000 | 25% | 90% | 26,100 | 32% | 2,900 | 9% |
| | 116,000 | 100% | | 82,650 | 100% | 33,350 | 100% |
| **All Stands** | | | | | | | |
| Pl | 346,200 | 86% | | 225,030 | 81% | 121,170 | 95% |
| Non-Pl | 57,800 | 14% | | 52,020 | 19% | 5,780 | 5% |
| | 404,000 | 100% | | 277,050 | 100% | 126,950 | 100% |

### *7.3.4 Risk*

We believe that this strategy has little risk to the community, First Nations, or the Government. The primary reasons are:

1. The proposed term is short.
2. This strategy is to focus on salvaging dead Pl, with green wood harvest coming as incidental volume only.
3. The dead Pl is deteriorating rapidly and our window of economic recovery is rapidly closing. If the dead Pl is not salvaged, many of the remaining stands will not be reforested; which will impact the long-term timber supply.
4. We are in the process of completing a very detailed and innovative forest estate modeling exercise that will provide information to develop a new Management Plan that will likely change the associated harvest level and strategy.

Operationally, the highest risk is that the salvage of the dead Pl will soon rely on the utilization of pulp logs for which there is currently no economic market. However, we are now working to secure a market for pulp logs.

## 7.4 "BEYOND THE BEETLE" – A FOREST MANAGEMENT PLAN FOR THE MID-TERM

In July 2015, the Community Forest Board of Directors began to explore forest management options to shift management of the Community Forest "Beyond the Beetle". The key challenges identified were the declining revenue forecast as sawlog shelf-life ends, the current timber supply shortfall in the mid-term, and lack of suitable data, tools and area-based operating philosophy to create and implement a MPB mitigation plan.

In August 2015, the Board of Directors approved funding for an extensive forest management program to address revenue concerns and mitigating the mid-term timber supply shortfall, all resulting from the MPB attack. The following outlines the forest management activities that will be undertaken.

First we will improve the basic resource data, which includes the acquisition of new forest inventory products including, new FLNRO funded forest cover inventory, BLCF LiDAR imagery, and BLCF sub-unit Pl inventory sampling.

We will review the basic silviculture program and determine how new objectives for both the basic and intensive silviculture program can help mitigate the mid-term timber supply.

We have identified issues with the timber supply netdown process, potentially some forest cover constraints, non-timber objectives and modelling assumptions that may be artificially constraining parts of the landbase. These will be explored further.

A significant environmental program has been included in the forest management program. Biodiversity will be conserved by providing a combination of protection and management to sustain ecological integrity across the landscape. The objectives for environmental management on the Community Forest are to:

- Model (using latest inventory information) species and habitats of concern (including rare) to identify high ecological resource values and prioritize conservation in these areas.
- Assess current and potential management strategies with regards to ecological resource values.
- Propose amendments to land use or Government Regulations where required for Government's consideration.
- Maximize potential ecological value of constraints (and integrate overlapping objectives).
- Examine restoration or enhancement opportunities to meet biodiversity objectives.

Due to the limited amount of time to salvage the remaining Pl stands, an economic model will be created and used to help make decisions on which stands should be harvested as the shelf-life and market place changes.

Finally, this information will be used in a Forest Estate Model to develop a MPB mitigation plan and ultimately be included in a revision of Management Plan 3 and potentially changes to the Forest Stewardship Plan.

Work on the forest management program is now well underway and several projects are complete (Sections 8.5.3 and 8.5.4). The new information is providing needed answers and helping reduce uncertainty of what is happening on the landbase. This is critical as we plan the transition into the mid-term.

This program is expected to be completed in early 2017.

Further details of this program will be provided to FLNRO by the end of February 2016.

# 8. CURRENT FOREST OPERATIONS

## 8.1 BACKGROUND

In forest operations we are driven by the BLCF vision and mission statements, Government objectives for Community Forests, safety considerations, local community values, and economic and operational realities of a market logger.

For the benefits of our local community (jobs), our organization (community values) and the provincial economy (revenue) we are committed to harvest and sell the dead Pl stands to recover the economic value and reforesting the MPB ravaged stands.

For us, it is now also a race between economic shelf-life and biological shelf-life (whichever is shortest) and no one knows which will come first. Either way, we know the operational changes resulting from shelf-life are coming; we just don't know when. This unknown timeline significantly impacts our ability to plan our operations or forecast with confidence.

The following sections outline details of our day-to-day operations.

## 8.2 SAFETY

Safety is a key value for the Community Forest and we are committed to ensuring all activities on the Community Forest are undertaken in a safe and secure manner.

We will comply with all the laws of application required to protect forest workers including, but not limited to, *WorkSafe BC Regulations (Part 26)* and the *Workers Compensation Act*. An Occupational Health and Safety Program that is consistent with the Regulations will be maintained.

We will encourage all contractors and consultants working on behalf of the BCLF to be SAFE[12] certified. In cases where they are not SAFE certified, we will conduct assessments of the company's safety program prior to the commencement of work.

Active hauling on logging roads is a major safety concern for the BLCF with regards to staff, contractors, and the general public. To address this hazard the we will:

- Ensure that all active haul roads are signed and road radio channels are clearly marked.
- Ensure that all active haul road signs are kept current.
- Incorporate an active haul road warning on the BLCF website to inform the general public of active hauling areas.

[12] The BC Forest Safety Council created SAFE (Safety Accord Forestry Enterprise) to assist companies in improving their safety performance and help to evaluate company safety programs using industry recognized audit protocols. SAFE certified companies are shown to be reliable, predictable and efficient.

## 8.3 FOREST CERTIFICATION

Schedule D, Section 1.03 of the Community Forest Agreement states that the BLCF must be certified under a recognized forest certification process no later than March 31, 2017.

We are committed to achieving forest certification and are currently working to determine which certification best meets the needs of the Community Forest. We believe we can meet the deadline of March 31, 2017.

## 8.4 PLANNING

The Community Forest operates under a variety of plans, some are required by Government and some are internal. In order to track multitude of goals, zones, reserves, etc., we use GIS to store and manage spatial data.

As well, we have established a relationship with a consultant to provide Patchworks[13] software and support for forest estate modelling and strategic operational planning.

### *8.4.1 Strategic Land and Resource Plans*

The Community Forest is within the area of three strategic land and resource plans:

- Lakes District Land and Resource Management Plan
- Lakes South Sustainable Resource Management Plan
- Lakes North Sustainable Resource Management Plan

For additional information on the Strategic Land and Resource Plans see Appendix 8.

### *8.4.2 Forest Stewardship Plans*

Forest Stewardship Plans are the only operational plan legally required for forest operations under the *Forest and Range Practices Act*. The term of the Forest Stewardship Plan is five years but may be extended a further five years with the written notice of the Minister in circumstances specified by regulation. The plan will show the Forest Development Units and outline the intended results or strategies for the objectives set by the government.

BLCF Forest Stewardship Plan was submitted on June 22, 2015 and approved by FLNRO on July 20, 2015.

### *8.4.3 Other Plans, Prescriptions and Permits*

Other plans, prescriptions, and permits include site plans, stand management prescriptions, road permits, cutting permits, deactivation prescriptions, and special use permits. These are described below.

[13] Patchworks is a spatially explicit harvest scheduling optimization model developed by Spatial Planning Systems in Ontario. It can develop spatially explicit harvest allocations that explore trade-offs between a broad range of conflicting management and harvest goals.

**Site Plans** are prepared for all proposed cutblocks and roads prior to harvesting. Under the *Forest and Range Practices Act* a Site Plan must include:

- Identify the approximate locations of cutblocks and roads.
- Be consistent with the Forest Stewardship Plan, the Act and the Regulations.
- Identify how the intended results or strategies described in the Forest Stewardship Plan apply to the site.

**Road permits** are issued by FLNRO and are required prior to road construction on the Community Forest. They must be in an FDU of an approved Forest Stewardship Plan and consistent with the Community Forest Agreement.

**Cutting permits** are also issued by FLNRO. They provide the authority to harvest timber and must be in an FDU of an approved Forest Stewardship Plan and consistent with the Community Forest Agreement.

### *8.4.4 BLCF Operational Planning*

Our current annual operating plans are being revised, and 5-, 10-, and 20-year plans based on information from a spatially explicit forest estate modelling tool, such as Patchworks, will also be developed.

We are also working on a new forest management program and forest estate modeling using the Patchworks model. During the forest estate modelling various scenarios will be run to examine opportunities, as well as the consequences of various assumptions. This will lead to the development of a Mitigation Plan which is envisioned to:

- Detail all of the improvements in the forest management data.
- Provide up to date land base summaries.
- Detail proposed changes to forest management practices.
- Detail proposed changes to future silviculture practices.
- Propose changes to environmental protection practices.
- Revise the timber supply forecast and spatial harvest plan.
- Communicate to agencies and guide training of staff and contractors.

A sufficient number of cutting permits will be submitted to ensure an adequate log supply to avoid any unnecessary slow-downs in harvesting.

## 8.5 RESOURCE INVENTORIES

Using the data produced by the resource inventories, models are used to characterize the existing and forecast future forest conditions. This information is used in many settings including the analysis of fibre supply, evaluation of tenure options and business opportunities, simulation of forest carbon dynamics, design of silviculture regimes, timber harvest planning, state of forest reporting, habitat mapping, wildfire risk

assessment, management of visual resources, biodiversity assessment, and much more.[14]

### 8.5.1 Accumulating the Information

Since the beginning of the Community Forest, Burns Lake Community Forest Ltd. has acquired, accumulated, and maintained a number of inventories of timber, recreation, and cultural resources. This data is stored on an in-house GIS system and is used for strategic and operational planning.

A list of the resource inventory information for the BLCF is included in the table below.

Table 6 – BLCF Resource Inventories

| Resource | Coverage Name | Resource | Coverage Name |
|---|---|---|---|
| Biogeoclimatic Zones | bec_poly | Landscape Units | rmp_lu_svw |
| Biodiversity Overlaps | Biodiversity_Overlaps | RESULTS Reserves | rslt_fcres |
| Community Forest Boundary | K1A_Boundary | RESULTS Forest Cover inventory | rslt_opngs |
| Visual Landscape Inventory | rec_vlnd | BLCF Blocks | s_blk |
| Existing Road Buffers | exist_buf | BLCF Reserves | s_blk_res |
| Deer Winter Habitat | lakes_deer | Grizzly Bear Habitat | s_grizzly |
| Mountain Goat Draft Ungulate Winter Range | lakes_goats | Seed Planning Zones | spz_gomtry |
| Moose Winter Habitat | lakes_moose | VRI in Community Forest | VEG_R1_PLY_polygon |
| Old Growth Management Areas | ogma_leg_c | PEM in Community Forest | pem_4510_ ecp |
| Private Land | f_own | PEM not in CF PEM or Woodlots TEM | pem_gap |
| Riparian Management | rip_final | TEM in Woodlots | tem_wl |
| Lakes North Connectivity Corridors | RMPSLR_SVW_polygon | LiDAR | |
| Lakes South Connectivity Corridors | rmp_lg_pl | | |

### 8.5.2 Data Exchange Agreement

As an area-based tenure holder, we are moving towards co-maintaining all resource inventory data with FLNRO. This will be done through data exchange agreements. We currently have a data exchange agreement (dated August 28, 2015) in place with the Forest Analysis and Inventory Branch for orthophotos and stereo imagery and are working on establishing a more detailed data exchange agreement with FLNRO.

### 8.5.3 LiDAR[15]

LiDAR and related imagery was flown for the Community Forest in 2015 and the data is currently being processed. The data collected includes:

[14] https://www.for.gov.bc.ca/hfp/mountain_pine_beetle/ForestInventoryStrategicPlan_Feb222013.pdf

[15] LiDAR is an airborne remote sensing technology used to make high-resolution maps, with many applications including forest management. In forest management, it finds applications in geomatics, archaeology, geology, contour mapping, road layout, mapping areas or visual management, growth & yield, etc.

- A series of LiDAR product tiles (1 m contours, digital elevation model, canopy height model, bare earth model).
- 4 colour band imagery including infrared (IR).
- Digital orthophotos.
- Stereo pair photos.

Processing of the LiDAR data is required before the data can be used in management and operational planning.

### *8.5.4 Forest Inventory*

FLNRO is currently completing a new Vegetation Resource Inventory (VRI)[16] for the Lakes TSA, including the Burns Lake Community Forest. This inventory classification includes new stand structure attributes and information on the MPB attacked areas. We will use this new inventory once it is publicly released.

**Mixed Species Sub-Unit Inventory**

In the fall of 2015, we undertook a Mixed Species Sub-Unit Inventory[17] to answer the question, is there enough total volume in the BLCF to develop a new salvage program that focuses on partial cutting Pl from mixed-species stands?

This information is being used in conjunction with known information on the Pl stands currently being salvaged to:

- Estimate the amount of dead Pl still remaining on the Community Forest.
- To rationalize an increase in the salvage program.
- Specifically, to provide the data to support the expansion of the salvage program into mixed stands using understory protection regimes.

Preliminary results were available by the end of October 2015. The results are discussed and used in the Harvest Strategy (Section 7.3.3).

Further analysis is underway on this data to help define the understory protection program opportunities.

[16] FLNRO maintain a data set of inventory polygons with their attributes that map land cover (and stand type) over the surface of the Province. Polygon data is updated periodically and released each year in January for download by data users within and outside of Government. FLNRO has an active program to update the Province's forest inventory maps. Both conventional photo interpretation and new approaches to inventory mapping are being used. Since the mid-1990's, the inventory polygon data has been collected to the VRI standard.

[17] Sample & Work Plan for the Pl-Sx Mixed-Species Stand Inventory. Prepared by: Jim Thrower, PhD, RPF. 2015 Sept 30.

### *8.5.5 Predictive Ecosystem Mapping (PEM)*

PEM is a computer modeling approach to ecosystem mapping where existing knowledge of ecosystem attributes and relationships is used with existing geographical data sources and expert knowledge to predict ecosystem representation in the landscape.
Ecosystem maps, along with associated interpretations, supply valuable information for many uses, particularly planning resource allocation. The maps can be used to meet many *Forest and Range Practices Act* requirements, including landscape unit planning (OGMAs), timber supply review, and range use planning.

From a wildlife/biodiversity perspective, PEM is used in the development and application of the Biodiversity guidelines, the Riparian Management Area guidelines, and the Identified Wildlife Management Strategy (wildlife habitat areas). Common interpretative themes include Wildlife Habitat Ratings[18] and Sensitive Ecosystem Inventory[19].

From a forestry perspective, PEM can be used in growth and yield, silviculture and in the forest estate modelling process.

The Burns Lake PEM is comprised of 7,038.5 ha from the 2007 Lakes PEM[20] and 85,260.3 ha from 2009 BLCF PEM[21]. Data cleaning joined the two PEMs into a single composite product.

### *8.5.6 Scenic Areas*

The majority of the Community Forest area consists of rolling hills down to valley bottoms often occupied by lakes of various sizes. Much of Community Forest is visible from Highways 16 and 35. A large portion of the harvestable timber lies on slopes that are visible from valley bottom highways and lakes, and therefore harvesting can easily impact the scenic quality.

Visual Quality Objectives (VQOs) have been set for the entire Community Forest area

[18] Wildlife habitat ratings define the relative importance of various ecological units to wildlife. The ratings reflect a habitat's potential to support a particular species by comparing it to the best available for that particular species in the province.
[19] The purpose of the Sensitive Ecosystems Inventory is to identify remnants of at risk and ecologically fragile terrestrial ecosystems and to encourage land-use decisions that will ensure the continued integrity of these ecosystems.
[20] Timberline Natural Resources Group. 2007. Predictive Ecosystem Mapping in the Lakes Timber Supply Area - Final Report
21 Timberline Natural Resources Group. 2009. Predictive Ecosystem Mapping of Burns Lake Community Forest

through Section 7 (1) & (2) of the Government Actions Regulation (GAR) of the *Forest and Range Practices Act*. This Order was effective April 1, 2010 and the objectives have been incorporated into the Community Forest inventories and plans.

## 8.6 SILVICULTURE

As forest management shifts “Beyond the Beetle”, the basic silviculture program and any funding for intensive silviculture must become focused on meeting key manage objectives.

### *8.6.1 Key Management Considerations for the Silviculture Program*

Given the forest management environment facing the Community Forest “Beyond the Beetle” and local expectations of the Community Forest, the silviculture program may be different than on other adjacent management units. The following should be considered:

- We are market loggers and have no associated milling capacity, therefore basic silviculture regimes should be flexible and able to meet future wood requirements (as best as they can be defined).
- The goal of mitigating or improving the mid-term timber supply forecast should be the focus of basic silviculture regimes and intensive silviculture programs.
- The silviculture program should be able to incorporate community values at the stand level.
- Certification may require modifications to silviculture regimes to meet specific certification requirements or indicators.
- The silviculture program should also help minimize the susceptibility of the forest to future forest health infestations and address considerations for climate change.
- At times, the intensive silviculture program may be adapted to use Government short-term job creation funding, which may have its own stand priorities that are different than the timber supply focused community forest goals. This is acceptable since we also have an objective for local job creation.
- Silviculture programs should incorporate site-limiting factors into decision-making processes, be cost effective, meet Ministry approval, and limit the Community Forest’s financial and legal liabilities.

### *8.6.2 Basic Silviculture Practices*

The following material outlines briefly the current silviculture practices on the Community Forest.

**Pre-Harvest Planning**

Many of the characteristics of the future stand will be determined by the silviculture system chosen to meet the goals for future wood supply. The choice of species, density, natural regeneration, or planting all have an impact.

**Site Preparation**

Site preparation is carried out to create plantable spots and facilitate planting (break up slash accumulations, reducing competing vegetation, improving soil growing conditions), to create

favourable seedbed for natural regeneration, or to reduce fire hazard as required. This may be accomplished by treatments such as mechanical site preparation (excavator piling or mounding primarily). Usually the burning of debris piles at landings and along roadsides is all that is required to prepare for planting. Use of this logging residue for biomass purposes would negate the necessity for burning of piles.

**Seed Supply**

A sufficient seed inventory will be maintained to supply the projected seedling requirements for a ten-year period. We generally use genetically improved Sx seed and locally sourced Pl seed.

Seedlings are grown under contract by private nurseries. Styro-block container grown seedlings are used and the preferred stock types are PSB 310B and PSB313B.

**Stocking Standards**

Forests will be regenerated according to the standards in the FSP. It is our goal to manage to targets, not to minimums.

**Planting**

Target stocking levels will generally be achieved through planting. Natural regeneration will add to species composition and assist in addressing biodiversity issues. A mixture of ecologically suitable conifer species will be planted dependent on subzones and site series. We have traditionally planted Pl and Sx but will be adding Fdi and Lw to the species composition on suitable sites to address forest health and climate change concerns.

Over the past 15 years the Community Forest has planted over 12 million tree seedlings.

**Brushing**

The purpose of brushing treatment is to control, temporarily, the growth of woody or herbaceous vegetation that is competing with the preferred crop trees. During the period of stand establishment, brushing treatments will be justified to ensure adequate survival and growth. The strategy for brush control will emphasize early identification of possible competition and timely application of treatment.

Table 7 – BLCF Silviculture Summary

| Year | Area Harvested (ha) | Area Planted (ha) | Area Site Prep (ha) | Trees Planted | Areas Declared FG (ha) | Brushing (ha) | Fertilized (ha) |
|---|---|---|---|---|---|---|---|
| 2000 | 23 | 9 | | 13,060 | | 23 | |
| 2001 | 82 | 41 | | 74,322 | | 43 | |
| 2002 | 53 | 83 | | 159,550 | | | |
| 2003 | 82 | 189 | | 314,565 | | | |
| 2004 | 198 | 87 | 93 | 178,414 | | | |
| 2005 | 727 | 289 | 814 | 390,906 | | | |
| 2006 | 1,676 | 401 | 690 | 511,561 | | | |
| 2007 | 2,460 | 1,337 | 2,440 | 1,822,432 | | | |
| 2008 | 1,191 | 1,854 | 3,999 | 2,354,821 | | 3 | |
| 2009 | 1,085 | 3,026 | 2,166 | 2,281,760 | | | |
| 2010 | 909 | 733 | 694 | 1,021,164 | 37 | | |
| 2011 | 420 | 428 | 1,532 | 611,720 | 10 | 3 | |
| 2012 | 274 | 735 | 139 | 677,020 | 2 | 20 | |
| 2013 | 756 | 420 | 927 | 598,210 | 116 | 1 | |
| 2014 | 1,044 | 501 | 786 | 663,330 | 226 | 13 | 261 |
| 2015 | 483 | 597 | 430 | 1,000,070 | | | |
| Total | 11,463 | 10,730 | 14,710 | 12,672,905 | 391 | 106 | 261 |

**Surveys and Reporting**

Silviculture surveys will be done at various stages of stand establishment and for as long as fifteen years after harvesting. The results of these surveys are used to assess the status and stocking of regeneration, as well as progress towards completing basic silviculture obligations. The surveys are also used to plan any additional silviculture treatments to ensure that basic silviculture is achieved. The status and survey results are entered into the silviculture record management system (PhoenixPro).

We are required under Section 86 of the *Forest Planning and Practices Regulation* to submit the following to FLNRO prior to June 1 each year, using the RESULTS database:

- Pertinent information about seeds used to grow seedlings planted.
- An update of the forest cover inventory for each area in which requirements for regeneration were met, or requirements for regeneration date have not been met but regeneration date has passed.
- An update of the forest cover inventory for free growing stands that have been declared free growing or where free growing stands have not been achieved but the free growing date has passed.
- A summary of any silviculture treatments that were carried out.

### *8.6.3 Intensive Silviculture*

Intensive, incremental, and enhanced are all words that are used to describe silviculture activities that are additional to Basic Silviculture.

As shown in Table 7, minimal intensive silviculture has been implemented on the Community Forest to date.

### *8.6.4 Regeneration Delay*

Average regeneration delay for all stands (naturally and artificially regenerated) was estimated using the FLNRO RESULTS database for all polygons harvested under the K1A license. The difference between the disturbance date and regeneration declaration date was estimated to be the Regeneration Delay. The current regeneration delay was estimated at 2.6 years for all stands and the reforestation program is 95% artificial (planting) and 5% natural regeneration.

### *8.6.5 Not Satisfactorily Restocked (NSR)*

Areas that are not satisfactorily restocked are classified as NSR. The BLCF does not have a backlog of NSR stands or hold any silviculture obligation for historic NSR stands.

## 8.7 HARVESTING

### *8.7.1 Harvest Planning*

The MPB essentially ended long-term operational planning on the Community Forest as all efforts were focused on salvaging the deal Pl. As the end of sawlog shelf-life approaches and we transition to the mid-term, strategic and operational planning will become critical.

During 2016, the results of the forest management investments started in August 2015 should provide important new information. The Forest Estate Modelling with information from land use plans, economic data, new wildlife and biodiversity information, the new VRI and a much better understanding of the harvesting and marketing challenges of the dead Pl (sawlogs, pulp and bioenergy fibre), will be used to run a variety of scenarios addressing shelf-life, economics, and strategies to mitigate the timber supply shortfall. Ultimately, this will result in an annual operational and 5-year plan, with 10- and 20-year tactical plans coming from the forest estate modelling and an update to Management Plan 3.

### *8.7.2 Harvest Priorities*

Once the increase in AAC is approved by FLNRO, it will be used to continue and expand salvage operations in order to recover the economic value from the dead Pl and to ensure as much as possible of the Community Forest area is regenerated.

The uncertainty of marketplace acceptance of dead Pl sawlogs requires the development of markets for all parts of the fibre profile, and contingency plans, in order to meet potential market changes:

- As market loggers, we must have “green” wood permits ready to implement if the market changes suddenly.
- Our first priority is to focus on 70%+ Pl stands for as long as possible since Pl sawlogs are the key to paying for the reforestation program.

- The next priority is the salvage of mixed Pl stands through understory protection. The stands must be selected to produce some sawlogs, as well as pulp logs and to incur limited silviculture costs.
- The role and importance of pulp logs sales will increase substantially as sawlog shelf-life decline continues. Pulp logs can add significantly to the revenue stream, however, pulp log revenue/ha cannot pay for silviculture costs alone. The focus will be recovering pulp logs from stands with 70%+ Pl and then mixed stand salvage on stands with some sawlog revenue.

### *8.7.3 Harvest Systems*

The terrain of the Community Forest is generally very well suited to conventional ground based harvesting systems. The majority of the harvesting today is done by feller bunchers, grapple skidders and butt & top loaders for roadside harvesting.

Many of the steeper slopes have harvesting restrictions/constraints such as terrain, stability and visual quality objectives. Steeper slopes will be harvested as required.

## 8.8 FOREST ROADS

### *8.8.1 Road System Planning and Development*

The road system has been developed progressively over the past 15 years. Many mainline roads were in existence when the Community Forest pilot area was awarded (road systems constructed by either the Ministry of Forests or licensees) and the majority of the system was designed for highway hauling. Some road systems have been upgraded to permit off-highway loads. Recently, the use of “hayracks” has necessitated minor changes to roads, and additional “daylighting” for visibility.

The road system is designed to transport logs to the market either east or west of Burns Lake via Highway 16. Sawlogs may end up at any of the three local mills or mills in adjacent communities.

No new major road developments are planned for the first 5 years of this plan, but there will be many smaller road systems and spurs built during the plan period. All access structures will be built to the regulatory requirements in force at the time.

Grass seeding is carried out on new roads following construction to minimize erosion as per the forest Stewardship Plan.

### *8.8.2 Maintenance*

Maintaining the road system is necessary to permit safe operation of logging trucks, to provide safe access to the public, and to prevent environmental damage.

This is achieved by completing these activities:

- Grading road surfaces.
- Clearing ditches.
- Cleaning culverts to ensure adequate water flow.
- Inspecting and maintaining bridges and major culverts.
- Removing slide and slough material.
- Stabilizing road banks.
- Brushing roadsides to maintain adequate visibility.
- Falling dangerous snags adjacent to roads.
- Spot gravelling.
- Sign maintenance.

Regular inspections are completed on roads and the maintenance levels are somewhat dependent on use. For example, roadside brushing will be completed quite frequently on the main roads but infrequently on lesser-used spurs. Inspections are completed on roads at least annually in the spring as the snow is melting to ensure drainage structures are working properly.

### *8.8.3 Access Management*

Access management refers simply to actions taken to “manage” access to areas. This usually means limiting access, typically for wildlife management reasons. Use of forest roads in the Community Forest is still largely industrial in nature – logging contractors, silviculture workers, and forestry people. However, mining, other resource industry, and private recreational access is increasing. Timber development generally requires increased road access. The increased traffic can lead to disturbance of and additional hunting pressure on wildlife. Actions to reduce wildlife disturbance and hunting pressure may include avoidance of road construction, road deactivation, or administrative road closures.

### *8.8.4 Deactivation*

Roads are generally considered to be an investment in the landbase and thus will be protected like any other forest investment until the next entry. Roads will be deactivated for purposes such stability, erosion control, or other environmental considerations.

## 8.9 SOILS AND SOIL CONSERVATION

Our practices for soil and soil conservation will be in compliance with the *Forest and Range Practices Regulation*, as amended from time to time. This will include soil disturbance limits,

permanent access structure limits, landslide prevention, natural surface drainage patterns, and re-vegetation of roads.

## 8.10 FOREST PROTECTION

### *8.10.1 Fire*

Necessary operations will be continued to protect the Community Forest from fire damage. The goal is to minimize damage from fire in the forested landbase and to maximize the timber salvage from fire damaged stands. Historically, the Community Forest has experienced a relatively low frequency of wildfires. Most fires that have occurred have resulted from lightning strikes. The fire protection program consists of fire prevention, detection, and control.

Fire suppression and prevention measures will be done in accordance with the *Wildfire Act and Regulation*. A high standard of firefighting organization will be maintained during the fire season.

**Prevention**

Fire protection awareness and preparedness will be reflected in all forest activities carried out during the fire season. Strategies will be implemented that minimize the buildup of harvest debris. Harvesting close to the Village will be primarily during September-November to reduce debris in this area during the wildfire season.

The BC Wildfire Service supports the FireSmart Canada program for communities across the Province. The program provides practical tools and information for use by interface residences, local government, land use planners, firefighters, and industries to reduce the impact of wildfire. We will provide financial and in-kind support to local organizations and First Nations to support the implementation of this program for the Community Forest and surrounding area to reduce the risk of wildfire.

**Fire Pre-Organizational Plan**

We will update our fire plan content annually to update contact information and equipment and supply lists. We will also provide contact details by April 1 each year in accordance with the *Wildfire Regulation.*

**Fire Detection**

Our goal is to detect all wildfires as soon as possible, and to control wildfires by 10:00 am of the day following detection.

Fire weather stations operated by FLNRO are used to calculate fire weather indices. When the fire danger rises to extreme, forest closure and access restrictions may be applied.

### *8.10.2 Forest Health*

A variety of insects and diseases occur naturally in the forests of the BLCF (Table 8). Table 9 shows the ranking of pest species by potential impact on forest management within the Nadina Forest District. The incidence and level of endemic activity is often higher in mature stands.

Table 8 – Common Pests and Diseases of the BLCF

| Type | Pest | Susceptible tree species |
|---|---|---|
| Insects | | |
| Bark beetles and borers | Spruce bark beetle (Dendroctonus rufipennis)<br>Mountain pine beetle (Dendroctonus ponderosae)<br>Western balsam bark beetle (*Dryocoetes confuses*) | Sx<br>Pli<br>Bl |
| Tissue feeders | Spruce weevil (*Pissodes strobi*)<br>Pine terminal weevil (*Pissodes terminalis)*<br>Engraver beetles *(Ips spp.)* | Sx<br>Pli<br>Pli |
| Diseases | | |
| Root diseases | Rhizina root disease (*Rhizina undulata* )<br>Tomentosus root disease *(Inonotus tomentosus)*<br>Warren's root collar weevil (*Hylobius warreni)* | Seedlings<br>Conifers<br>Pli, Sx seedlings |
| Stem rusts | Comandra Blister Rust (*Cronartium comandrae)*<br>Stalactiform Blister *Rust (Cronartium coleosporiodez)*<br>Western Gall Rust (*Endocronartium harknessii)* | Pli |
| Butt rots | *Fomitopsis pinicola*<br>*Phaeolus schweinitzii* | conifiers |
| Foliar Diseases | Dothistroma needle blight *(Dothistroma)*<br>*Phaeoseptoria contortae*<br>*Lophodermella concolor*<br>*Rhizosphaera kaukhoffii*<br>Fireweed rust (*Pucciniastrum epilobii*) | Pli<br>Pli<br>Pli<br>Sx<br>true firs |
| Others | Lodgepole pine dwarf mistletoe *(Arceuthobium americanum)*<br>Mammal damage | Pli<br>All seedlings |

Table 9 - Ranking of Pest Species by Potential Impact on Forest Management in the Nadina District[22]

| Very High | High | Medium | Low | Very Low |
|---|---|---|---|---|
| Spruce bark beetle | Mountain pine beetle | Tomentosus root disease | Mammal damage | Rhizina root disease |
| | Western balsam bark beetle (Morice TSA) | Warren's root collar weevil (Lakes TSA) | Warren's root collar weevil (Morice TSA) | Spruce leader weevil |
| | Hard pine stem rusts | Various insect defoliators (Morice TSA) | Lodgepole pine dwarf mistletoe | Various insect defoliators (Lakes TSA) |
| | | Various foliar diseases of conifers | Pine terminal weevil (Lakes TSA) | Butt rot |
| | | | Western Balsam bark beetle (Lakes TSA) | Pityophthorus spp |
| | | | Dothistroma | |

Spruce bark beetle attack of mature Sx stands was problematic on the Community Forest in early 2000. Small patch sanitation and pheromone baiting was used. This problem subsided somewhat since, but provincial data shows higher numbers of spruce bark beetle in 2014 and 2015. There are currently a few scattered areas of spruce bark beetle in the Boer Mountain area.

[22] Ranking of pest species updated through personal communication with Leslie Moore, Silviculture Specialist, Nadina District. January 2016.

It is not possible, nor is it desirable, to eradicate pests from the forest. The strategy will be to attempt to maintain pests at endemic levels by preventing the conditions that favour build-up and spread. Measures to prevent epidemic conditions, or control epidemics if they occur will include:

- Prompt harvesting of windthrow and use pheromone attractants (spruce bark beetle) as required.
- Salvage harvesting of bark beetle or other heavily damaged stands (pine and spruce bark beetle); minimize unsalvaged losses by harvesting beetle-killed trees through large-scale operations.
- Reforestation with non-host and/or mixed species (hard pine rusts, root diseases, foliar diseases).

## APPENDIX 1 – COMMUNITY FOREST HISTORY

Burns Lake Community Forest Ltd. was incorporated in December 1998 in response to the Ministry of Forests' Community Forest Request for Proposals. Establishment of the company followed a comprehensive round of public consultations in which local residents clearly indicated that ownership of the requested forest license should belong to everyone living in the Lakes District, and not a single political entity or special interest group. Local efforts to obtain a conditional Community Forest Agreement were rewarded in the summer of 2000, when the Ministry of Forests announced that the Village of Burns Lake was one of four organization awarded a Community Forest Pilot Agreement.

Our initial pilot license (K1A) was signed July 7, 2000 and consisted of 23,325 ha of Crown Land. The Community Forest has undergone several expansions since that time, and now consists of 92,062.5 ha of Crown land. Burns Lake Community Forest Ltd. was awarded a 25-year Long Term Community Forest Agreement in April 2005, the first of its kind in the province. This Agreement was revised and renewed in October 2014 for a further 25 years.

The initial AAC of the Community Forest was 23,677 $m^3$, increasing to 54,026 $m^3$ between 2002 and 2005. In 2005, our AAC was increased (through an uplift) to 300,000 $m^3$ per year. Subsequent uplifts were granted to allow a harvest of 500,000 $m^3$ for both 2006 and 2007, and 250,000 $m^3$ for 2008 and 2009. Uplifts were granted to accommodate the salvage of MPB-killed and infested areas, and to salvage a large blowdown area. In February 2011 the AAC was set at 260,000 $m^3$ until December 31, 2013, at which time the AAC was reduced to 100,000 $m^3$ per year pending a new Management Plan.

Management Plan 1 for the Community Forest was approved on September 20, 2000. In January 2010, FLNRO requested the development of Management Plan 2 for the period of 2010-2015, which was approved in February 2011. In August 2013, FLNRO requested an amendment to Management Plan 2 to address changes in the Community Forest Agreement and Management Plan requirements. The amendment to Management Plan 2 was submitted in December 2013.

# APPENDIX 2 – MANAGEMENT PLAN 3 PUBLIC REVIEW

The consultation for Management Plan 3 is detailed below.

April 17, 2015 – ads in local paper announcing development of Management Plan 3 and asking for public and First Nations input.

April 20, 2015 – letters were mailed to stakeholders (26) and letters plus draft Management Plan mailed to First Nations representatives (22).

April 22, 2015 – email with attached draft Management Plan and Timber Supply Review sent to First Nations Consultants.

May 15, 2015 – email to First Nations consultants with new Timber Supply Review Analysis and updated draft Management Plan.

July 7, 2015 – A public open house was hosted to allow for input and public consultation on Management Plan 3. Only one individual attended and provided no input.

During the consultation process and time period, no input or comments were received from the public, stakeholders, or First Nations.

# APPENDIX 3 – FIRST NATIONS

**Wet'suwet'en First Nations & Office of Wet'suwet'en Hereditary Chiefs**
Representatives from both the Wet'suwet'en First Nation and the Office of Wet'suwet'en Hereditary Chiefs have designated seats on the Community Forest Board of Directors. These communities have a traditional area that is south of Burns Lake to Ootsa Lake, west to the western boundary of the Morice Lake Park, and north to almost Smithers. There are 9 Reserve Communities in the traditional territory and many are located in the Community Forest. Bands in the Burns Lake area have approximately 140 members with half living on the Reserves.

**Burns Lake Band**
The Burns Lake Band is also known as the Ts'il Kaz Koh First Nation. A Representative from the Burns Lake Band has a designated seat on the Community Forest Board of Directors. The Band has a traditional territory that is west of Burns Lake to approximately the west tip of Francois Lake, North to Babine Lake, and south to the north side of Francois Lake, and east to Rose Lake. There are 4 Reserve Communities totaling 184.6 ha. The Band has approximately 150 members that live on and off the Reserves

**Stellat'en First Nation**
The Stellat'en First Nation has a traditional territory which is east of Fort Fraser to the east end of Francois Lake, south to Ootsa Lake and north to the Village of Burns Lake. There are 2 Reserves totaling 834.6 ha. The Stellat'en First Nation has approximately 506 registered members with half live on the Reserves. The Community Forest consults with and provides communication to the Stellat'en First Nations.

**Yekooche First Nation**
The Yekooche First Nation is located on the north end of Stuart Lake and has 4 Reserves totaling 180 ha. There are approximately 220 Band members with around 130 living on the Reserves. The traditional territory of the Yekooche First Nation is located on the Community Forest. The Community Forest consults with and provides communication to the Yekooche First Nations.

**Lake Babine Nation**
Lake Babine Nation is located along the shores of Babine Lake, south to the Village of Burns Lake. There are 27 Reserves and 3 Communities that are inhabited year round with approximately 2,500 members. The main community is Woyenne which is located within the municipal boundaries of the Village of Burns Lake and has approximately 2,207 residents. The traditional territory of this Nation is located on the Community Forest. The Community Forest consults with and provides communication to the Lake Babine Nation.

**Skin Tyee Band**

The Skin Tyee Band is a member of the Wet'suwet'en First Nation. The Band has 6 Reserves with approximately 170 members living on and off the Reserves. The traditional territory of the Skin Tyee Band is located on the Community Forest. The Community Forest consults with and provides communication to the Skin Tyee Band.

**Nee Tahi Buhn Band**

The Nee Tahi Buhn Band is a member of the Wet'suwet'en First Nation. The Band has 5 Reserves with the main Reserve being located on Francois Lake. There are approximately 120 members living on and off the Reserves. The traditional territory of the Nee Tahi Buhn Band is located on the Community Forest. The Community Forest consults with and provides communication to the Nee Tahi Buhn Band.

# APPENDIX 4 – ANNUAL REPORTS

The following provides a short summary of the information contained in the Annual Reports for the Burns Lake Community Forest and the activities that have occurred on the Community Forest since 2000.

Table 10 – BLCF Community Donations

| Year | Donation | Year | Donation |
|---|---|---|---|
| 2001 | $25,000 | 2009 | $710 |
| 2002 | $28,575 | 2010 | $17,074 |
| 2003 | $27,000 | 2011 | $53,239 |
| 2004 | $35,520 | 2012 | $65,418 |
| 2005 | $1,328,372 | 2013 | $2,000 |
| 2006 | $234,753 | 2014 | $75,326 |
| 2007 | $131,500 | 2015 | $268,505 |
| 2008 | $105,222 | | |
| **Total $2,398,214** | | | |

Table 11 – BLCF Silviculture Activities

| Year | Area Harvested (ha) | Area Planted (ha) | Area Site Prep (ha) | Trees Planted | Areas Declared FG (ha) | Brushing (ha) | Fertilized (ha) |
|---|---|---|---|---|---|---|---|
| 2000 | 23 | 9 | | 13,060 | | 23 | |
| 2001 | 82 | 41 | | 74,322 | | 43 | |
| 2002 | 53 | 83 | | 159,550 | | | |
| 2003 | 82 | 189 | | 314,565 | | | |
| 2004 | 198 | 87 | 93 | 178,414 | | | |
| 2005 | 727 | 289 | 814 | 390,906 | | | |
| 2006 | 1,676 | 401 | 690 | 511,561 | | | |
| 2007 | 2,460 | 1,337 | 2,440 | 1,822,432 | | | |
| 2008 | 1,191 | 1,854 | 3,999 | 2,354,821 | | 3 | |
| 2009 | 1,085 | 3,026 | 2,166 | 2,281,760 | | | |
| 2010 | 909 | 733 | 694 | 1,021,164 | 37 | | |
| 2011 | 420 | 428 | 1,532 | 611,720 | 10 | 3 | |
| 2012 | 274 | 735 | 139 | 677,020 | 2 | 20 | |
| 2013 | 756 | 420 | 927 | 598,210 | 116 | 1 | |
| 2014 | 1,044 | 501 | 786 | 663,330 | 226 | 13 | 261 |
| 2015 | 483 | 597 | 430 | 1,000,070 | | | |
| Total | 11,463 | 10,730 | 14,710 | 12,672,905 | 391 | 106 | 261 |

**Annual Report 2000**

- The Village of Burns Lake was awarded a Community Forest Pilot Agreement on July 7, 2000.
- Forest Management efforts were focused on forest health related activities due to a Spruce Bark Beetle outbreak.
- The Community Forest lobbied the Provincial Government for fair stumpage rates for Community Forests and small scale salvage operations, and for more realistic operating allowances.

**Annual Report 2001**

- Stumpage rates remained unrealistically high in fall 2000 and the Community Forest was on brink of a crisis. Two of the four employees were laid off.
- In January 2001 stumpage rates were reduced.
- The Community Forest hosted a school-based program providing high school students practical experience in forest management. Five students were employed constructing trails within the Community Forest.
- Comfor Management Services purchased a new office building in the Village of Burns Lake.
- The Community Forest spent $1.05 million on services in the Lakes District and generated 14,268 man-hours of employment for a total of 70 individuals.

**Annual Report 2002**

- The Community Forest assumed stewardship responsibility for a provincial park and more than two dozen recreation sites and trails previously maintained by the Ministry of Forests. This created employment for local residents and ensured some of the Lakes District most popular recreation sites remained open.
- The Community Forest spent almost $400,000 on services in the Lakes District and generated more than 32,000 man-hours of employment.
- Approximately 53,000 $m^3$ of beetle infested wood was harvested from the Community Forest.
- Almost all work on the Community Forest was completed by local residents and 3 students were hired to conduct a variety of recreational and forestry projects.
- Representatives from the Community Forest met 3 times with the Minister of Forests to discuss various aspects of provincial forest policy. During these meetings the community's needs and concerns were brought to the attention of the Minister.

**Annual Report 2003**

- Significant adjustments in stumpage rates, appraisal allowances, and flexibility were made by the Provincial Government *Bark Beetle Regulation*. This assisted the Community Forest financially and operationally.
- The Community Forest spent almost $200,000 on services in the Lakes District and generated over 31,000 man-hours of employment.
- Stewardship responsibility was assumed for 2 provincial parks, as well as, 29 recreation sites and 8 recreation trails previously maintained by the Ministry of Forests. This created economic benefit to the community and employment for at least 2 local residents, while ensuring popular recreation sites remained open to the public.
- Representatives from the Community Forest met with the Minister of Forests to discuss various aspect of provincial forest policy.

**Annual Report 2004**

- Burns Lake Community Forest was offered BC's first long-term Community Forest License.
- Approximately 85,000 $m^3$ was harvested under an accelerated rate of cut to deal with the MPB. Harvest was concentrated on salvaging dead Pl trees.
- All of the harvest was sold to local milling companies to help maintain existing levels of employment in local processing facilities.
- The Community Forest created approximately 35,000 man/hours of employment in harvesting, silviculture, road-building, recreation trail construction, and a variety of other activities.
- The Community Forest purchased more than $3.7 million worth of goods and services in the Lakes District.

- Community Forest Staff provided presentations to local schools and participated in school-based activities.

**Annual Report 2005**

- Approximately 286,098 $m^3$ was harvested from the Community Forest and harvesting was concentrated on MPB infested stands.
- The majority of the harvest was sold to local milling companies to help maintain existing levels of employment.
- The Community Forest created approximately 160,00 man/hours of direct employment. An estimated 112 jobs in the community were directly linked to the Community Forest operations.
- The Community Forest purchased more than $14 million worth of goods and services in the Lakes District.
- Community Forest Staff provided presentations to local schools and participated in school-based activities.
- The Community Forest initiated a vegetation resources inventory that was completed in 2007.

**Annual Report 2006**

- The Community Forest was operating under an AAC uplift and harvested 448,000 $m^3$, concentrating on dead Pl stands.
- 250,000 man/hours of direct employment were created by the Community Forest.
- The Community Forest purchased more than $17 million worth of goods and services in the local community.
- Comfor Management Services purchased 160 acres of land and leased it to the local mountain bike club for construction of a mountain bike park.
- A salvage operation was initiated in the Maxan Lake area to salvage extensive blowdown.

**Annual Report 2007-2008**

- Comfor Management Services acquired Endako River Timber Ltd.
- The Community Forest Board of Directors hired a General Manager of all the companies.
- Comfor Management Services took ownership of Sheraton Holdings Ltd.
- Approximately 450 workers were employed to support work on the Community Forest.
- 443,966 $m^3$ was harvested on the Community Forest and 87% was Pl killed by MPB.
- 1,500,000 seedlings were planted on the Community Forest.
- The Community Forest partnered with Royal Roads University on a project to identify non-timber forest products opportunities on the Community Forest.

**Annual Report 2008-2009**

- The Community Forest explored opportunities in silviculture liability transfer and carbon trading. The first silviculture liability transfer agreement was completed and the Community Forest assumed another company's silviculture liabilities in exchange for a fee.
- Sheraton Holdings began construction of a new dowel mill.
- Lakes Communication Inc. began construction of the Endako transmitting tower as part of a campaign to extend wireless internet service to outlying areas.
- 4.5 full-time equivalent positions were eliminated within Comfor Management Services as part of cost-cutting measures.
- 224,000 $m^3$ was harvested from the Community Forest and the majority was delivered to local mills.
- Thousands of man/hours of employment were generated for local residents.
- 2.4 million seedlings were planted on the Community Forest.

**Annual Report 2009-2010**

- The 10 seats on the Community Forest Board of Directors were reduced to 6 seats (3 First Nations and 3 from the Community). The Village of Burns Lake assumed full responsibility for interviewing and appointing individuals to the Board of Directors.
- Comfor Management Services and its subsidiaries underwent massive restructuring. More than 4 full-time equivalent positions were eliminated.
- Land formerly occupied by Whistle Lake Woodlot was amalgamated into the Community Forest.
- The Community Forest declared its first Free-to-Grow plantation.
- 200,000 $m^3$ was harvested from the Community Forest and the majority was delivered to local mills.
- Thousands of man/hours of employment were generated and only local contractors were hired.
- 1.4 million seedlings were planted on the Community Forest.

**Annual Report 2010-2011**

- Burns Lake Community Forest celebrated its 10$^{th}$ anniversary in September 2010.
- Company articles were amended to ensure that First Nations have permanent representation on the Board of Directors.
- Sheraton Holdings Ltd. was temporarily closed due to poor market conditions.
- Dry conditions lead to 2 fires on the Community Forest that were extinguished by the Ministry of Forests.
- The Community Forest participated in a research project evaluating the effectiveness of public engagement in BC Community Forests.
- 150,000 $m^3$ was harvested from the Community Forest. The majority of the harvest was delivered to local sawmills and minor volumes were delivered to the local pellet plant.

**Annual Report 2011-2012**

- The Community Forest streamlined operations to ensure the business stayed economically viable when the AAC was reduced in 2014.
- To maximize local employment and economic benefits, all of Community Forest management, construction and logging activities are preferentially contracted to residents of the Lakes TSA.

**Annual Report 2012-2013**

- Comfor Management sold Sheraton Holdings Ltd.
- Dramatic restructuring of the companies was completed to ensure Comfor Management remained a viable entity, positively contributing to the community.
- An extensive financial and operational analysis was conducted to determine the soundest business model moving forward.

**Annual Report 2013-2014**

- The Board of Directors revised the Policy Manual, Mission & Vision Statements, as well as established Employee and Director Handbooks to reflect current operations.
- A revised donation policy was implemented.
- The Community Forest created local employment opportunities by hiring three local contraction companies to harvest 100% of Community Forest fibre, as well as two seasonal equipment operators for road maintenance.
- Comfor Management Services entered into a 25-year lease with the Burns Lake Fire Training Society for a piece of property located on the old Endako River Timber site. The society intends on establishing a firefighter training facility.
- The Forest for Tomorrow Program completed 197 ha of layout with treatment to start next fiscal year.
- BLCF hosted the first annual Public Information Open House on July 7, 2014.

# APPENDIX 5 – GUIDE OUTFITTERS AND TRAPPERS

## Trappers

The Community Forest retrieved a spatial coverage of the licensed trapper lines in the Skeena Region in January 2016 from the Databc website[23]. This coverage was used to determine the licensed trappers using the Community Forest. The Community Forest also maintains a list of First Nations trappers that operate on the Community Forest.

## Guide Outfitters

A number of Guide Outfitters operate on the Community Forest. A list of the current Guide Outfitters is maintained at the Community Forest office.

[23] http://catalogue.data.gov.bc.ca/dataset/traplines-of-british-columbia

# APPENDIX 6 – TIMBER SUPPLY AND LANDBASE INFORMATION

The following sections provide the details required by FLNRO for the timber supply analysis and landbase definitions.

## Timber Harvesting Landbase

The Ecora timber supply analysis shows that the Community Forest covers 92,262 ha, of which 85,452 ha is Crown Forested Land Base.[24]

The Timber Harvesting Land base (THLB) is an estimate of the land where timber harvesting is considered both available and economically feasible, given the objectives for all relevant forest values, existing timber quality, market values and applicable technology. To define the THLB, a series of deductions were made from the Crown Forest Land Base to account for economic or ecological factors that reduce the forest area available for harvesting as shown in Table 12. Once all deductions are made the remaining area of about 65,707 hectares, or about 71% is assumed to be the THLB.

Table 12 - Timber Harvesting Land Base Definition[1]

| **Land base Classification** | Area (ha) | % of Gross Land base |
|---|---|---|
| **Gross Area** | 92,262 | 100% |
| Private / Non-Crown Ownership | 629 | 0.7% |
| Non-Forest | 2,209 | 2.4% |
| Non-Productive Forest | 2,006 | 2.2% |
| Existing Roads | 1,966 | 2.1% |
| Crown Forested Land Base | 85,452 | 92.6% |
| Old Growth Management Areas | 5,966 | 6.5% |
| Blue/Red-Listed Ecosystems | - | - |
| Physically Inoperable | 1,524 | 1.7% |
| Riparian Reserve Zones | 4,377 | 4.7% |
| Recreation Trails | 43 | 0.0% |
| Non-Commercial Cover | 598 | 0.6% |
| Deciduous Leading Stands | 5,374 | 5.8% |
| Low Volume Pine Leading | 931 | 1.0% |
| Low Volume Other Conifer | 929 | 1.0% |
| Low Site Immature | 3 | 0.0% |
| Total CFLB Reductions | 19,745 | 21.4% |
| **Timber Harvesting Land Base** | **65,707** | **71.2%** |

[24] May 2015. Ecora Resource Group. Burns Lake Community Forest Timber Supply Analysis Report.

The netdown processes of the two timber supply analysis reports (2010 Teco[25] and 2015 Ecora) differ in some cases, by very little, in others more significantly. Riparian is one place where there is a significant difference.

The Community Forest grew in size between the two analyses, resulting in an initial gross land base difference of 5,174 ha. There was also an increase in the THLB of 8,759 ha due to different assumptions and modeling approaches.

Teco 2010 showed Riparian Reserve Zones of 1,634 ha, 1.9% of the gross landbase area of 87,088 ha. Ecora 2015 showed Riparian Reserve Zones of 4,377 ha, 4.8% of the expanded gross landbase area of 92,262 ha.

The OGMAs for the Lakes TSA are defined in the Lakes District Land and Resource Management Plan and the Forest Stewardship Plan states that these areas will be removed from the THLB.

**Parks and Reserves**

There are no parks or reserves within the boundaries of the Community Forest.

**Forest Cover Summary**

The following tables approximate the THLB and show areas, volumes, and age class by leading species.

Table 13 - THLB area (ha) by species and age class

| | Age Class | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total | % |
| Pl | | 4,416 | 7,449 | 2,978 | 3,140 | 3,962 | 5,127 | 3,820 | 2,161 | 26 | 33,079 | 50% |
| Sx | | 2,036 | 1,115 | 1,555 | 2,009 | 2,854 | 3,601 | 4,406 | 7,090 | 102 | 24,769 | 38% |
| Bl | | 34 | 158 | 307 | 337 | 457 | 198 | 160 | 460 | 199 | 2,309 | 4% |
| (blank) | 5,620 | | | | | | | | | | 5,620 | 9% |
| Other | | 4 | 29 | 4 | 4 | 18 | 5 | 35 | 81 | | 181 | 0% |
| Total | 5,620 | 6,490 | 8,750 | 4,845 | 5,490 | 7,292 | 8,930 | 8,421 | 9,792 | 328 | 65,958 | 100% |

Table 14 – THLB Volume ($m^3$) by species and age class

| | Age Class | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total | % |
| Pl | | 118 | 47,978 | 277,175 | 605,604 | 930,662 | 1,408,652 | 1,136,478 | 695,006 | 5,972 | 5,107,646 | 44% |
| Sx | | 35 | 6,824 | 146,626 | 266,043 | 638,960 | 911,969 | 1,536,977 | 2,665,598 | 35,900 | 6,208,933 | 53% |
| Bl | | 0 | 196 | 12,480 | 29,738 | 58,645 | 26,195 | 34,477 | 98,651 | 24,907 | 285,288 | 2% |
| Other | | 0 | 109 | 8 | 105 | 2,467 | 64 | 8,501 | 31,517 | | 42,771 | 0% |
| Total | 0 | 153 | 55,107 | 436,289 | 901,490 | 1,630,734 | 2,346,880 | 2,716,433 | 3,490,772 | 66,779 | 11,644,638 | 100% |

[25] October 2010. Teco Natural Resource Group Limited. Burns Lake Community Forest Timber Supply Analysis Report.

### Ecological Inventory Summary

The Community Forest consists of four Biogeoclimatic (BEC) units: SBSdk, SBSdw3, SBSmc2 and ESSFmc.

Table 15 – BEC Subzone/Variant Summary

| BEC Variant | Elevation (m) | Area (ha) | % of BLCF |
|---|---|---|---|
| ESSFmc | 1000 – 1800 | 10,202 | 11.0% |
| SBSdk | 700 – 1050 | 49,313 | 53.4% |
| SBSdw3 | 750 – 1100 | 2,631 | 2.9% |
| SBSmc2 | 850 – 1350 | 30,159 | 32.7% |
| Total | | 92,305 | 100% |

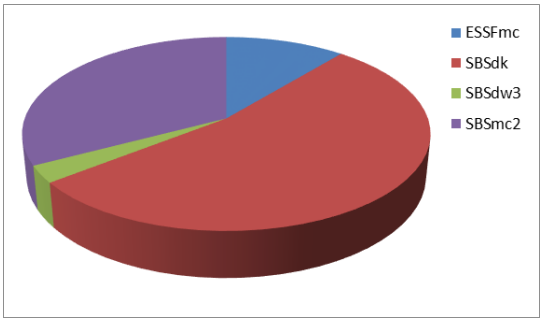



Figure 4 – BEC Subzone/Variant Summary

### Wildlife Considerations and Connectivity Corridors

In order to provide opportunities for the distribution of species, populations and genetic material, the Lakes Land and Resource Management Plan includes an objective to maintain or enhance habitat connectivity at the landscape level. One method to achieve this objective is to establish a network of landscape corridors.

The landscape connectivity network is located in areas with linear assemblages or complexes of various Ecosystem-Based Structural (EBS) components. Based on the continuity of these assemblages, habitat structure, and known species' use within them, and other known ecosystem functions (e.g. hydrological), this network is intended to represent the best scientific approximation of ecosystem-based, functional landscape connectivity.

Within the Community Forest there is approximately 16,563 ha of Landscape Connectivity Matrix defined. Most is concentrated around larger named lakes and class 2 streams;

- Southwest from Pinkut Lake along Division Lake to Decker Creek
- Around Ling, Packrat and Sponge Lakes and wetlands to east
- Lakes around and including Star Lake
- Burns Lake and Slug and Kager Lakes
- Tchesinkut Lake
- Southeast portion of BLCF slopes above Francois Lake
- Guyishton Lake
- Decker Lake southwest along Gerow Creek
- Maxan Lake and south along Maxan Creek

### Regeneration

The 2015 Ecora Data Package provides details on the regeneration assumptions used in the timber supply analysis and these assumptions are in-line with the Forest Stewardship Plan.

The average regeneration delay for all stands (naturally and artificially regenerated) was estimated at 2.6 years, using information from the FLNRO RESULTS databased. The regeneration delay was assumed to be the difference between the disturbance date and the regeneration declaration date.

The Community Forest reforestation program is 95% artificial (planting) and 5% natural regeneration.

### Harvest Performance

Table 16- BLCF Harvest Performance

| Harvesting Year | Area (ha)[26] | Volume ($m^3$)[27] | AAC ($m^3$) | % Harvest of AAC |
|---|---|---|---|---|
| 2000 | 23 | 57,254 | 23,677 | 242% |
| 2001 | 82 | 42,774 | 23,677 | 181% |
| 2002 | 53 | 59,259 | 23,677 | 250% |
| 2003 | 82 | 67,868 | 54,026 | 126% |
| 2004 | 198 | 86,337 | 54,026 | 160% |
| 2005 | 727 | 286,481 | 300,000 | 95% |
| 2006 | 1,676 | 473,776 | 500,000 | 95% |
| 2007 | 2,460 | 526,355 | 500,000 | 105% |
| 2008 | 1,191 | 386,451 | 250,000 | 155% |
| 2009 | 1,085 | 203,806 | 250,000 | 82% |
| 2010 | 909 | 197,790 | 250,000 | 79% |
| 2011 | 420 | 119,165 | 260,000 | 46% |
| 2012 | 274 | 122,480 | 260,000 | 47% |
| 2013 | 756 | 197,728 | 260,000 | 76% |
| 2014 | 1,044 | 178,120 | 100,000 | 178% |
| 2015 | 483 | 105,000 | 100,000 | 105% |
| **Total** | **11,463** | **3,110,644** | **3,209,083** | 97% |

[26] Areas harvested were obtained from the BLCF PhoenixPro database.
[27] Volumes harvested were obtained from the FLNRO RESULTS database.

# APPENDIX 7 – AAC REQUEST & RATIONALE LETTER

**Burns Lake Community Forest Ltd.**
153 FRANCOIS LAKE DRIVE P.O. BOX 788, BURNS LAKE, BC V0J 1E0
TEL: (250) 692-7724 FAX: (250) 692-7767 E-MAIL: info@blcomfor.com

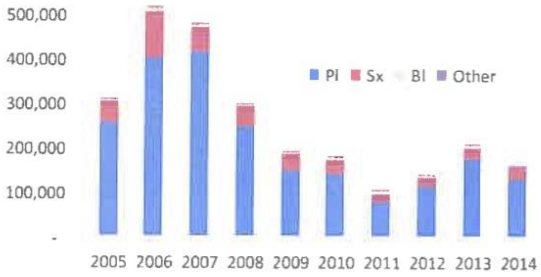
November 30, 2015

Albert Nussbaum, RPF
Ministry of Forests, Lands and Natural Resource Operations
Director, Forest Analysis and Inventory Branch
Victoria, BC

Dear Albert:

We thank you for visiting the Burns Lake Community Forest on October 29 and meeting with our Board of Directors (BOD). We appreciate your guidance and expectations around preparing an AAC request and the management plan. In this letter we give some background on the forest, our salvage efforts, outline our vision and strategy for the future, and present our thoughts on a short-term AAC that we believe will help us achieve our vision. We look forward to discussing this with you at your convenience.

## 1 Background




Lodgepole pine forests around Burns Lake, being near the epicenter of the MPB infestation, have experienced massive mortality. Although estimates vary, upwards of 90% of all Pl was killed. Since 2006, we have increased our focus on salvaging dead Pl harvesting about 2.6 million $m^3$ over the last 10 years. About 82% of that was Pl (source HBS) and the vast majority of this volume was dead.

These salvage operations have had significant impact on the Pl resource, and yet there is still an estimated 4.0 million $m^3$ of Pl in the Community Forest – with likely more than 90% of that being dead. About two-thirds of the total remaining Pl volume is in stands of 70%+ Pl and the remaining one-third in mixed-species stands.

Some dead Pl is now starting to rot and falling over. We believe the remaining shelf-life for sawlogs may only be 4-6 years. This emerging reality compels urgency and requires a focused, concerted effort to maximize remaining value of the dead Pl. This emerging reality also

strengthens our resolve to do what we can today to change methods and systems to enhance future values of the all forest resources in the rapidly approaching post-MPB salvage era.

## 2 New Direction

In July 2015, the BOD identified three significant challenges to the Community Forest:

1. The rapidly expiring shelf life of sawlogs in dead Pl - the primary source of revenue since 2007 - and the forecasted impact on the Community Forest's financials.
2. The recently completed timber supply modelling for the forest and lack of a strategic planning to mitigate the MPB impacts.
3. The lack of suitable data, tools, and area-based operating philosophy to create and implement a plan to mitigate future impacts of the MPB epidemic.

The BOD has now committed to a multi-year program with the vision of improving the quality of information to manage the forest, mitigating the impacts of the MPB infestation, and enhancing the many forest values that are important to us in Burns Lake in the post-MPB salvage era.

Our strategy to achieve that vision contains three components:

1. Implement a multi-year technical program to support planning and management.
2. Accelerate the salvage of MPB impacted stands with 70%+ Pl.
3. Implement a new salvage program in MPB impacted stands with 30-70% Pl.

## 3 Strategy Component 1: The Technical Program

### 3.1 Technical Team

The BOD has approved hiring a team of experienced consultants to help us complete this work. Much of that work is now underway, and during the BOD meeting that you attended, we discussed a number of the initiatives and results that are already bearing fruit. Programs to support the commitments will be outlined in the updated management plan.

### 3.2 Improved Information

Key actions to improve existing and develop new information include:

- Integrating the new VRI and previously completed IFPA ecosystem map. This will help support programs to address a variety of resource management issues including G&Y, silviculture planning, wildlife habitat, and timber supply.
- Collecting supplemental inventory data to support modeling, which will provide better information on log grades, availability, and economics to improve product marketing, log sales, and financial return.
- Defining and implementing new silviculture regimes and systems to protect understory regeneration. This will help minimize the mid-term falldown, retain good visual quality, improve water quality, help mitigate watershed issues, address ecosystem restoration, improve wildlife habitat, and reduce susceptibility of future stands to MPB attack.
- Using wildlife suitability models to quantify potential benefits of different harvest strategies for wildlife resources.

### 3.3 Challenging Status-Quo Thinking

Actions to challenge status-quo thinking will include:

- Exploring new ways to sell timber and building new markets for sawlogs and pulpwood.
- Understanding market and client needs to develop log sales strategies to maximize long-term profitability.
- Exploring alternative ways to provide environmental protection and address mid-term timber supply in the post-MPB era.
- Exploring alternative approaches to developing a silviculture inventory of post-free-growing areas requiring different silviculture treatments.
-

### 3.4 MPB Impact Mitigation Plan

The mitigation plan will integrate the new data and tools with innovative ways to manage all forest resources. The plan is envisioned as:

- Detailing improvements in data and tools;
- Providing up-to-date land base summaries;
- Detailing proposed changes to forest management practices;
- Detailing proposed changes to future silviculture regimes;
- Proposed intensive silviculture practices;
- Detailing results of economic studies and resulting strategies;
- Proposed changes to environmental protection practices;
- Revised timber supply forecast and spatial harvest plan;
- Communication to agencies and training to staff and contractors.

## 4 Strategy Component 2: Accelerate Salvage in 70%+Pl Stands

We believe we can accelerate the salvage of dead Pl in the still considerable area of stands with 70%+Pl. However, it is clear that the shelf life of this wood to yield sawlogs is rapidly expiring and may only last 4-6 years. We estimate there is approximately 2.4 million $m^3$ of dead wood remaining in the 70%+ Pl stands in the THLB.[1] About 300,000 $m^3$ of that has been developed and is scheduled for harvest. Below is an estimate of how we could maximize the remaining value of the dead wood in these stands.

- Assume we accelerate salvage for 5 years – using clearcut and plant/naturals.
- Total area of 70%+Pl stands is ~8,100 ha containing 2.4 million $m^3$ (about 90% Pl).
- Assume we can get 60% of that volume (2.4 million x 0.6 = 1.44 million $m^3$).
- Which is 288,000 $m^3$/year from ~650 ha (assuming targeted stands have higher than average volume – thus 60% of volume is 40% of area).
- Assume Pl sawlog recovery is 65% and non-Pl is 90%.

[1] Based on the Ecora TSR resultant file for the THLB (using March 2014 VRI), and estimated harvest in 70%+Pl stands 2014 and 2015. Includes age class 5+.

- This would require a sawlog AAC of 194,400 m³ and generate an additional 93,600 m³ for Grade 4 credit.

# 5 Strategy Component 3: New Salvage in Pl 30-70%+ Stands

## 5.1 Salvage Opportunity

We believe there is a significant opportunity to recover dead Pl from the significant area (~8,000 ha) of mixed-species stands on the forest. This salvage could be done with partial cutting implemented as an intermediate cut (i.e., thinning), or a preparatory or final cut in shelterwood systems. However, as with the 70%+Pl stands, the opportunity is disappearing fast in these mixed types as the shelf life for sawlogs expires.

In late October, we completed an inventory in those stands with a 30-70% Pl component. A summary of major results from that inventory is:

- Net merch volume 263 m³/ha (2SE 8%). VRI indicated 300 m³/ha.
- Total volume 2.1 million m³ on 7,989 ha in the THLB (all species).
- Species comp (net merch) Pl 50%, Sx 40%, Bl 10% (almost no deciduous).
- Thus 132 m³/ha Pl on average with 1.1 million m³ total.
- Dead volume: Pl 94, Sx 18%, Bl 22%.
- Downfall volume: Pl 16%, Sx 12%, Bl 10%.
- Pl standing dead: 85% estimated to have some sawlog recovery.
- Pl fallen dead: 63% estimated to have some sawlog recovery.

Below is an estimate of how we could maximize the remaining value of the dead wood in these stand types.

- Assume we salvage for 5 years – using partial cutting and varying degrees of understory protection.
- Total area of 30-70%+Pl stands is ~8,000 ha containing 2.4 million m³ (50% Pl).
- Assume we can get 50% of the area (8,000 ha x 0.5 = 4,000 ha which is 800 ha/year).
- Assume average volume is 290 m³/ha (higher than the overall average).
- Assume remove 50% of stand volume (on average) in partial cutting.
- Thus 145 m³/ha x 800 ha = 116,000 m³/year.
- Assume recovered volume is Pl 75% Sx 25% and Pl sawlog recovery 65% and Sx 90%.
- This would require 82,650 m³ sawlog AAC and generate 33,350 m³ for Grade 4 credit.

## 5.2 Understory Protection

A major part of this salvage program would be understory protection. As part of developing these ideas we visited Ministry research staff in Smithers to discuss the ideas and view some examples of harvesting with understory protection in their community forest. Protection of existing understory could provide opportunities to better meet free-growing requirements, shorten time to green-up, address some wildlife habitat issues, allow access to VQO areas, address water quality issues, reduce forest susceptibility to future MPB outbreaks, help community fire prevention efforts, and help mitigate mid-term timber supply by preserving as much live wood as possible.

We also collected data on understory conditions in our recently completed inventory in these stand types. The results suggest that there is ample understory regeneration in these types, and as

expected is patchy and dominated by Bl. However, the estimates suggest there is still about 1,000 stems/ha of Sx and 100/ha of Pl in primarily layers 3 and 2 in these stands. Our next steps are to identify areas that are most suitable for understory protection, and build stand-level tools to help develop harvesting and silviculture prescriptions for salvage in these stand types.

Results of understory measurements taken in 36 randomly located plots in the 30-70%Pl stand types.

| Layers | Mean (no/ha) | 2SE (no/ha) | CV | Plots with >1,200/ha | Plots with >1,600/ha |
|---|---|---|---|---|---|
| Layer 4 - (0.3-1.3 m in ht) | 1,400 | 600 | 125% | 42% | 28% |
| Layer 3 - (1.3 m - 7.5 cm DBH) | 1,300 | 490 | 110% | 36% | 28% |
| Layer 2 (7.5 - 12.4 cm DBH) | 400 | 270 | 200% | 0% | 0% |
| All Layers | 3,100 | 1,025 | 100% | 80% | 70% |
| Species | | | | | |
| Bl | 2,000 | 1000 | 160% | 40% | 40% |
| Sx | 960 | 440 | 135% | 40% | 22% |
| Pl | 110 | 120 | 330% | 6% | 6% |
| At | 17 | 24 | 440% | | |
| All | 3,100 | 1028 | 100% | 80% | 70% |

# 6 A Short-Term AAC to Support Our Strategy

## 6.1 Term

We believe that a short-term AAC is appropriate to help us achieve our vision and strategy – for example three years. With an appropriate, relatively high level of cut, we would like to maximize the value of the remaining dead wood. During this period of short-term uplift, we will be fully engaged in completing our technical plan, which includes a detailed forest level analysis of timber supply and other resource values. That analysis will use state-of-the-art modeling, growth and yield, and inventory methods and data. That will help us in the effort to identify an appropriate level of harvest in the post-MPB era.

## 6.2 Harvest Level

We estimate that a sawlog cut of 300,000 $m^3$ annually will allow us to achieve our goals. This is based on focusing on the two Pl stand types that are described above. The estimated distribution of volume by species and grade is given in the table below. Although our quantitative approximation process (based on many assumptions) indicates a cut of 277,050 $m^3$/year for five years, a slightly higher level would allow room for some flexibility in the front end of the five-year period over which these estimates are based.

Quantitative approximation of cut required to focus on the two Pl stand types and distribution of volume ($m^3$) by species type and log grade.

| 70%+Pl Stands | Total Volume | | SL% | Sawlog Volume | | Grade 4 Volume | |
|---|---|---|---|---|---|---|---|
| Pl | 259,200 | 90% | 65% | 168,480 | 87% | 90,720 | 97% |
| Non-Pl | 28,800 | 10% | 90% | 25,920 | 13% | 2,880 | 3% |
| | 288,000 | 100% | | 194,400 | 100% | 93,600 | 100% |
| **30-70%+Pl Stands** | | | | | | | |
| Pl | 87,000 | 75% | 65% | 56,550 | 68% | 30,450 | 91% |
| Non-Pl | 29,000 | 25% | 90% | 26,100 | 32% | 2,900 | 9% |
| | 116,000 | 100% | | 82,650 | 100% | 33,350 | 100% |
| **All Stands** | | | | | | | |
| Pl | 346,200 | 86% | | 225,030 | 81% | 121,170 | 95% |
| Non-Pl | 57,800 | 14% | | 52,020 | 19% | 5,780 | 5% |
| | 404,000 | 100% | | 277,050 | 100% | 126,950 | 100% |

### 6.3 Partitions

We request that a partition not be used for this short-term AAC period. It is our understanding that with a partition we would be required to cruise our stands. Our performance in focusing on salvaging dead Pl is evident in the HBS data, and we would prefer not to have this additional level of constraint in this last stage of salvage. The issue of partitions will, we expect, be part of the discussion of a new AAC after Pl salvage is largely complete and we have completed our detailed forest estate modeling and management plan.

### 6.4 Risk to the Crown

We believe that our proposed AAC presents little risk to the Crown – and in fact reduces risk in many regards. If we implement a lower AAC, the dead wood will be lost to shelf life, and if we propose a higher AAC it may be difficult to find more buyers and wood will be lost.
From an environmental perspective, we are making a large commitment to addressing ecosystem restoration through our understory protection and habitat mapping initiatives. Some of this work may propose new approaches to protecting environmental values. We look forward to working the Ministry to support our efforts as the BLCF moves forward in the post-MPB era with a stronger area-based operating philosophy.
We believe that we can sell the volume we have proposed, that the new programs we are implementing are creative, innovative and based upon sound science; and will set the Burns Lake Community Forest down a solid path to a better future.

Yours Truly

Jim McCormack, RFT
President,
Burns Lake Community Forest Ltd.

# APPENDIX 8 – PLANNING

The Community Forest must profitably harvest and reforest its lands while ensuring that future opportunities will not be compromised, and that other resources are adequately managed. In order to do so careful planning must take place. The basis of any sound planning process is good information. We have collected or recently improved the following information:

- Aerial photography
- Digital orthophotos
- Lidar
- Stream, lake, and wetland classification and inventory
- Vegetation resource inventory mapping
- Predictive ecosystem mapping
- Aggregate potential mapping

The information collected is of limited utility unless it is in a form that is convenient to use. To this end, we have developed digital map database layers that include (but are not limited to):

- Contours
- Visual Landscape Inventory
- Streams, lakes, wetlands
- Roads
- Long term wildlife tree patches
- OGMAs
- BLCF harvest units (past, planned, approved)
- Other licensee blocks
- Biological Ecosystem Networks (for general reference)
- Vegetation resource inventory
- Predictive ecosystem mapping
- Aggregate potential mapping
- Recreation features

With this information in the Community Forest database, intensive planning is both possible and effective. Plans are revisited and refined as better information (local knowledge and updated inventories) becomes available.

## Strategic Land and Resource Plans

### *Lakes District Land and Resource Management Plan*

The Lakes District Land and Resource Management Planning process provides broad direction for the sustainable use of Crown land and resources. The process was launched in April 1994 with the formation of the Lakes Resource Council (the planning table). The table concluded its meetings in November 1997 with a consensus on the Land Use recommendation. The

Government of BC has now approved in principle the recommendations as prepared by the planning table.

The Community Forest is entirely within the area that the Lakes District Land and Resource Management Plan recommendations cover. This plan was approved in January 2000, and Resource Management Zones and Resource Management Zone Objectives were established through an Order dated July 26, 2000 (Lakes Higher Level Plan Order).

The Lakes District Land and Resource Management Plan is implemented by tenure holders under the oversight of government agencies. The approved plan guides a variety of resource management programs and activities.

***Lakes South Sustainable Resource Management Plan***

The Lakes South Sustainable Resource Management Plan outlines objectives and strategies for resource management in the southern half of the Lakes Timber Supply Area (TSA) in the Nadina Forest District. This plan is consistent with the provisions of the Lakes District Land and Resource Management Plan and was approved July 17, 2003.

A very small portion of the Community Forest lies within the Lakes South Sustainable Resource Management Plan boundary.

***Lakes North Sustainable Resource Management Plan***

Lakes North Sustainable Resource Management Plan is a strategic land use plan that covers the northern portion of the Lakes Timber Supply Area in the Nadina Forest District. This plan outlines biodiversity objectives and strategies for resource management. The plan is consistent with, and builds upon the provisions of the Lake District Land and Resource Management Plan and was approved January 26, 2009.

The Lakes North Sustainable Resource Management Plan outlines land use objectives that are established by legal order under Section 93.4 of the *Land Act* by the Regional Executive Director of the Northern Region of the Integrated Land Management Bureau.

The majority of the Community Forest lies within the boundary of the Lakes North Sustainable Resource Management Plan.

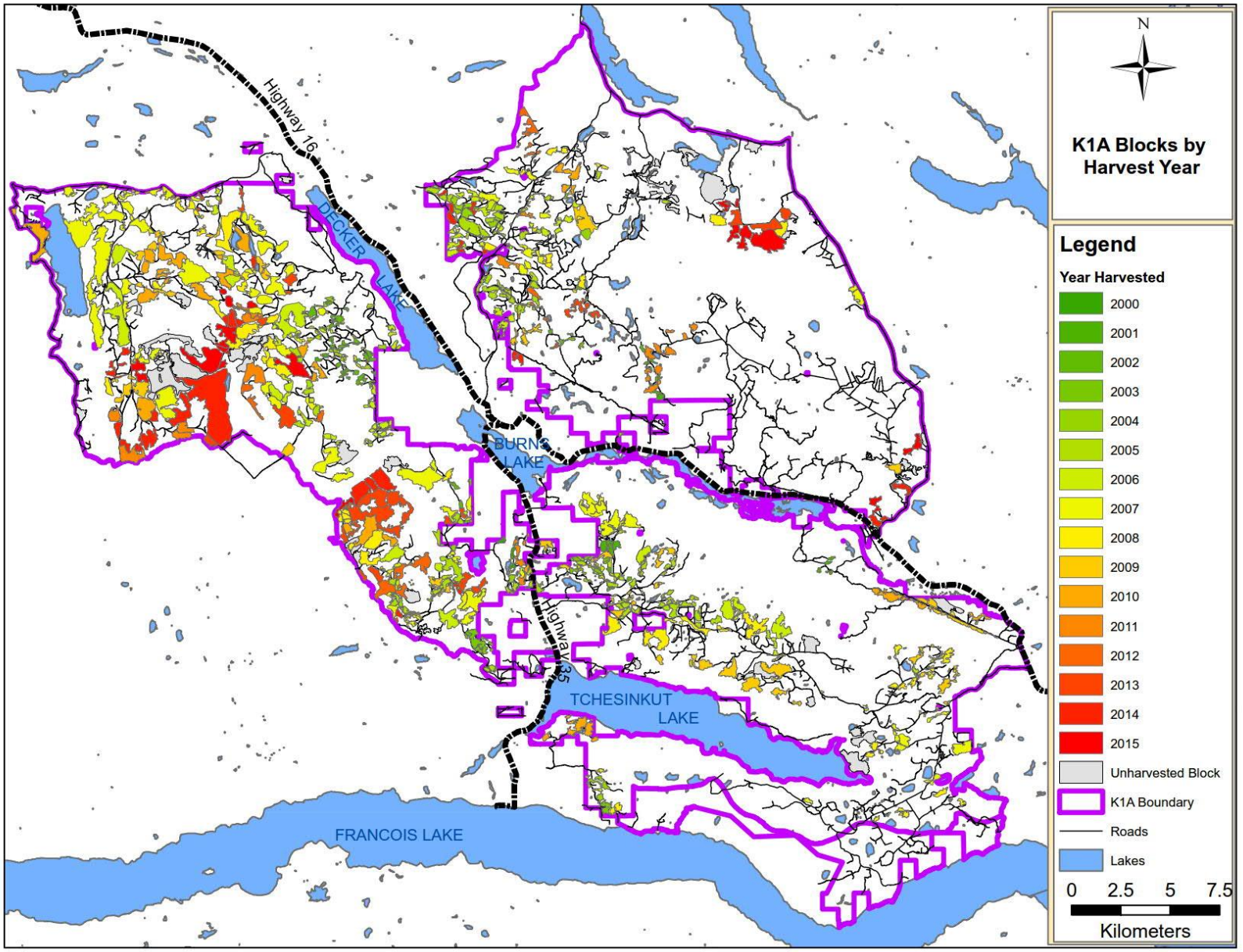
# APPENDIX 9 – COMMUNITY FOREST MANAGEMENT PLAN 3 COMMITMENTS

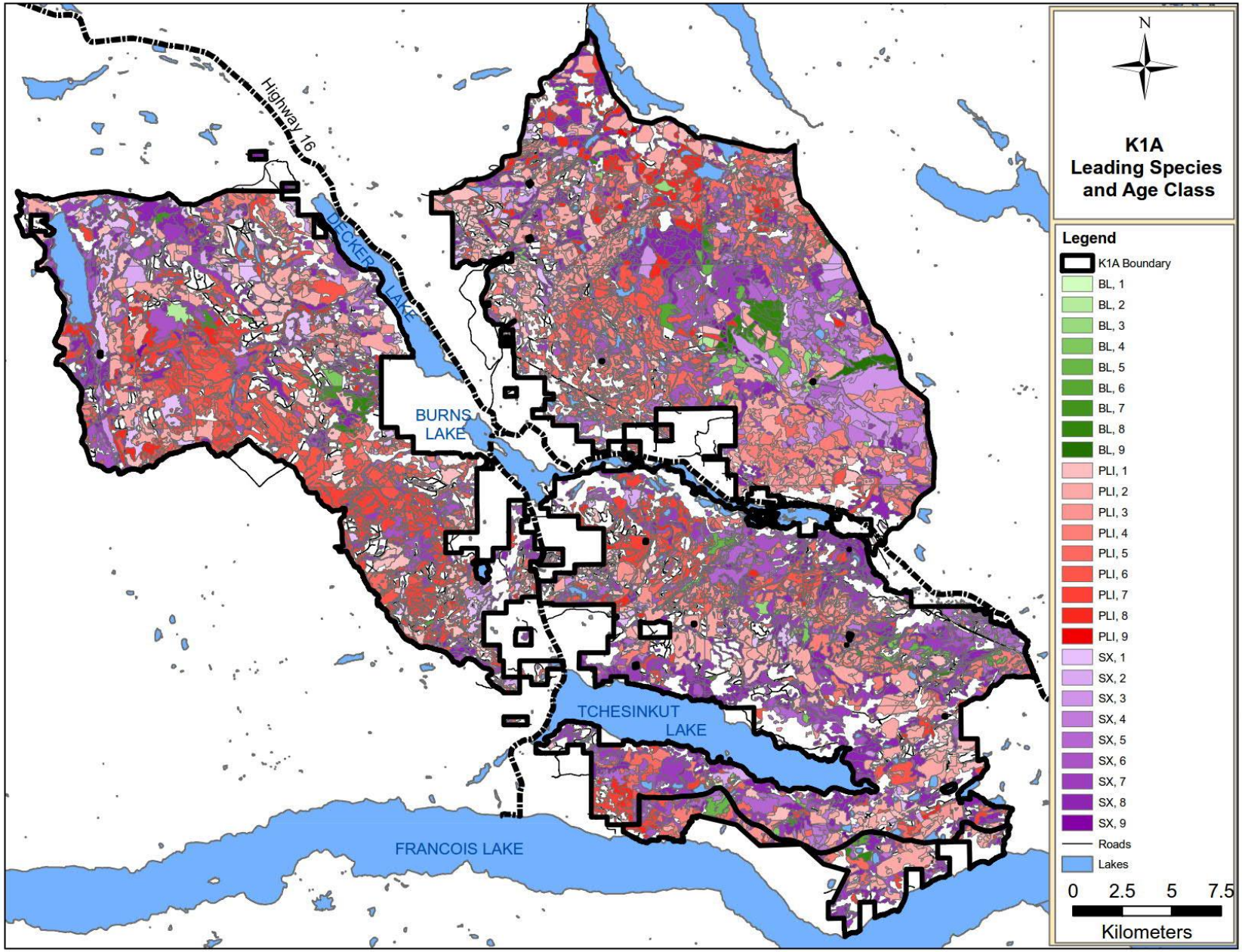
| Management Plan 3 Commitments | Status | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| **Safety** | | | | | | |
| Encourage all contractors and consultants working on behalf of the BLCF to be SAFE Certified. | ongoing | | | | | |
| Maintain a safety program for company employees. | ongoing | | | | | |
| Ensure all active roads are signed and road channels are clearly marked. | ongoing | | | | | |
| Ensure all "active hauling" signs are kept current. | ongoing | | | | | |
| Incorporate an "active hauling" warning on the BLCF website. | | | | | | |
| | | | | | | |
| **Forest Management Program** | | | | | | |
| Revise the harvesting and marketing strategy for the era when harvesting priorities will shift away from salvage. | underway | | | | | |
| Explore new market opportunities for sawlogs, bioenergy fibre, and pulp logs | | | | | | |
| Develop silviculture regimes to include:<br>• understory protection harvesting;<br>• climate change;<br>• forest health factors; and<br>• non-timber values. | underway | | | | | |
| Utilize the deciduous timber resource to meet timber and non-timber values. | underway | | | | | |
| Use improved data such as LiDAR for operational planning and to improve inventory information. | underway | | | | | |
| Build analytical forest-level tools to design a secondary salvage program and a fibre value model for marketing | underway | | | | | |
| Propose silviculture regimes to include understory protection harvesting and:<br>• Undertake a demonstration area or trial area to test the regimes.<br>• Identify candidate stands for understory protection harvesting and undertake sensitivity analysis to determine the impacts on the timber supply.<br>• Pending successful conclusion of understory protection trials and sensitivity analyses, undertake understory protection logging of candidate stands. | ongoing | | | | | |
| Develop and implement the MPB mitigation plan for the Community Forest | ongoing | | | | | |
| Maintain a salvage program to remove and reforest as much of the MPB impacted forest as possible | ongoing | | | | | |
| Take advantage of external funding for enhanced silviculture programs such as fertilization, improved resource inventories, or ecosystem restoration | ongoing | | | | | |
| Explore options for producing pulp chips from whole logs or logging residue | underway | | | | | |
| Explore alternative visual landscape planning approaches and update the visual landscape database. | | | | | | |
| Find a market to sell pulp logs | ongoing | | | | | |
| Update resource inventories | underway | | | | | |
| Explore innovative ways to access timber from scenic areas | | | | | | |
| Review the basic silviculture program to ensure it meets key management considerations | underway | | | | | |

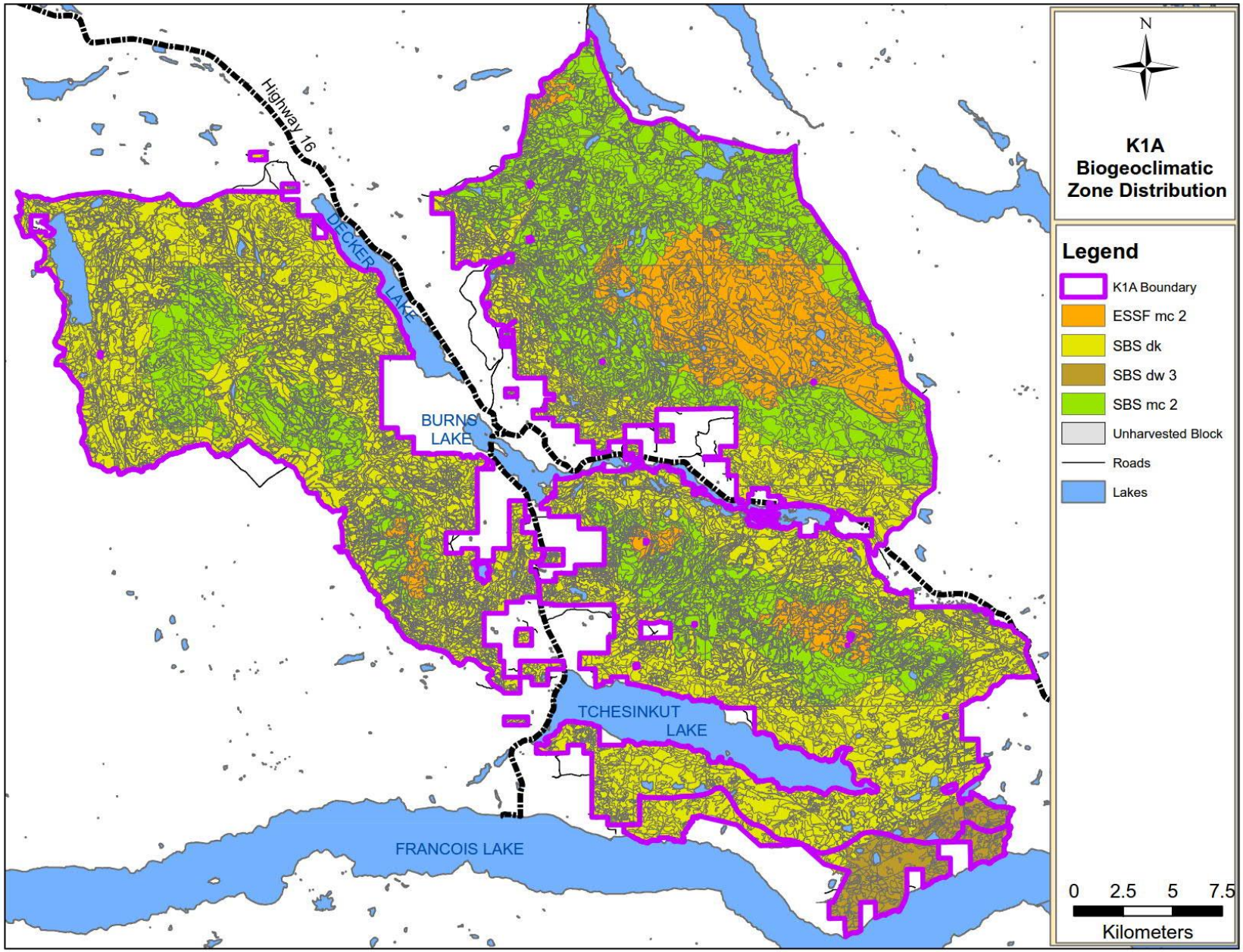
| | | | | | | |
|---|---|---|---|---|---|---|
| Use forest estate modelling to determine the type and amount of intensive silviculture activities that will have the biggest impact on addressing the mid-term timber supply shortfall | | | | | | |
| Undertake an economic model project to build analytical forest-level tools | underway | | | | | |
| | | | | | | |
| **Environment** | | | | | | |
| Explore funding sources and implementation of ecosystem restoration in areas impacted by the MPB. | | | | | | |
| Improve the use of PEM in forest management planning | ongoing | | | | | |
| Improve stream inventory and classification. | | | | | | |
| Complete wildlife habitat modeling for important species and modeling of rare and sensitive ecosystems for use in forest management. | underway | | | | | |
| Identify options to meet biodiversity objectives beyond the beetle | underway | | | | | |
| Classify area best able to meet biodiversity objectives using ecological mapping, wildlife habitat modeling, and updated forest inventories. | underway | | | | | |
| Identify areas with the highest biodiversity value or potential to focus protection and recovery programs | underway | | | | | |
| Encourage diversity of tree species and age classes across the landscape. | | | | | | |
| Assess the impact of MPB attack on biodiversity | underway | | | | | |
| | | | | | | |
| **Operational** | | | | | | |
| Continue to use an annual operational plan. | ongoing | | | | | |
| Develop and revise 5 and 10 year plans based on information from a spatially explicit forest estate modelling tool such as Patchworks | | | | | | |
| Undertake treatments on free-growing stands that increase forest growth, reduce losses to pests and diseases, and/or improve timber quality in the future. | As $ avail | | | | | |
| Consult with other forest users during operational planning and consider their needs. These users include guide outfitters, trappers, range tenure holders, mining tenure holders, oil & gas companies, and outdoor recreational users. | ongoing | | | | | |
| Provide maps and engage with active trappers and guide outfitters on the planned annual activities prior to September 1st of each year. | | | | | | |
| Achieve and maintain Forest Certification | ongoing | | | | | |
| Continue to pay stumpage, royalties, rents and taxes as required under the statutes of the Province of BC | ongoing | | | | | |
| Support the Provincial Government's agreement with Hampton Affiliates by offering timber to the local mill. | ongoing | | | | | |
| Design, construct, and maintain roads in accordance with all applicable FLNRO requirements. | ongoing | | | | | |
| Respond promptly to road-induced erosion hazards in order to minimize environmental damage | ongoing | | | | | |
| Deactivate roads in accordance with all applicable FLNRO requirements. | ongoing | | | | | |
| Explore opportunities for extension work with the other Community Forests. | | | | | | |
| New Forest Management Program referral | | | | | | |
| | | | | | | |

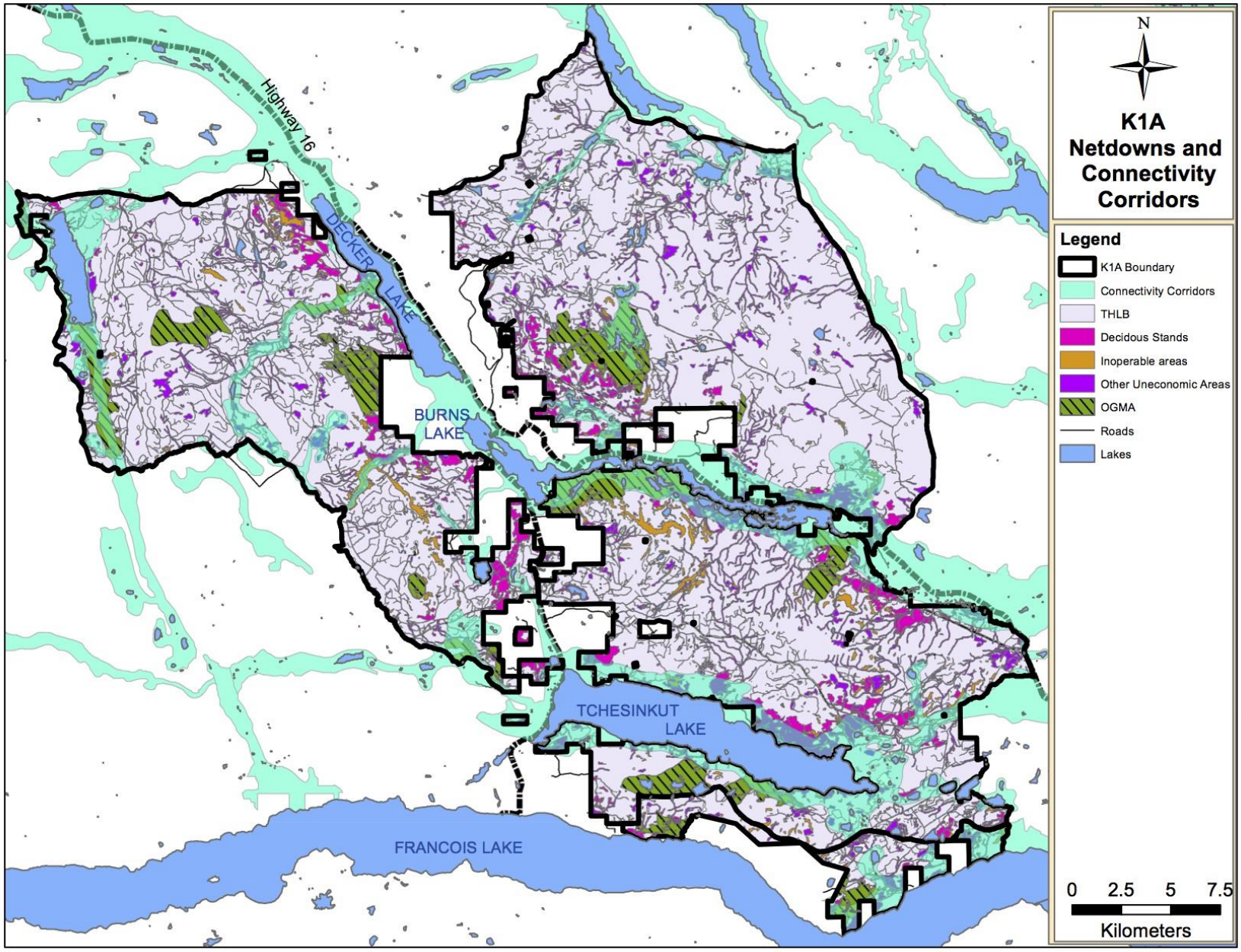
| | | | | | | |
|---|---|---|---|---|---|---|
| **First Nations** | | | | | | |
| Provide presentations to First Nations Band Councils regarding the operations and management of BLCF | | | | | | |
| Maintain First Nations representation on the Board of Directors | ongoing | | | | | |
| Continue profit sharing to participating First Nations as per the Community Forest Agreement. | ongoing | | | | | |
| Develop and maintain a communications strategy | underway | | | | | |
| Provide financial or in-kind support to local organizations and First Nations in support of developing the FireSmart program | | | | | | |
| Protect and respect the confidentiality of First Nations' cultural resources. | ongoing | | | | | |
| | | | | | | |
| **Community** | | | | | | |
| Distribute a portion of the Community Forest profit to the Village to support Community priorities when the financial performance of the Community Forest warrants it. | ongoing | | | | | |
| Support community based recreation initiatives | ongoing | | | | | |
| Maintain Community representation on the BLCF Board of Directors | ongoing | | | | | |
| Continue to contribute to local organizations that maintain and enhance recreation facilities in the BLCF and Lakes TSA. | ongoing | | | | | |
| Support jobs for local residents | ongoing | | | | | |
| Continually improve the BLCF website to incorporate more information and make it easier for the public and stakeholders to use. | underway | | | | | |
| Identify options to enhance resources valued by the community. | | | | | | |
| Conduct at least one formal public meeting each year to inform the general public of the activities of the Community Forest. | ongoing | | | | | |
| Provide an annual report on the BLCF performance to shareholders, stakeholders, First Nations, and the general public | ongoing | | | | | |
| Revise the format of the annual report on the BLCF performance | | | | | | |
| Hold an annual general meeting of the company as required by the articles of incorporation. | ongoing | | | | | |
| Maintain a bulletin board in the local mall, weekly column in local newspaper and ``open-door`` policy | ongoing | | | | | |
| Develop and maintain a Communication Strategy | underway | | | | | |
| Explore and implement developing a new web-based tool to improve the maps and resource information provided to the recreational users and the public by the BLCF | | | | | | |

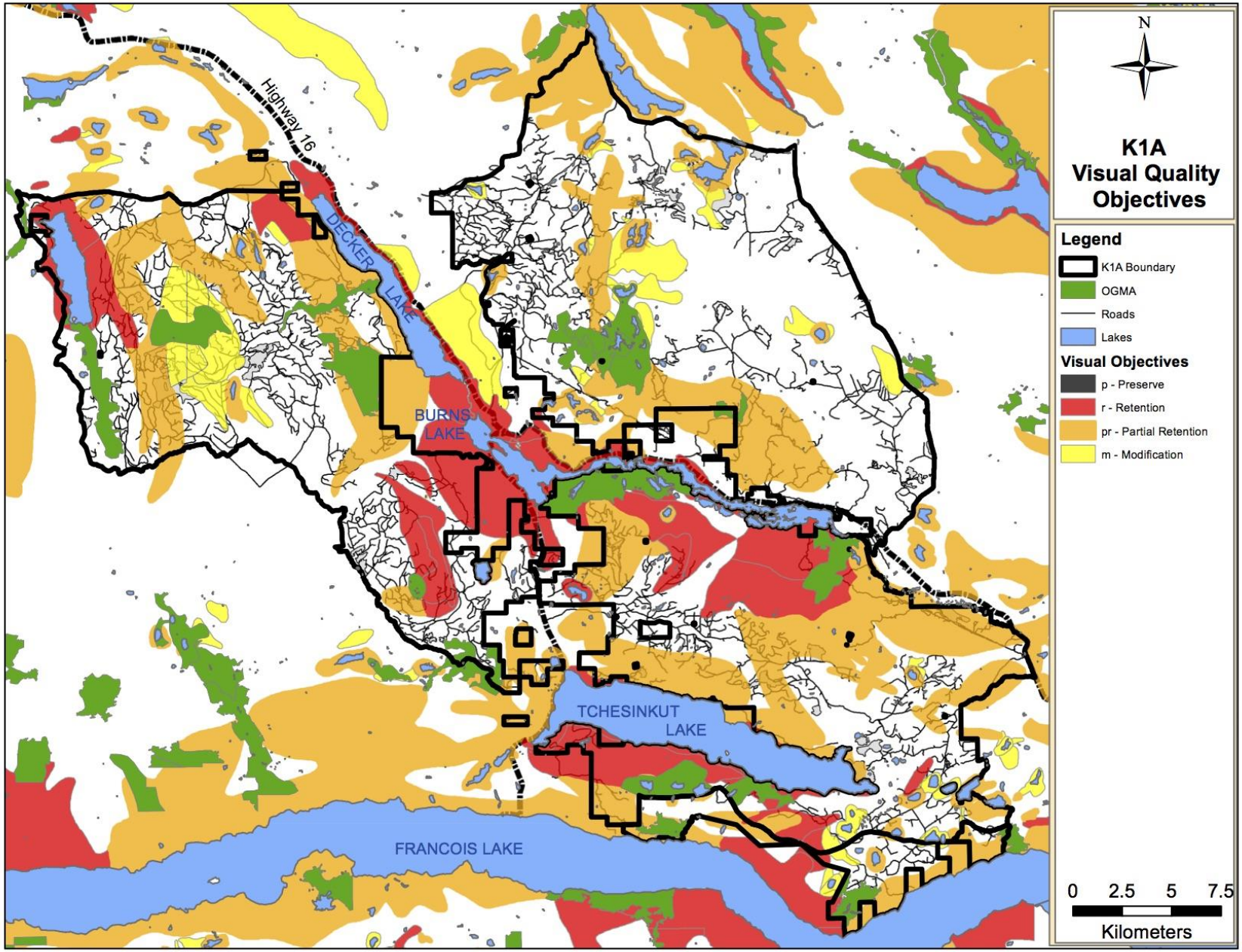
# APPENDIX 10 – BLCF MAPS


N
K1A Blocks by Harvest Year
Legend
Year Harvested
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Unharvested Block
K1A Boundary
Roads
Lakes
0 2.5 5 7.5
Kilometers
Highway 16
DECKER LAKE
BURNS LAKE
Highway 35
TCHESINKUT LAKE
FRANCOIS LAKE


N
K1A
Leading Species
and Age Class
Legend
K1A Boundary
BL, 1
BL, 2
BL, 3
BL, 4
BL, 5
BL, 6
BL, 7
BL, 8
BL, 9
PLI, 1
PLI, 2
PLI, 3
PLI, 4
PLI, 5
PLI, 6
PLI, 7
PLI, 8
PLI, 9
SX, 1
SX, 2
SX, 3
SX, 4
SX, 5
SX, 6
SX, 7
SX, 8
SX, 9
Roads
Lakes
0 2.5 5 7.5
Kilometers
Highway 16
DECKER LAKE
BURNS LAKE
TCHESINKUT LAKE
FRANCOIS LAKE


N
K1A
Biogeoclimatic
Zone Distribution
Legend
K1A Boundary
ESSF mc 2
SBS dk
SBS dw 3
SBS mc 2
Unharvested Block
Roads
Lakes
0 2.5 5 7.5
Kilometers
Highway 16
DECKER LAKE
BURNS LAKE
TCHESINKUT LAKE
FRANCOIS LAKE


N
K1A
Netdowns and
Connectivity
Corridors
Legend
K1A Boundary
Connectivity Corridors
THLB
Decidous Stands
Inoperable areas
Other Uneconomic Areas
OGMA
Roads
Lakes
0 2.5 5 7.5
Kilometers
Highway 16
DECKER LAKE
BURNS LAKE
TCHESINKUT LAKE
FRANCOIS LAKE


N
K1A
Visual Quality
Objectives
Legend
K1A Boundary
OGMA
Roads
Lakes
Visual Objectives
p - Preserve
r - Retention
pr - Partial Retention
m - Modification
0 2.5 5 7.5
Kilometers
Highway 16
DECKER LAKE
BURNS LAKE
TCHESINKUT LAKE
FRANCOIS LAKE