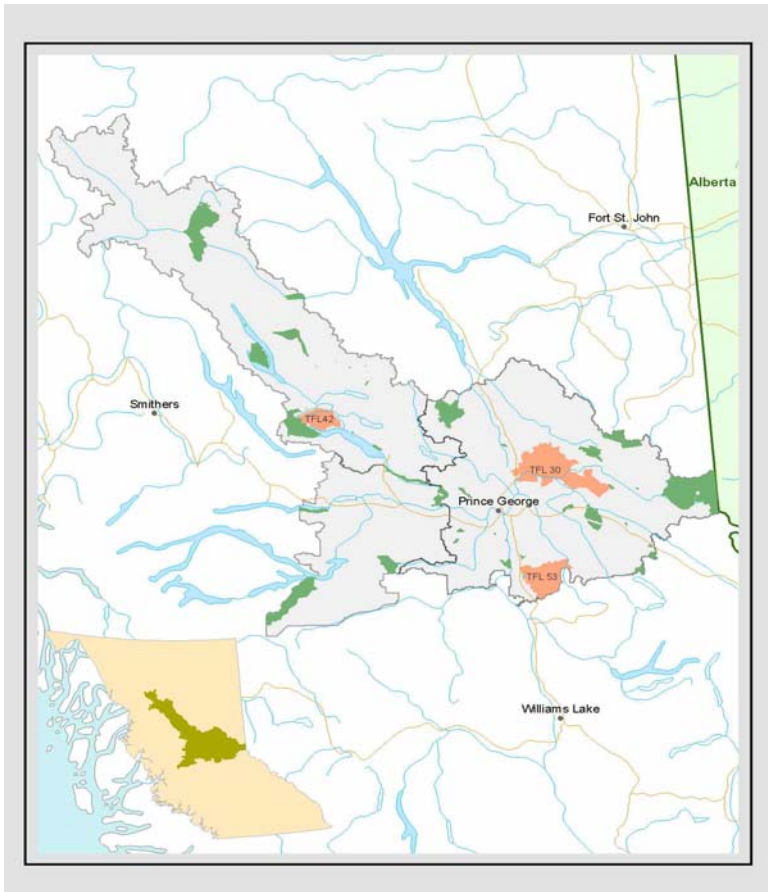


# Prince George Timber Supply Area

Information Report  
November 2008



# Timber Supply Review

## Prince George TSA

## Introduction

The Ministry of Forests and Range is required by law to formally review the timber supply\* in all timber supply areas\* and tree farm licence\* areas in the province. Ideally, a review of each area is completed at least once every five years. The main objectives of the five-year reviews are:

- to identify the economic, environmental and social information that reflects the current forest management practices — including their effects on the short- and long-term timber supply;
- to identify where improved information is required for future timber supply forecasts;
- to provide the chief forester with information to make any necessary adjustments to the allowable annual cuts\* for the next five years.

\* Throughout this document, an asterisk at the end of a phrase or word indicates that a definition can be found in a box at the foot of the page.

### Objective of this document

The objective of this document is to provide an opportunity for public review of the draft data and management assumptions that will be applied in reviewing the timber supply for the Prince George TSA. This document represents the initial stages of the timber supply review process and is intended to provide a non-technical overview of the draft data and management assumptions that will be used in the *Prince George Timber Supply Area Analysis Report*.

#### **Timber supply**

*The amount of timber that is forecast to be available for harvesting over a specified time period, under a particular management regime.*

#### **Timber supply area (TSA)**

*An integrated resource management unit established in accordance with Section 7 of the Forest Act.*

The *Prince George Timber Supply Area Analysis Report* will be one of the documents that the chief forester will consider in making the allowable annual cut determination under Section 8 of the *Forest Act*. Public input is encouraged to ensure the best information is used in determining allowable annual cuts.

This report contains a general description of the data assumptions and current forest management practices related to timber supply for the Prince George TSA. For the purpose of this timber supply review, current practices can be defined as the set of land-use decisions and forest management practices that are currently implemented and enforced. Future forest management objectives that may be developed but are not currently implemented and enforced are not included.

The draft data and management assumptions on pages 3-7 are summarized. For a more detailed description of the information, please contact the Prince George Forest District office in Prince George or the Fort St. James Forest District office in Fort St. James or the Vanderhoof Forest District in Vanderhoof or the Northern Interior Forest Region office in Prince George and request a copy of the data package. The public will have the opportunity to review the data package and this information report and to provide written comments until January 30, 2009.

#### **Tree farm licence (TFL)**

*Provides rights to harvest timber and outlines responsibilities for forest management in a particular area.*

#### **Allowable annual cut (AAC)**

*The rate of timber harvest permitted each year from a specified area of land, usually expressed as cubic metres of wood per year.*

# Timber Supply Review

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## Timber Supply Review process

In British Columbia, a process of determining allowable annual cuts has been in place since the late 1940s. However, the process has changed significantly over the years.

Currently, timber supply review process has three main stages: (1) data package preparation, (2) timber supply analysis and (3) AAC determination. First Nations and the public are encouraged to review and comment on the draft documentation prepared for the first two steps. All

comments and information obtained from First Nations and the public during the formal review processes will be summarized and presented to the chief forester for his consideration in the AAC determination.

Figure 1 illustrates the current status of the timber supply review for the Prince George timber supply area. The process for reviewing the timber supply and establishing the allowable annual cut for tree farm licence areas is based on similar principles.

Figure 1: approximate timelines for the timber supply review for the Prince George timber supply area.

Information Report & Data Package														
Public Review														
Analysis Report														
Public Review														
AAC Decision & Rationale														
Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
2008					2009									

## The chief forester's responsibility

Determining the allowable annual cuts for Crown forest lands in British Columbia is the responsibility of the province's chief forester. It is one of the chief forester's most important responsibilities since it affects the local and provincial economies and environment — now and in the future. Section 8 of the *Forest Act* requires the chief forester to consider the following factors to determine allowable annual cuts for timber supply areas and tree farm licence areas:

- a) the rate of timber production that may be sustained from the area, taking into account:
  - the composition of the forest and its expected rate of growth;
  - the time in which the forest will become re-established;

- silvicultural treatments, including reforestation;
  - standards of timber utilization;
  - constraints on the amount of timber produced from the area due to use of the forest for purposes other than timber production;
  - any other information which relates to the capability of the area to produce timber.
- b) the short- and long-term implications to the province of alternative rates of timber harvesting from the area.

## **Description of the timber supply area**

The Prince George TSA covers approximately 7.5 million hectares in the northern interior of British Columbia. It extends from near the Alberta border and Kakwa Protected Area in the southeast, Tweedsmuir Park in the southwest and the Spatsizi Plateau in the northwest.

The Prince George TSA, which is the third largest in British Columbia, is administered by three forest district offices, Prince George Forest District, Vanderhoof Forest District and the Fort St. James Forest District, all of which are within the Northern Forest Region.

### **The communities**

The major population centres in the Prince George TSA are Prince George, Vanderhoof and Fort St. James, as well as other small communities such as Fraser Lake. According to recent census data, the combined population in the Prince George TSA is approximately 110,000 people.

### **The economy**

The forest sector continues to provide a significant source of employment including timber harvesting and silviculture activities, as well as timber processing.

The upcoming analysis report will include a socio-economic assessment (SEA) of the Prince George TSA.

The SEA will provide the chief forester with a socio-economic profile of the timber supply area. In light of the changes that may result from the unprecedented levels of mountain pine beetle infestation in the timber supply area, and potential implications for communities and the province, the socio-economic analysis will be of particular importance in this timber supply review.

### **First Nations**

The First Nations groups which have identified traditional territories within the Prince George TSA include: Red Bluff, Nazko, West Moberly, Halfway River, Gitksan, Tahltan, Lake Babine, Kwadacha, Ulkatcho, Lhooskuz Dene, Skin Tyee, Cheslatta, and Tsay Keh Dene. First Nations communities include: Lheidli T'enneh, McLeod Lake, Yekooche, Nak'azdli, Tl'azt'en, Takla, Saik'uz, Stelat'en and Nadleh Whut'en.

The Lheidli T'enneh and Yekooche First Nations have negotiated Agreements-In-Principle with the federal and provincial governments, an important step in the treaty negotiation process. These agreements identify land that may be transferred to each First Nation when a final treaty is negotiated; therefore, these lands will not be considered as part of the timber harvesting land base.

All First Nations within the timber supply area have identified the importance of preserving or managing for cultural heritage resources, including ancient and contemporary trails and other important features. They have also indicated that the management of fish and wildlife is of critical importance to them.

In addition to information already received from First Nations, the Ministries of Forests and Range, and Environment are assembling information regarding wildlife abundance and First Nations requirements for the chief forester's consideration.

## The forest land resources

Numerous natural resources are associated with the forest land base. Forest products, recreation and tourism amenities, and a variety of wildlife habitat highlight the wide range of values and uses found in the Prince George TSA.

There are high recreational values and many uses of the forests in the Prince George TSA due to the proximity of provincial parks and protected areas. The diverse terrain, lakes and streams provide a wide range of opportunities for recreation including hiking, mountain biking, fishing, and boating.

## The environment

There are four biogeoclimatic zones\* in the Prince George TSA. The distinct ecological features and the unique nature of the area contribute to high biodiversity values. The diverse forests of the timber supply area host a wide variety of wildlife species including black bear, grizzly bear, moose, deer, elk, mountain goat and caribou.

## Management issues and assumptions

### Mountain pine beetle mortality

The mountain pine beetle (MPB) epidemic has peaked in the Vanderhoof and Prince George forest districts; however, the number of beetle-attacked pine trees may still increase slightly in the Fort St. James forest district.

Furthermore, MPB has killed trees in the Prince George and Vanderhoof forest districts faster than expected. Previous forecasts estimated that MPB would ultimately kill about 70 percent of mature pine – pine older than 60 years of age – in the Prince George forest district and 77 percent of mature pine in the Vanderhoof forest district. However, observed mortality rates have been faster than recently projected.

For the Prince George timber supply analysis the British Columbia Mountain Pine Beetle (BCMPB) model will help to estimate how MPB may affect harvest flows and impact timber supply. The BCMPB model (version 5) predicts that by 2024 the total volume of MPB-killed pine will be:

- 91,103,000 cubic metres in the Fort St. James forest district;
- 75,010,000 cubic metres in the Vanderhoof forest district; and
- 54,775,000 cubic metres in the Prince George forest district.

These forecasts assume that only mature pine stands will be attacked. However, due to the increasing population, MPB has also begun to attack immature pine trees. Mortality in immature pine stands was considered during the last timber supply review, but was not included in the timber supply analysis. In the upcoming analysis, the recent mortality data from immature stands in all three of the forest districts will be included.

Over the past several years, the allowable annual cut in the Prince George TSA has been significantly increased in an effort to slow the spread of MPB and to salvage dead pine while it is still merchantable. In determining a new allowable annual cut, the chief forester will consider how to maximize the recovery of dead pine, while minimizing the impact on the mid-term timber supply. Therefore, the timber supply analysis will examine a number of harvest forecasts based on different levels of pine salvage.

### ***Biogeoclimatic zone***

*A large geographic area with broadly homogeneous climate and similar dominant tree species.*

### **Pine shelf-life**

Shelf-life is the term used to describe the length of time after death that a MPB-killed tree remains merchantable. Some forest licensees in the Prince George TSA report pine shelf-life as three years; whereas, others have indicated that shelf-life may be as long as 40 years. This variability is due in part to differences in sawmill technology and soil moisture conditions. The ability of sawmills to process MPB-killed pine varies from facility to facility. Pine stands growing on wet sites tend to have shorter shelf-life than similar stands growing on dry sites. Shelf-life uncertainty is also increasing due to a growing interest in using MPB-killed pine to make products other than sawlogs, such as bioenergy.

For this timber supply review, the base case or reference timber supply forecast will be based on a pine shelf-life of 15 years, which is the average identified in several studies. Sensitivity analysis will be used to examine the effect of changes in shelf-life on timber supply.

### **Sub-alpine fir (balsam) decline in the Fort St. James forest district**

Sub-alpine fir or balsam is the predominant tree species in the northern part of the Fort St. James forest district. However, since the early 1990s, outbreaks of western balsam bark beetle and spruce budworm, as well as various heart rot diseases have resulted in significant losses of balsam.

Based on a study conducted in 2007, there are 1.16 million hectares of stands in which balsam is

the major tree species. Of these stands, 985,000 hectares have been affected by balsam decline. Of the balsam stands, four percent were classified as 'high' mortality, 74 percent as 'moderate', and 22 percent as 'low' mortality. In the high, moderate and low mortality stands, stand volumes were reduced by 38 percent, 37 percent and 24 percent, respectively.

In order to assess the potential impact of balsam decline on timber supply, the results of this study will be used in the timber supply analysis to adjust the volume of balsam available from these stands.

### **Landscape-level biodiversity order for old growth**

In October 2004, a Cabinet Order established legal objectives for the size of young forest patches, retention of old forest, and retention of old-interior forest. The order specifies that some old MPB-killed pine stands can contribute to the retention targets for old forest. The timber supply implications of this order will be assessed during the timber supply analysis.

### **Interior Cedar-Hemlock biogeoclimatic zone management**

The current AAC includes a partition of 110,000 cubic metres to be harvested from interior cedar-hemlock stands. New legal orders for biodiversity have established old-growth management areas in the Dome, Slim and Humbug landscape units in the Interior Cedar-Hemlock biogeoclimatic zone. The timber supply impacts of excluding these areas from the timber harvesting land base in order to meet the legal requirements for old forest retention will be assessed during this timber supply analysis.

# Timber Supply Review

## Prince George TSA

### **Economic operability**

In previous timber supply analyses, economic operability was based on criteria such as the predominant tree species, age, height and stocking class. Other factors such as forest district and logging system requirements were also assessed. Immature stands were assessed for economic operability on the basis of site index, or the height that a stand of trees is projected to reach by age 50 years.

For this timber supply analysis, three alternative methodologies for assessing economic operability are being considered. One of these includes delivered wood costs or value index, as well as other 'traditional' factors, such as location, slope (harvesting system required), site index and product prices.

### **Socio-economic analysis**

For the Prince George TSA, the unprecedented MPB epidemic may result in some significant transitions in harvest levels. Socio-economic analysis will be used to provide economic and community level information to assist the chief forester in determining the allowable annual cut as required by Section 8 of the *Forest Act*. The socio-economic analysis will:

- Provide the chief forester with employment, mill production and government revenue information related to the 'short- and long-term implications to British Columbia of alternative rates of timber harvesting from the area' (*Forest Act*, Section 8(8)(b));

- Provide an assessment of some of the economic implications of potential future harvest patterns and levels in light of the MPB impacts; and
- Include a summary of the various economic and community development initiatives currently underway in the Prince George TSA, including input from community members regarding the implications of changes in timber supply.

The reporting of employment, mill production and government revenue information will follow previous socio-economic formats. A socio-economic profile of the TSA will specifically emphasize and examine the forest sector. The magnitude of potential employment impacts resulting from possible changes in harvest levels will be assessed. Information about mill demand and processing will be used to examine the possible levels of production activity that can be supported by present and possible future timber harvesting. Price forecasts for wood products and other demand indicators will be used to illustrate how demand may evolve over the next two to three years. This information may help municipalities, businesses and economic development professionals understand the community-related implications of possible changes to future harvest levels.

# **Timber Supply Review**

## **Prince George TSA**

In the Prince George TSA, the amount of merchantable volume has been significantly degraded by MPB infestation. Damage has been most severe in the southern portion of the TSA. As a result, future harvest may come from sources further to the north. This shift may have implications for the location of processing facilities. An economic analysis will be structured to assist in demonstrating the potential changes to the cost of delivered wood.

Various economic and community development initiatives are well underway in the Prince George area. The purpose of the socio-economic analysis is not to duplicate this effort or re-trace steps already taken, but to provide the chief forester with relevant information reflecting these various efforts. Other information, issues or concerns from organizations and individuals can also be made available to the chief forester through this documentation.



# Timber Supply Review

Prince George TSA

## Your input is needed

Establishing the allowable annual cut is an important decision. It requires well-informed and thoughtful public input. Feedback is encouraged on any aspect of this Information Report, the Data Package and other topics related to the timber supply in the Prince George TSA. Forest Service staff are available to discuss your questions or concerns and/or help you prepare your response.

Please forward any comments to the Forest Service district manager located at the addresses provided at the end of this section. Your comments will be accepted until January 30, 2009.

After receiving public input, the Ministry of Forests and Range will finalize the data and management assumptions that will be applied in this timber supply analysis. The timber supply analysis will be completed and available for review in June 2009.

Following this second public review period, the chief forester will examine all of the information available in order to review the timber supply for the Prince George TSA. The chief forester will then establish the allowable annual cut based on his consideration of the factors as required under Section 8 of the *Forest Act*.

You may identify yourself on your response if you wish. If you do, you are reminded that responses will be subject to *Freedom of Information and Protection of Privacy Act* and may be made public. If copies of the responses are requested, personal identifiers will be removed before the responses are released.

## For more information contact and/or mail your comments to:

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