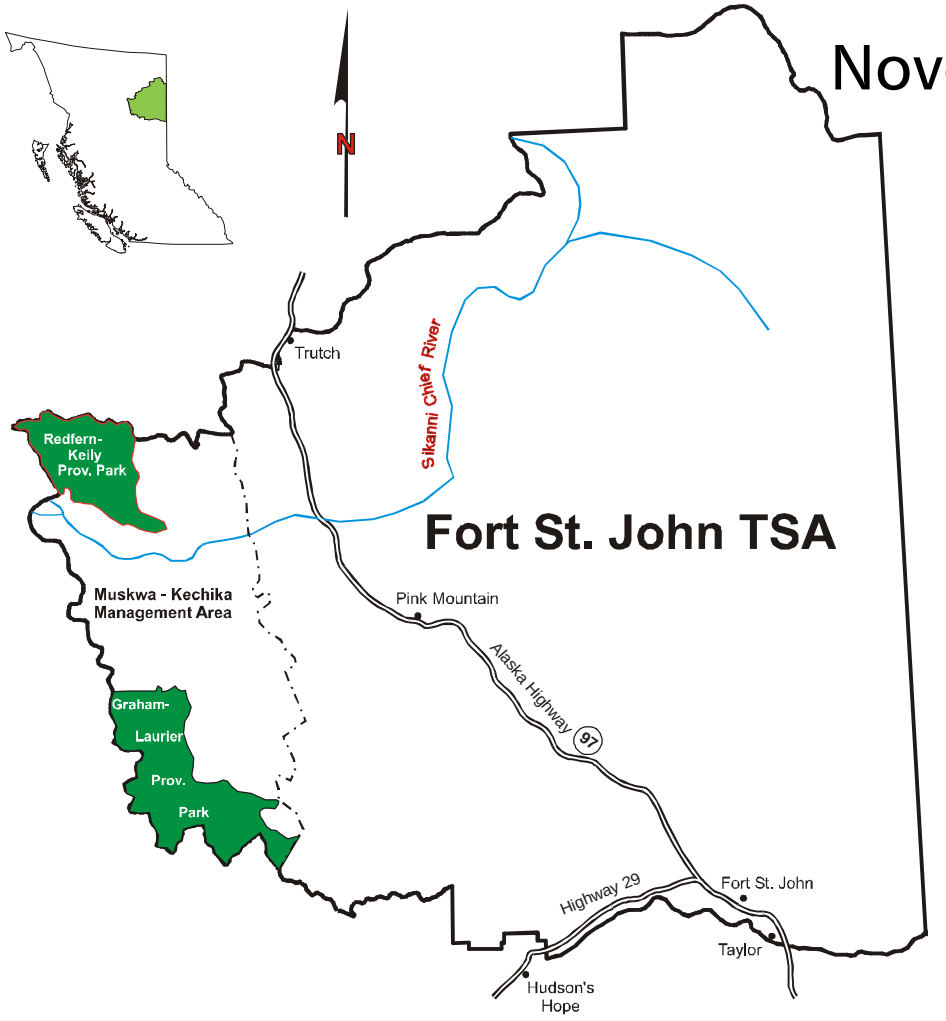
Timber Supply Review

Fort St. John Timber Supply Area

Information Report November 2000



BRITISH COLUMBIA

Ministry of Forests

Introduction

The British Columbia Forest Service is required by law to formally review the timber supply* in all timber supply areas* and tree farm licence* areas in the province. A review of each of the areas is completed at least once every five years. The main objectives of the reviews are:

- to identify 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 the margin.*

Objective of this document

The objective of this document is to provide an opportunity for the public to review the draft data and management assumptions that will be applied in the timber supply analysis for the Fort St. John timber supply area. This document represents the early 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 upcoming *Fort St. John Timber Supply Area Analysis Report.*

The *Fort St. John 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 in order 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 Fort St. John timber supply area. 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 implemented and enforced. Future forest management objectives that may be established but are not currently implemented and enforced are not included.

Many of the draft data and management assumptions are summarized on pages seven through ten. For a more detailed description of the information or a copy of the data package, please contact the Prince George Forest Region office in Prince George, or the Fort St. John Forest District office located in Fort St. John. The public has 30 days to review and comment on the information report and data package. A response form at the end of this document will assist you in providing your comments. Written comments will be accepted until December 29, 2000.

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 time. Most recently, the process has had some minor revisions designed to improve efficiency and encourage earlier public review through the release of this report.

Figure 1 (next page) illustrates the five-step process that has been developed for the Timber Supply Review for timber supply areas. The diagram indicates the current status of the Timber Supply Review for the Fort St. John timber supply area, and the estimated time required for each step.

Timber Supply Review
in the Fort St. John TSA

Timber supply
A harvest level that is forecasted to be available over time, under a particular management regime.

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

Tree farm licence
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
in the Fort St. John TSA

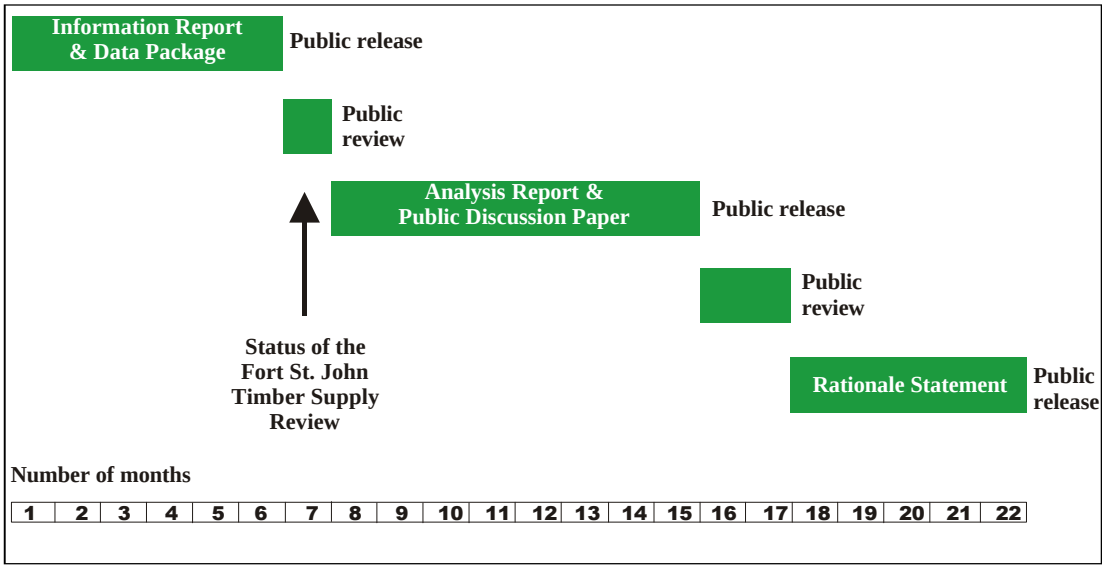


Figure 1.
Status of the timber supply review process for the Fort St. John TSA

The process for reviewing the timber supply and establishing the allowable annual cut for tree farm licence areas is based on similar principles; however, the process takes 30 months from start to completion. By the end of 2001, a new review process for all tree farm licence areas will require only 20 months for completion.

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

c) the nature, production capabilities and timber requirements of established and proposed processing facilities

d) the economic and social objectives of the Crown for the area, the region and the province, as expressed by the minister of forests

e) abnormal insect or disease infestations and major salvage programs planned for the timber on the area.

Some of these factors can be measured and analyzed—others cannot. Ultimately, the chief forester's determination is an independent, professional judgment based on the best available information. Information that is relevant to the factors listed above is provided to the chief forester by government agencies, the minister of forests and the public.

One of the objectives of the Timber Supply Review is to incorporate changes arising from new information, new practices and new government initiatives

that may have an impact on timber supply. In the event of significant change, the allowable annual cut may be reviewed in less than the required five years.

Following the release of the allowable annual cut determination by the chief forester, the minister of forests apportions the cut to the various licences and programs.

Principles of the Timber Supply Review

In determining allowable annual cuts—in addition to the requirements outlined in Section 8 of the *Forest Act*—the following principles have been developed.

The Timber Supply Review:

- is a decision-making process for establishing the allowable annual cut for timber supply areas and tree farm licence areas by the chief forester on a maximum five-year cycle, as required under Section 8 of the *Forest Act*; **it is not a process for making land-use or management decisions**
- incorporates the best information available including all relevant current practices, and identifies where new information is needed
- reflects the results of implemented plans and land-use decisions, and provides a benchmark for future planning processes
- involves other agencies, affected groups, and the public.

Fort St. John Land and Resource Management Plan

In October 1997, the *Fort St. John Land and Resource Management Plan* (LRMP) was approved by government. The planning area covers the Fort St. John timber supply area. The plan includes recommendations for the designation of new provincial parks, and now guides ongoing resource management activities and forest development planning. Eleven new protected areas were recommended in the plan, comprising approximately four per cent of the planning area. Five of these new areas have been established as Class A parks and will not contribute to the timber supply. Details surrounding the remaining six protected areas have not been finalized. These areas will be examined in a sensitivity analysis* as part of the timber supply review.

The planning area is divided into resource management zones based on resource values, existing economic activity, environmentally important areas and Agricultural Land Reserve boundaries. Land-use planning decisions regarding forest practices that are implemented will be reflected in the timber supply analysis.

A large geographic area known as the Muskwa Kechika covers a western portion of the Fort St. John timber supply area and a portion of the Fort Nelson timber supply area. An important part of the Fort St. John LRMP was the designation of the Muskwa-Kechika Management Area, which is composed of protected and special management areas, and was established under the *Muskwa-Kechika Management Area Act.* Important management objectives for this area will ensure that wilderness characteristics, and wildlife and their habitat are maintained while allowing some resource development.

The *Fort St. John Land and Resource Management Plan* is being implemented by the participating ministries, which include Environment, Lands and Parks, Forests and Energy and Mines.

Description of the timber supply area

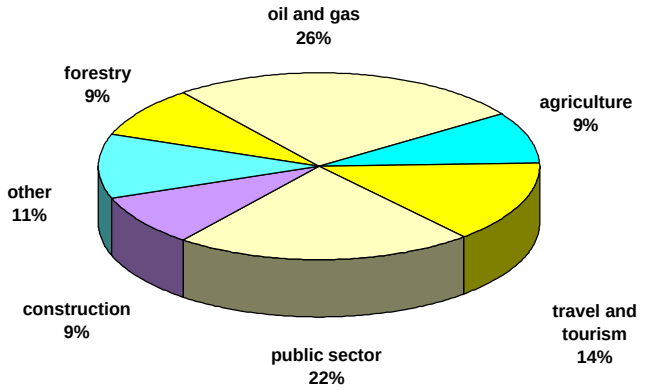
The Fort St. John timber supply area is the sixth largest in British Columbia and covers approximately 4.6 million hectares in the northeastern part of the province. The timber supply area is bounded by

Sensitivity analysis
Examines how uncertainty in data and management assumptions affect timber supply.

Alberta to the east, Fort Nelson timber supply area to the north, the Peace River to the south and the height of the Rocky Mountains to the west. A vast plateau dominates the eastern part of the timber supply area and rises westward to the foothills, and the steeper terrain of the mountains. Rivers are the dominant water feature as the lakes tend to be small and shallow. The major rivers include the Sikanni Chief, Beatton, Halfway, Chowade, Graham, Ettithun and Fontas.

The timber supply area is administered by the Ministry of Forests' district office located in Fort St. John.

Figure 2. Total employment by sector for the Fort St. John timber supply area, 1996



Notes: "Forestry" consists of harvesting, forestry services, and forest products manufacturing. "Other" consists of employment in mining, transportation, manufacturing, and other employment not included elsewhere. "Travel and tourism" consists of business and holiday related travel. A large portion of the travel is related to the oil and gas, forestry and other industries.
Source: Ministry of Finance. 1999. *British Columbia Local Area Economic Dependencies and Impact Ratios – 1996.* Victoria, B.C.

Indirect and induced jobs
Indirect jobs are supported by direct business purchases of goods and services. Induced jobs are supported by employee purchases of goods and services; for example, at retail outlets.

The communities

Based on 1999 BC Statistics, the population of the Fort St. John timber supply area was an estimated 28,300 people. The largest communities in the Fort St. John timber supply area are Fort St. John and Taylor, with populations of 16,448 and 1,211, respectively. From 1996 to 1999, the population of Fort St. John increased by 4.7 per cent and Taylor grew by 12.4 per cent. First Nations communities in the timber supply area include settlements at Halfway River, Blueberry River, Doig River and Kahntah. In 1996, the combined population of these communities was 462. Hudson's Hope is located just outside the timber supply area, and in 1999 had a population of 1,152, which reflected a population decrease of approximately 1.0 per cent since 1996.

The economy

The Fort St. John timber supply area is one of the most diversified regions of the province. As Figure 2 shows, the oil and gas sector continues to be the leading employer in the area supporting approximately 26 per cent of the direct and indirect* labour force. The public sector is the second largest employer supporting approximately 22 per cent of the direct and indirect labour force. This is followed by travel and tourism-related employment, which supports approximately 14 per cent of the labour force and includes service businesses that cater to both business and tourism travel. Forestry, agriculture and construction each account for 9 per cent of the labour force.

First Nations

The Fort St. John timber supply area lies within the area described as Treaty 8 Territory. Three First Nations in the timber supply area are signatories to Treaty 8: Blueberry River First Nation, Doig River First Nation and Halfway River First Nation. They also have reserve lands and traditional territories within the timber supply area. The Kahntah community, Prophet River, West Moberly, and Assumption First Nations have traditional territory, but no reserve lands within the timber supply area. First Nation's members are involved in ranching, trapping, big game guiding, oil and gas development, and forestry activities within the timber supply area.

The forest land resources

Numerous natural resources are associated with the forest land base. Forest products, recreation, guide-outfitting, trapping, tourism, ranching, oil and gas exploration and development, and wildlife habitat highlight the wide range of resources and values found in the Fort St. John timber supply area. Range resources on public forest land support a high level of commercial grazing for livestock. The diverse terrain results in distinct climates and vegetation across the timber supply area. Mountains and river valleys in the west are covered predominantly with Englemann spruce and subalpine forests. The plateau in the east is covered mostly with boreal spruce and trembling aspen forests. White spruce, lodgepole pine, aspen, black spruce and subalpine fir are the main tree species in the area; these species frequently grow as mixed-wood* stands.

Parks, recreational sites and trails, and roaded and non-roaded areas provide numerous opportunities to enjoy the outdoors. The large amount of unroaded area in the timber supply area is an important feature for outdoor recreation. Depending on the season, activities include camping, horse-back riding, hunting, snowmobiling, all-terrain-vehicle riding, fishing, river-boating, and wildlife viewing. The parks within the timber supply area include Beatton, Buckinghorse River Way, Charlie Lake, Graham-Laurier, Milligan Hills, Pink Mountain, Redfern-Keily and Sikanni Old Growth Provincial Parks. Established recreation sites within the timber supply area include Inga Lake, Duhu Lake, Sikanni Chief Falls, Halfway Graham and Beaver Pond.

The environment

There are three forested biogeoclimatic zones* in the Fort St. John timber supply area. These zones are the Engelmann Spruce-Subalpine Fir (ESSF), Boreal White and Black Spruce (BWBS) and Spruce-Willow-Birch (SWB) zones. Also, there is a large amount of Alpine Tundra (AT) found above the tree line in the western part of the timber supply area. Historically, fire has been the dominant agent of disturbance on the landscape and has largely determined the type of the forests that are currently found in the timber supply area.

The timber supply area supports thriving populations of large mammals, including black bear, grizzly bear, mountain goat, elk, mountain sheep, Stone's sheep, white–tailed deer, mule deer, caribou and moose. Healthy populations of furbearers, birds and fish are found within the area, although a few species are considered to be endangered or threatened. Species that are red-listed (endangered or threatened) include several warblers, broad-winged hawk, Nelson's sharp-tailed sparrow and the upland sandpiper. Several blue-listed (vulnerable) species include the trumpeter swan, sandhill crane, Canada warbler, northern long-eared myotis (bat), grizzly bear, fisher and wolverine.

The network of rivers and streams support twelve species of fish including mountain whitefish, Arctic grayling, rainbow trout, lake whitefish and walleye. Substantial populations of bull trout, northern pike, goldeye, yellow perch and burbot and are also found in the TSA. Bull trout is the only fish species identified as vulnerable (blue-listed) in the area.

History of the allowable annual cut

In October 1996, the chief forester set the allowable annual cut (AAC) for the Fort St. John timber supply area at 2,015,000 cubic metres (effective December 31, 1996). The AAC determination represented a 12-per cent increase from the previous level and was based on an increase of 24 per cent in the coniferous component and maintenance of

Mixed-wood
Forests that have a mix of coniferous and deciduous trees.

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

Silviculture
Activities that ensure the regeneration of young forests on harvested areas, enhance tree growth or improve wood quality in selected stands. Activities include: site rehabilitation and preparation, planting, spacing, fertilization and pruning.

Operability
Classification of an area considered available for timber harvesting. Operability is determined using the terrain characteristics of the area as well as the quality and quantity of timber on the area.

Integrated resource management
The identification and consideration of all resource values, including social, economic and environmental needs, in resource planning and decision-making.

Forest Practices Code
Legislation, standards and guidebooks that govern forest practices and standards, with heavy penalties for violators.

the deciduous component. The AAC is currently partitioned into 1,100,000 cubic metres for harvesting within predominantly coniferous stands, and 915,000 cubic metres for harvesting within predominantly deciduous stands.

As part of the 1996 determination, the chief forester gave direction to resolve uncertainties with respect to the timber supply in the Fort St. John timber supply area. In preparation for the upcoming allowable annual cut determination, the following issues were examined:

- **forest inventory** – in the last determination, the chief forester noted that the timber supply analysis was based on older forest inventory information, suggesting a need for a re-inventory. In preparation for this timber supply review, district staff conducted a pre-inventory analysis and completed a study on small-diameter lodgepole pine stands. A re-inventory project is currently underway in the southeastern portion of the timber supply area. Any new information gathered regarding new inventory information will be considered in the timber supply analysis.
- **silviculture* treatments** – in the previous determination the chief forester noted the need to develop silviculture treatments which reflect clear objectives for managing new regenerating forests that are susceptible to crowding by other types of vegetation. The concern was mainly in areas where heavy grass and aspen competition are suppressing young forests. Since then, district staff have carried out field trials to investigate alternative silviculture treatments with varied results. This information will be considered in the upcoming AAC determination.
- **unsalvaged losses** – in the previous determination it was noted that an estimate of the unsalvaged deciduous volume losses was needed and that the current estimate of unsalvaged losses for coniferous stands should be examined. District staff have implemented procedures to identify the location, volume and species of salvage timber. This will provide information to improve the estimate of unsalvaged losses for the timber supply analysis.
- **environmentally sensitive areas** – the chief forester noted in the previous determination that terrain hazard and recreation mapping should be completed for a better accounting in the next timber supply analysis. New operability* mapping has been completed that examined harvesting methods, slope and soil types. This mapping will improve accounting for difficult and hazardous terrain in determining the operable land base. The recreation features inventory was updated in 1998, and will be included in the upcoming timber supply analysis.

  Note: For more information on these points, please refer to the Fort St. John Timber Supply Area Rationale for Allowable Annual Cut Determination October 22, 1996.

Current Timber Supply Review

Public forest lands in British Columbia provide recreational enjoyment, fish and wildlife habitats, water supplies, timber resources and many other benefits. The Ministry of Forests manages the timber, range and recreation resources on public lands, and the Ministry of Environment, Lands, and Parks manages fish, wildlife, water resources and parks. Both agencies subscribe to the principle of integrated resource management*, whereby all resources are considered when making forest management decisions.

The Forest Practices Code* is now law and has been implemented in the timber supply area since June 15, 1997. The new practices may influence both the short- and long-term timber supply.

The data and management assumptions that will be used in the timber supply analysis will be based on the existing land-use designations and current resource management practices that are approved and implemented in the Fort St. John timber supply area. Uncertainties about some of the data regarding current practices and their potential effects on timber supply will be examined through sensitivity analyses. The chief forester will also consider any new information, or changes in practices, at the time of the allowable annual cut determination.

Draft data and management assumptions for public review

The public is encouraged to review the data and management assumptions for completeness and accuracy. In determining an allowable annual cut, the chief forester will be considering these assumptions as required by Section 8 of the *Forest Act*. The following general outline contains a brief description of the more pertinent information that will be used in the timber supply analysis and subsequently, in the chief forester's allowable annual cut determination for the Fort St. John timber supply area. More detailed information can be found in *Appendix A: Data Package*. This appendix is available upon request from the Forest Service offices listed at the end of this report.

Land base factors

- **operable area** - the forested areas in the Fort St. John timber supply area have been assessed for operability based on soil and slope types. For the timber supply review, only those areas considered operable will contribute to the timber harvesting land base.
- **forest types not currently being harvested** – these are forest types that are currently not utilized in the Fort St. John timber supply area due to economic limitations. Typically, these are stands that have a low volume per hectare, and therefore have low merchantability. These forest types will not be included in the timber harvesting land base.
- **protected areas –** recommendations of the Fort St. John LRMP have led to the creation of five new parks including the Graham-Laurier, Milligan Hills, Pink Mountain, Redfern-Keily and Sikanni Old Growth Provincial Parks. These parks will be excluded from the timber harvesting land base.
- **forest roads** - the amount of productive forest land base occupied by existing forestry-related roads, trails, landings, as well as oil and gas exploration and development-related activity, including seismic lines will be estimated. Average widths for each of these disturbance types have been determined. Next, the total area will be determined by multiplying these widths by the corresponding mapped length of each disturbance type. In the analysis, the total area that is occupied by the existing features will be deducted from the productive forest land base. An additional factor will be developed to account for future roads.
- **cultural heritage resources –** an archaeological site inventory was updated in 1999 based on information from the Ministry of Small Business, Tourism, and Culture. Archaeological and cultural heritage site data are collected on an ongoing basis in operational planning.

Inventory factors

- **forest inventory -** the forest inventory has been updated to December 1999 to account for recent wildfires, harvesting and silviculture activities. Forest inventory measurements, such as tree ages and heights are projected to the present to reflect growth since the time of data collection.

Variable Density Yield Projection model
BC Forest Service computer program that generates natural stand yields.

Clearcut harvesting
A harvesting method whereby all trees that meet utilization standards are harvested. The harvested site is then regenerated to acceptable standards by appropriate means including planting and natural seeding.

Wildlife tree
A standing live or dead tree with special characteristics that provide valuable habitat for conservation or enhancement of wildlife.

Biodiversity (biological diversity)
The diversity of plants, animals and other living organisms in all their forms and levels of organization, and includes the diversity of genes, species and ecosystems, as well as the evolutionary and functional processes that link them.

The principle coniferous tree species of commercial significance are lodgepole pine, white spruce and subalpine fir. The main deciduous tree species is trembling aspen; and cottonwood to a minor extent.

- **minimum harvestable ages** - the minimum harvestable age is the earliest age at which a forest stand is estimated to reach a merchantable size to be considered available for harvest. For the timber supply analysis, the ages will vary depending on tree species and harvesting system, and are based on the time to achieve a minimum volume. For example, on the conventional harvesting areas for all species, the minimum harvestable age is based on achieving a minimum volume of 120 cubic metres per hectare.
- **mixed-woods** – mixed-woods comprise a large portion of the productive forest within the Fort St. John timber supply area. Currently there is limited information available on the growth and yield of these stands. In the timber supply analysis, the BC Forest Service's Variable Density Yield Projection model* will be used to estimate existing and future volumes for these stands. A growth and yield model designed specifically for mixedwoods (Mixedwood Growth Model) is being calibrated for BC. If available, information from this model will be used for a sensitivity analysis.

Forest re-establishment factors

- **basic silviculture** - British Columbia laws require that areas harvested and expected to produce timber in the future must be reforested with ecologically acceptable species within a specified time frame. The most common silvicultural practice is to harvest; then if necessary, prepare the site for reforestation; reforest by planting a mix of species or by relying on natural regeneration; and finally if necessary, control competing vegetation.

In the Fort St. John timber supply area, the most common silvicultural system involves clearcut harvesting* with reserves of wildlife tree* patches, followed by reforestation achieved predominantly by planting well-spaced trees of acceptable species. In the timber supply analysis, it is assumed that all coniferous-leading areas are reforested within five years after harvest. Deciduous species are not planted as they regenerate naturally; it is assumed regeneration and adequate stocking will be achieved in the two years following harvest.

Timber utilization factors

- **timber utilization –** estimates of merchantable volume will be based on the utilization of all trees that meet or exceed the following standards: a minimum 10-centimetre top diameter (inside the bark) for all species types except small lodgepole pine, which is used to a minimum top diameter of 7.5 centimetres; a minimum 17.5-centimetre diameter measured at 1.3 metres above the ground for spruce and balsam, and a minimum diameter of 12.5 centimetres for lodgepole pine and deciduous species; and a maximum 30-centimetre high stump.

Infestations, devastations, and salvage of timber

Each year, natural agents such as fire, wind, insects and disease damage portions of the forests in the Fort St. John timber supply area. A portion of the volume is salvaged and contributes to the timber supply. However, it is anticipated that some of the damaged timber will not be salvaged due to difficult access or economic limitations. The annual unsalvaged volume is estimated to be 126,600 cubic metres and will be deducted from the timber supply projections.

Factors to be considered for purposes other than timber production

Forest management guidelines used to manage forest resources such as biodiversity*, scenic values, and wildlife habitat quality will be included in the timber supply analysis through the use of forest cover requirements, and volume and land-base reductions.

- **general forest cover requirements -** under current forest management practices, cutblocks* must achieve green-up* before adjacent areas are permitted to be harvested. The objective of this practice is to avoid over-concentration of harvesting in an area. To account for this practice, no more than 40 per cent of the timber harvesting land base outside of visually sensitive areas will be allowed to have trees less than three metres tall at any time. As well, forest cover requirements will be applied in the timber supply analysis to account for maintaining areas of old-growth forests (see "biological diversity").
- **visually sensitive areas –** the maintenance of scenic landscapes is a priority for recreation and tourism management. In the Fort St. John timber supply area, visually sensitive areas are located adjacent to the Alaska Highway and rivers that are important for backcountry recreation. Road construction and logging within these areas are planned and implemented to minimize visual impacts. In the analysis, to reflect current management practices in visually sensitive areas, the amount of harvested area (with trees less than five metres tall) will be limited to a maximum of between three to 33 per cent at any time, depending on the specific objective.
- **recreation areas** – a recreation features inventory was completed in 1993 and updated in 1998. Recreation features that are classified as very sensitive will not contribute to the timber harvesting land base. In addition, 50 per cent of areas classified as sensitive and with a high or very high recreation significance are considered unavailable for timber harvesting.
- **riparian habitat* -** to account for riparian reserves and management areas along streamsides, or around lakes and wetlands, a portion of the forest land base will be considered unavailable for timber harvesting.
- **caribou habitat areas -** four areas are managed for critical caribou habitat and important habitat for a variety of fur bearers. These areas are currently managed to enhance or maintain forest conditions for lichen growth and to reduce fragmentation of the forest canopy. In the analysis, for three of the areas at least 40 per cent of the forested area must be retained with forests older than 100 years. In the fourth area, 50 per cent of the forested areas must be retained with forests older than 40 years.
- **biological diversity -** the *Forest Practices Code* requires that biodiversity be considered at both the stand and landscape level.

  Leaving wildlife tree patches, single trees and coarse woody debris* provides stand-level biodiversity and is current practice in the Fort St. John timber supply area. Generally, coarse woody debris objectives are met by the contributions of non-merchantable timber left on the ground after harvesting. Wildlife tree patches are generally larger than two hectares and will be retained for at least several decades. For the timber supply analysis, wildlife tree retention requirements described in the *Landscape Unit Planning Guide* will be applied to account for management for stand-level biodiversity within the timber harvesting land base.

  Management of landscape-level biodiversity will be accounted for in the timber supply analysis by applying averaged seral stage* constraints to each draft landscape unit* and ecosystem type. This approach is being taken because at

Cutblock
A specific area, with defined boundaries, authorized for harvest.

Green-up
The time needed after harvesting for a stand of trees to reach a desired condition (usually a specific height) — to ensure maintenance of water quality, wildlife habitat, soil stability or aesthetics — before harvesting is permitted in adjacent areas.

Riparian habitat
The stream bank and flood plain area adjacent to streams or water bodies.

Coarse woody debris
Logs and stumps that provide habitat for plants, animals and insects, and a source of nutrients for soil development.

Seral stages
Sequential stages in the development of plant communities that successively occupy a site and replace each other over time.

Landscape unit
A planning area based on topographic or geographic features, that is appropriately sized (up to 100 000 hectares), and designed for application of landscape-level biodiversity objectives.

Base case forecast
The timber supply forecast which illustrates the effect of current forest management practices on the timber supply using the best available information, and which forms the reference point for sensitivity analysis.

Person-year(s)
One person working the equivalent of one full year, defined as at least 180 days of work. If someone works full-time for 90 days, he or she accounts for 0.5 person years.

this time landscape units and biodiversity emphasis options are still in draft form and have not been formally established. The average requirement will reflect recommendations in the *Biodiversity Guidebook* that about 45 per cent of a management unit or planning area should have lower biodiversity emphasis, 45 per cent intermediate biodiversity emphasis, and 10 per cent higher biodiversity emphasis.

As part of the timber supply analysis, sensitivity analyses will be undertaken to examine the potential impacts on timber supply of applying the draft biodiversity emphasis options developed for the Fort St. John timber supply area.

Implications of alternative rates of harvesting

- **alternative rates of harvesting** - many alternative harvest forecasts can be produced for a given set of forest conditions and management assumptions. Each alternative usually represents a trade-off between the harvest level in the short term and the subsequent transition to the long-term harvest level. For the projected base case forecast*, the initial harvest forecast will focus on achieving the current rate of harvest in the short term without compromising the long-term harvest level, and if necessary, allowing for a gradual and managed transition to a lower harvest level. The implications of alternative short-term rates of harvest will be examined in the analysis.
- **implications related to community dependence –** the impact of timber supply adjustments on local communities and the province is an important consideration in the timber supply review. The *1996 Fort St. John Timber Supply Area Socio-Economic Analysis* reported that provincially, harvesting, silviculture and processing activities associated with the Fort St. John timber supply area supported about 594 person-years of direct employment, and approximately 891 person-years of indirect and induced employment.

The socio-economic section of the upcoming analysis report will review the role of the forest sector in the Fort St. John timber supply area. To provide this update, current information on employment and fibre flows will be gathered from licensees, processing facilities, the Forest Service and other stakeholders. Indirect and other related employment at both the local and provincial levels will also be provided by the Ministry of Finance and Corporate Relations.

To examine the implications of alternative rates of harvest, employment coefficients, reported in person-years* per 1,000 cubic metres harvested, will be developed and used to estimate changes to employment levels now and in the future from any potential harvest level changes.

Timber processing facilities

The socio-economic analysis will also examine the implications of potential changes in timber supply for the area's processing facilities. There are two lumber mills, a chipping facility, and a pulp mill operating in the timber supply area. In 1998, these mills consumed approximately 1.2 million cubic metres of timber and 186 thousand bone dry units of wood chips. A total of approximately 410 people were employed at these mills in 1998.

An oriented-strand board mill is currently in the planning stage, and when operational it is expected to have a capacity to process about 1.1 million cubic metres per year of aspen.

Economic and social objectives of the Crown

In a letter and a memo to the chief forester, the minister of forests has expressed the Crown's economic and social objectives for the province. The harvest flow objectives to be used in the timber supply analysis (see above, "*Alternative rates of harvesting*") are consistent with the minister's stated objectives.

In addition, economic and social objectives for the area and the general region will be derived from considering public input.

Your input is needed

Establishing the allowable annual cut is an important decision that requires well-informed and thoughtful public input. Feedback is welcomed on any aspect of this *Information Report, the Data Package Appendix* and other topics related to the timber supply in the Fort St. John timber supply area. The response form at the end of this document will assist you in preparing your comments. As well, Forest Service staff would be pleased to discuss questions or concerns that may help you prepare your response.

Please mail the completed response form and your comments to the regional manager or the district manager at the address below. Your comments will be accepted until December 29, 2000.

After receiving public input, the Forest Service will finalize the data and management assumptions that will be applied in the timber supply analysis. The timber supply analysis will be complete and available for public review by winter 2001. You may also wish to participate in the second public review period, which will follow the release of the *Fort St. John Timber Supply Area Analysis Report.*

Following the second public review period, the chief forester will examine all the information available in order to review the timber supply for the Fort St. John timber supply area. 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 the *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:

District Manager
B.C. Forest Service
Fort St. John Forest District
8808-72 Street
Fort St. John, B.C.
V1J 6M2

Phone: (250) 787-5600
Fax: (250) 787-5610

Regional Manager
B.C. Forest Service
Prince George Forest Region
1011 4th Avenue,
Prince George, B.C.
V2L 3H9

Phone: (250) 565-6100
Fax: (250) 565-6671

or electronically to:
Ron.Rutledge@gems9.gov.bc.ca

Fort St. John Timber Supply Area
Timber Supply Review

Information Report Response Form

The *Forest Act* requires the chief forester to consider the following factors to determine the allowable annual cut for timber supply areas and tree farm licence areas in the province, as follows:

- the rate of timber production that can be sustained from the area;
- the short- and long-term implications to the province of alternative rates of timber harvesting from the area;
- the nature, production capabilities and timber requirements of established and proposed timber processing facilities;
- the economic and social objectives of the Crown for the area, the general region, and the province, as expressed by the minister of forests, and;
- abnormal insect or disease infestations and major salvage programs planned for the area.

We welcome your review to ensure the best available information is considered for the Fort St. John timber supply area. Please provide your comments on this form, or in another format. Input will be accepted until December 29, 2000.

A. Economic and social objectives

Please use the space below to provide your comments regarding the economic and social information contained in this report or other information that you believe should be considered in completing the social and economic analysis for the Fort St. John timber supply area.

B. Reviewing the draft data and management assumptions

Please use the space below to provide your comments regarding the draft data and management assumptions contained in this report or other information that you believe should be considered in the timber supply analysis for the Fort St. John timber supply area.

Name (optional):_____

Address (optional):_____

Mail or fax your comments to:

District Manager
B.C. Forest Service
Fort St. John Forest District
8808-72 Street
Fort St. John, B.C.
V1J 6M2

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APPENDIX A

Data Package
Description of Data Inputs and Management Assumptions

This appendix is available upon request from the Ministry of Forests.

Offices are located at:

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Fort St. John Forest District
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