

**Timber
Supply
Review**

Soo Timber Supply Area

P u b l i c D i s c u s s i o n P a p e r

August 1999



**BRITISH
COLUMBIA**

Ministry of Forests

Introduction

The British Columbia Forest Service is reviewing the timber supply for all timber supply areas* (TSAs) and tree farm licences (TFLs) in the province. This review examines the impacts of current forest management practices on the timber supply, economy, environment and social conditions of the local area and the province. Based on this review, the chief forester may, if necessary, adjust the allowable annual cut (AAC) for the Soo TSA.

By law, the chief forester must review and set new AACs for all TSAs and TFLs every five years. The objectives of the Timber Supply Review are:

- to identify relevant current forest management practices and assess their effects on short- and long-term timber supply, and identify related economic, environmental and social factors
- 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 AACs for the next five years

Timber Supply Review in the Soo TSA

The *Soo TSA Data Package* and *Information Report* were released in August 1997. Following the release, the documents were reviewed by licensees, the public and government agencies. The B.C. Forest Service has now completed the *1999 Soo TSA Analysis Report* which is summarized in this discussion paper. The objectives of this document are to provide British Columbians with an overview of the timber supply review and forecasts for the Soo TSA and to encourage them to provide comments during the 60-day public review period. Public comments will be accepted until October 29, 1999.

Before setting a new AAC, the chief forester will review all relevant reports and public input. The chief forester's determination will be outlined in a rationale statement which will be available, along with the *Summary of Public Input*, to the public. Following the release of the AAC determination by the chief forester, the minister of forests will allocate the AAC to the various licences and programs.



Figure 1.
Review process for the Soo TSA

Description of the TSA



The Soo TSA is located on the southern coast of B.C. and is administered by the Squamish Forest District office in Squamish. The TSA covers approximately 826 000 hectares and includes the communities of Squamish, Whistler, Lions Bay, Pemberton and Mt. Currie as well as several other First Nation communities.

Forest land resources

The forest land base in the Soo TSA is rich in numerous natural resources. These include timber, significant fish and wildlife habitat, and recreation and tourism amenities.

**A timber supply area is an integrated resource management unit established in accordance with section 7 of the Forest Act.*

The Soo TSA is characterized by the rugged terrain of the coast mountains and by valley bottom floodplains. Due to the range in climate and elevation (from sea level to 2 700 metres), this TSA is ecologically diverse and provides habitat for a wide variety of wildlife species. These include 130 species that depend on the characteristics of older forests, from songbirds to big game species such as grizzly and black bears, moose, mountain goat, gray wolf, cougar, and mule and black-tailed deer. The northern spotted owl, an endangered species, is managed through the guidelines presented in the Spotted Owl Management Plan. Four major river systems support a variety of fish species, and the nutrient-rich Squamish river estuary supports a range of marine life.

Recreational and tourism opportunities are high due to the proximity of the Lower Mainland, numerous provincial parks, the attraction of the Whistler resort, exceptional natural scenery, and the presence of highway and rail transportation.

Socio-economic profile

Regional economy

Overall, the communities in the Soo TSA are experiencing significant growth. The total labour force expanded by 41 per cent from 1991 to 1996 and population grew by 28 per cent in the same period (to the current level of 26 117). Most of this expansion is attributable to growth in tourism and related sectors (such as construction). This is especially true in Pemberton and Whistler, the two fastest growing communities in B.C. with growth rates of 70 and 60 per cent respectively during this period.

Figure 2, based on 1996 Census data, shows that the tourism sector is the leading employer in the Squamish Forest District, directly and indirectly responsible for about 37 per cent of the labour force. The public sector is the second largest employer followed by construction.

The forest sector directly and indirectly accounts for 12 per cent of the labour force, and has been affected by AAC reductions in 1992 and 1995. Since the 1996 Census data was collected, the forest sector has also been affected by temporary mill closures. The tourism sector provides the greatest total income in the forest district, however; average income per employee in tourism is about half of the average income per employee in the forest sector.

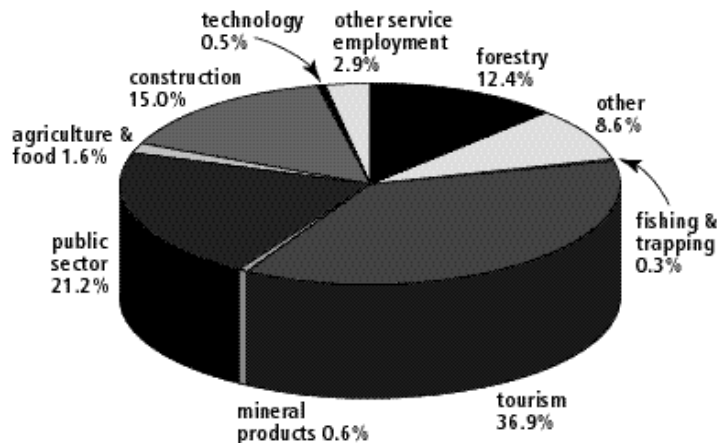


Figure 2.
Soo TSA - Experienced labour force by sector, Ministry of Finance and Corporate Relations 1996

Figure 3 illustrates the potential contribution of the forest industry associated with the Soo TSA timber harvest to both the regional and provincial economies. Figures in this table are based on the current AAC of 506 000 cubic metres.

Summary of Local and Provincial Economic Impacts		
	TSA	Provincial
Direct Employment (person years)	263	683
Total Employment (person years)	420	1,523
Total Employment Income (\$'97 millions/year)	18.7	63.3
Provincial Government Revenues (\$'97 millions/year)	n.a.	20.8

Figure 3.*Economic Summary*

Current AAC

In October 1995, the chief forester reduced the AAC by 15 per cent to 506 000 cubic metres from 580 000 cubic metres. The current AAC includes for harvesting of 2 500 cubic metres per year from forest types dominated by cottonwood.

Land use planning

Several new provincial parks were created as a result of the Lower Mainland Protected Areas Strategy (Upper Lillooet River, Callaghan Lake, Brackendale Eagle Reserve, Indian Arm, Stawamus Chief, Sockeye and Tantalus). The forested areas within these new parks no longer contribute to the timber supply. In addition, in May 1997, government approved the Spotted Owl Management Plan which established several land use zones dedicated to the management of the spotted owl. The forested areas within these zones contribute to timber supply, but forest harvesting is constrained significantly.

Timber supply forecasts

A timber supply computer model is used to develop several possible timber supply forecasts for the next 250 years. One of these forecasts is the base case which illustrates the effect of current forest management on timber supply. The base case is not an AAC recommendation, but rather, it is one of many sources of information the chief forester will consider when setting the AAC. The base case forecast presented in this report is for discussion and comparative purposes and, due to areas of uncertainty, the AAC determined by the chief forester may be greater or less than the base case forecast.

The base case timber supply forecast for the Soo TSA indicates the current AAC of 506 000 cubic metres can be maintained over the long term without requiring future harvest level reductions or creating future timber disruptions.

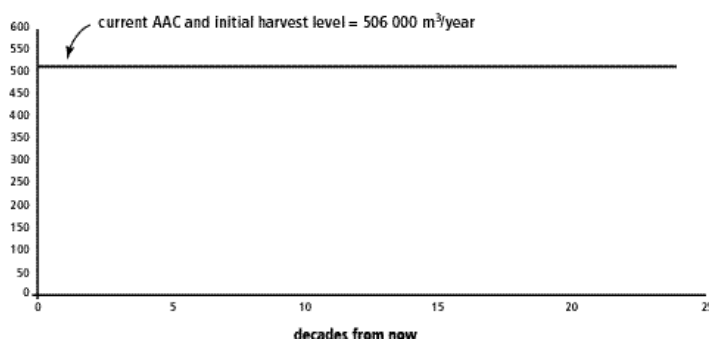


Figure 4.

Base case timber supply forecast, 1999

The harvest forecast indicates a stable timber supply. The creation of new parks, forest cover requirements for biodiversity protection, increases in riparian reserves, visually sensitive areas, and deer

(ungulate) and spotted owl management zones have all reduced the amount of timber available for harvest in this analysis. However, these reductions are balanced by a significant increase in the area considered available for helicopter logging. The net change in the timber harvesting land base was an increase of over 13 per cent.

Sensitivity analyses: examining uncertainty

Since forests are complex and constantly changing, timber supply analysts assess how timber supply forecast results might be affected by uncertainties in the inventory information and management practices. These uncertainties are examined in sensitivity analyses which the chief forester will consider in determining an AAC. The sensitivity analyses are useful for assessing how any changes in information or uncertainties and risks might affect timber supply.

In the Soo TSA, 26 sensitivity analyses were conducted to examine the stability of the timber supply. One of the key sensitivity analyses is described below. For a complete listing, please refer to the *1999 Soo TSA Analysis Report*.

Uncertainty in estimated size of helicopter accessible areas in the timber harvesting land base

In recent years, there have been significant increases in helicopter logging on the coast. It is now considered a viable means for accessing and developing remote terrain that was previously considered to be economically inaccessible.

The expansion in area considered suitable for helicopter logging – to about 22 per cent of the timber harvesting land base – was largely based on an examination of inventory stand characteristics. Until these areas are confirmed through aerial or ground surveys, uncertainty exists about the size of the area considered operable for helicopter logging.

Figure 5 shows that even if the entire area for helicopter logging was removed, the current harvest level of 506 000 cubic metres could be maintained for 10 years without an impact on future timber supply. Therefore this uncertainty does not create a risk to the timber supply in the short term.

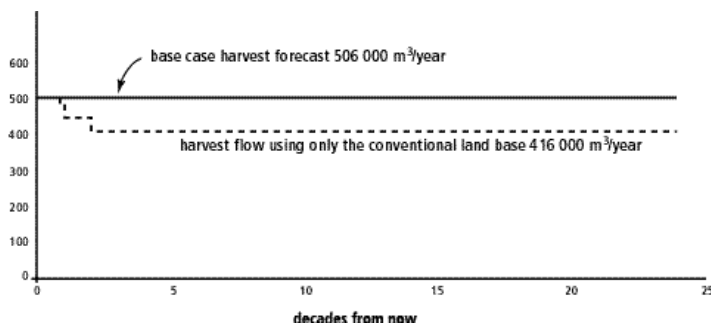


Figure 5. *Uncertainty in size of the helicopter land base, Soo TSA. 1999.*

Implications of changes in the AAC

Environmental Implications

Current forest management follows the Forest Practices Code which sets standards for a range of critical biodiversity and wildlife considerations. In the Soo analysis area, about 60 per cent of the Crown forested area (or 85 per cent of the total TSA) is not considered available for timber harvesting and will provide for many environmental considerations. Forested area both in and outside of the timber harvesting land base will aid in the maintenance of critical forest habitats for many species. Forest cover requirements for spotted owl, deer, biodiversity, visual quality and community watersheds were included in the analysis.

First Nations Implications

Eight First Nations have reserve lands and/or traditional territory within the Soo TSA. The Mt. Currie Band is currently the only band within the TSA that is not involved in the treaty negotiations. Some First Nations are employed in forestry activities, such as timber harvesting, processing and silviculture. Most First Nations in the TSA have shared concerns about the management of cultural heritage resources and expressed an interest in expanding their involvement in the forest sector.

Archaeological overview assessments have been completed for the Soo TSA. Archaeological impact and cultural heritage assessments are undertaken as part of development planning to adjust forestry practices so that cultural heritage sites are protected. However, the impact of measures required to protect known sites remains unquantified at this time, and therefore could not be incorporated into the analysis. Future timber supply analyses and AAC determinations will incorporate the management practices when the impacts have been quantified.

The Inshuck-ch N'Quatqua treaty process is scheduled to produce an agreement-in-principle by the end of 1999 or early 2000. An agreement-in-principle is also expected for the Tsleil-Waututh process during 2000. The impacts of these treaties on the Soo TSA land base are unknown at this time. When the impacts are known, they will be considered in future AAC determinations.

Community Implications

The implication of changes in the AAC for local communities is an important consideration in the Timber Supply Review. The base case harvest forecast for the Soo TSA suggests the current AAC of 506 000 cubic metres can be maintained over the short and long term. If the AAC is maintained at the current level, and fully harvested, no employment or other industry-related changes would occur in the Soo TSA forestry sector as a result of the Timber Supply Review.

Given the declining harvests in other areas of southwestern B.C., there will continue to be a high demand provincially for timber from the Soo TSA. The stable timber supply in the Soo TSA should help maintain the existing presence of the forest industry, both within the TSA and in the province generally.

Your input is needed

Establishing the AAC is an important decision which requires well-informed and thoughtful public input. Feedback is welcomed on any aspect of this discussion paper, the *1999 Soo TSA Analysis Report* and other issues related to the timber supply in the Soo TSA. Forest Service staff would be pleased to discuss questions or concerns you may have that would help you prepare your response. Please mail your comments to the forest district manager at the address below. Your comments will be accepted until October 29, 1999.

You may identify yourself on the response form 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 the responses are made public, personal identifiers will be removed before the responses are released.

A summary of public comments will be attached to the AAC rationale and will be available from the district office when the chief forester's AAC determination is announced.

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

District Manager
B.C. Forest Service
Squamish Forest District
42000 Loggers Lane
Squamish, B.C. V0N 3G0

Phone: (604) 898-2100, Fax: (604) 898-2191 or electronically mail to:
antti.makitalo@gems2.gov.bc.ca or visit our website at <http://www.for.gov.bc.ca/tsb>

Background Information Regarding TSR

The Chief Forester's Responsibility

Determining the Allowable Annual Cuts (AACs) for public forest lands in British Columbia is the responsibility of the province's chief forester. Section 8 of the Forest Act requires the chief forester to consider the following factors:

1. 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 that it will take the forest to become re-established
 - silviculture treatments, including reforestation
 - standards of timber utilization
 - constraints on the amount of timber that may be produced due to use of the forest for other purposes.
2. The short- and long-term implications to the province of alternative rates of timber harvesting from the area.
3. The nature, production capabilities and timber requirements of established and proposed processing facilities.
4. The economic and social objectives of the Crown for the area, region and province – as expressed by the minister of forests.
5. 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. By law, the chief forester is independent of the political process, and is not directed by the minister of forests when determining AACs. In these determinations, the chief forester considers relevant information from any source, including interest groups. However, he cannot allow these determinations to be inappropriately influenced by the advocacy efforts of one group.