

**BRITISH COLUMBIA  
MINISTRY OF FORESTS, LANDS AND  
NATURAL RESOURCE OPERATIONS**

# **Sunshine Coast Timber Supply Area**

## **Rationale for Allowable Annual Cut (AAC) Determination**

**Effective January 16, 2012**

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Chief Forester**

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## **Objective of this document**

This document provides an accounting of the factors I have considered and the rationale I have employed as chief forester of British Columbia in making my determination, under Section 8 of the *Forest Act*, of the allowable annual cut (AAC) for the Sunshine Coast timber supply area (TSA). This document also identifies where new or better information is needed for incorporation in future determinations.

## **Acknowledgement**

For preparation of the information I have considered in this determination, I thank staff of the BC Ministry of Forests, Lands and Natural Resource Operations (FLNR) in the Sunshine Coast District, South Coast Region and Forest Analysis and Inventory Branch (FAIB). I am also grateful to the local residents, First Nations, Sunshine Coast Regional District, forestry consultants, licensees, and other organizations that provided input.

## **Description of the Sunshine Coast Timber Supply Area**

Located on the south coast of British Columbia, approximately 100 kilometres north of the City of Vancouver, the Sunshine Coast TSA is part of the South Coast Region and is administered by the Sunshine Coast District of the Ministry of Forests, Lands and Natural Resource Operations (FLNR). This TSA, which has a total area of about 1.56 million hectares extends from Howe Sound in the south to the head of Bute Inlet in the north.

The forests of the Sunshine Coast TSA provide a wide range of forest land resources, including timber and non-timber resources, recreation and tourism amenities, and a variety of fish and wildlife. About 426 000 hectares or 27 percent of the Sunshine Coast TSA land base is considered productive Crown forest land, of this area 222 894 hectares is available for timber harvesting. The remaining area includes non-forest, non-productive forest, and forests in parks and protected areas.

The mountainous topography and associated high rainfall in the Sunshine Coast TSA produce a diverse climate and ecology. The landscape ranges from rocky shorelines and coastal plains to rugged ice-capped mountains. The Coast Mountains dominate the TSA, with nutrient-rich, moist floodplains in valley bottoms and alpine meadows at higher elevations. Several significant coastal fjords, most notably Bute, Toba and Jervis Inlets, also occur in the TSA.

Within the land base currently considered available for timber harvesting, Douglas-fir, hemlock and balsam are the major tree species, while western redcedar, yellow-cedar, spruce, pine, red alder, cottonwood and maple also occur. Douglas-fir, hemlock, western redcedar and yellow-cedar are the tree species most commonly used by the forest industry in the area. The TSA has a long history of harvesting activity, resulting in younger forests on better quality, more accessible growing sites, and older forests on the poorer and less accessible areas. Most forest stands are younger than 150 years.

The forests and landscapes of the Sunshine Coast TSA are home to a wide variety of wildlife species, including grizzly and black bear, black-tailed deer, Roosevelt elk, mountain goat, cougar and wolf, as well as isolated populations of moose. Provincial legislation outlines a process for identifying species at risk that require special management. Currently, eight species identified as 'at risk' may be found in the Sunshine Coast TSA, including the Northern goshawk, marbled murrelet and Keen's long-eared myotis.

Residents and visitors make extensive use of the forests of the TSA for recreational activities. Parks, recreation sites and trails, and roaded and non-roaded areas in the TSA provide

opportunities for numerous outdoor activities, such as hiking, camping, skiing, mountain biking, horseback riding, mountaineering, angling, hunting, canoeing, kayaking, and wildlife or forest viewing.

Fourteen First Nations have asserted traditional territory in the Sunshine Coast TSA. Five of the First Nations also have reserve lands (the *shíshálh* Nation, the Sliammon First Nation, the Xwémalkwu First Nation, the Klahoose First Nation and the Squamish Nation). These five First Nations have a combined population of over 5900 people located both on and off their various reserves. The other nine First Nations with traditional territory are the We Wai Kai First Nation, Wei Wai Kum First Nation, Kwiakah First Nation, the Snaw'Naw'As First Nation, Qualicum First Nation, Lil'wat First Nation, Tsleil-Waututh First Nation, Ulkatcho First Nation, and the K'ómoks First Nation.

## History of the AAC

The Sunshine Coast TSA was established in 1986 with an AAC of 1 429 580 cubic metres. The AAC was temporarily increased in 1989 by 16 000 cubic metres to facilitate harvesting of deciduous species. In 1993, the AAC was reduced by 24 percent to 1 100 000 cubic metres.

In 1996, the AAC was increased by about four percent to 1 140 000 cubic metres and included a 95 000 cubic metre partition to red alder stands with a deciduous component greater than 50 percent.

In 2002, the AAC for the Sunshine Coast TSA was determined to be 1 143 000 cubic metres. This harvest level includes a partition of 95 000 cubic metres per year to red alder-leading stands with at least 50 percent deciduous by volume, and a further 3000 cubic metres per year to other deciduous-leading stands. The AAC was increased by 54 949 cubic metres in 2007 to account for land added to the TSA from the former tree farm licence (TFL) 10. The current AAC, including the partitions is 1 197 949 cubic metres and is currently apportioned by the Minister of Forests, Lands and Natural Resource Operations as follows:

Table 1. *Apportionment of the current AAC*

Apportionment	Cubic metres/year	Percentage of AAC
Forest Licences (FL) – replaceable	741 758	61.92
FL – non-replaceable	95 000	7.93
Non-replaceable FL	81 923	6.84
FL to cut	7 483	0.62
BC Timber Sales (BCTS) FL non-replaceable	10 000	0.83
BCTS Timber sale licence	186 463	15.57
Timber Sale Licence, <= 10 000 m <sup>3</sup> , replaceable	2 200	0.18
Community Forest Agreement	58 600	4.89
Woodlot Licence	8 522	0.71
Forest Service Reserve	6 000	0.50
<b>Total</b>	<b>1 197 949</b>	<b>100.0</b>

## New AAC determination

Effective January 16, 2012, the new AAC for the Sunshine Coast TSA will be 1 197 949 cubic metres, including partitions of 95 000 cubic metres attributable to red alder-leading stands with at least 50 percent deciduous species by volume, and a further

3000 cubic metres attributable to all other deciduous-leading stands. This AAC will remain in effect until a new AAC is determined, which must take place within 10 years of this determination.

### **Information sources used in the AAC determination**

Information considered in determining the AAC for the Sunshine Coast TSA includes the following:

- Sunshine Coast Timber Supply Area: Timber Supply Review Data Package. Ministry of Forests, Lands and Natural Resource Operations. Updated April 2011. (This includes the Background Information listed on pp. 8-9 in the Data Package document);
- Sunshine Coast TSA Timber Supply Analysis Public Discussion Paper. Ministry of Forests, Lands and Natural Resource Operations. Revised September 23, 2011;
- Review and comment submissions to the 2011 Data Package and the 2011 Public Discussion Paper;
- Technical review and evaluation of current operating conditions on the Sunshine Coast Timber Supply Area through comprehensive discussions with ministry staff held in Powell River on November 9 and 10, 2011;
- *Ministry of Forests and Range Act*;
- *Forest Act*;
- *Forest and Range Practices Act* and regulations;
- Letter from the Minister to the Chief Forester re: Economic and Social Objectives of the Crown, July 4, 2006;
- Site Index Adjustment of the Sunshine Coast TSA, Timberline Natural Resource Group, March 2010;
- Summary of Dead Potential Volume Estimates for Management Units within the Coastal Forest Region. Ministry of Forests and Range. March 2006;
- Community Watershed Guidebook; Ministries of Health; Environment, Lands and Parks; Forests; Employment and Investment; and Agriculture, Fisheries and Food; October 1996;
- Order Establishing Provincial Non-Spatial Old Growth Objectives; Minister of Sustainable Resource Management; June 2004;
- Identified Wildlife Management Strategy Version 2004. Ministry of Environment. May 2004;
- Notice – Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Sunshine Coast Timber Supply Area; Ministry of Environment; 2004;
- Memorandum of Understanding on Establishment of Ungulate Winter Ranges and Related Objectives, ministries of Sustainable Resource Management; Water, Lands and Parks; and Forests; May 2003;
- Notice – Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Winter Survival of Ungulate Species in the Sunshine Coast Timber Supply Area; Ministry of Environment; 2004;
- Notice – Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Winter Survival of Ungulate Species in Tree Farm License 10; Ministry of Environment; 2004;

- Procedures for Factoring Visual Resources into Timber Supply Analysis; Ministry of Forests, March 1998;
- Updated Procedures for Meeting Legal Obligations When Consulting First Nations – Interim; Province of British Columbia; May 7, 2010;
- First Nations Consultation Summary for the 2012 AAC determination; Ministry of Forests, Lands and Natural Resource Operations; November 2011; and
- Sunshine Coast TSA Rationale for AAC Determination Effective January 1, 2002, Larry Pedersen, Chief Forester; December 20, 2001.

## **Role and limitations of the technical information used**

Section 8 of the *Forest Act* requires the chief forester, in determining AACs, to consider biophysical, social, and economic information. Most of the technical information used in determinations is in the form of a timber supply analysis and its inputs of inventory and growth and yield data. These are concerned primarily with biophysical factors—such as the rate of timber growth and definition of the land base considered available for timber harvesting—and with management practices.

The analytical techniques used to assess timber supply necessarily are simplifications of the real world. Many of the factors used as inputs to timber supply analysis are uncertain, due in part to variations in physical, biological, and social conditions. On-going scientific studies of ecological dynamics will help reduce some of this uncertainty.

Furthermore, computer models cannot incorporate all of the social, cultural, and economic factors that are relevant when making forest management decisions. Technical information and analysis, therefore, do not necessarily provide complete answers or solutions to forest management decisions such as AAC determinations. Such information does provide valuable insight into potential impacts of different resource-use assumptions and actions, and thus forms an important component of the information I must consider in AAC determinations.

In determining the AAC for the Sunshine Coast TSA I have considered known limitations of the technical information provided. I am satisfied that the information provides a suitable basis for my determination.

## **Guiding principles for AAC determinations**

Rapid changes in social values and in our understanding and management of complex forest ecosystems mean there is always uncertainty in the information used in AAC determinations. In making the large number of periodic determinations required for British Columbia's many forest management units, administrative fairness requires a reasonable degree of consistency of approach in incorporating these changes and uncertainties. To make my approach in these matters explicit, I have set out the following body of guiding principles. In any specific circumstance where I may consider it necessary to deviate from these principles, I will explain my reasoning in detail.

Two important ways of dealing with uncertainty are:

- (i) minimizing risk; in respect of which, in making AAC determinations, I consider particular uncertainties associated with the information before me and attempt to assess and address the various potential current and future social, economic, and environmental risks associated with a range of possible AACs; and
- (ii) re-determining AACs frequently, in cases where projections of short-term timber supply are not stable, to ensure they incorporate current information and knowledge.

In considering the various factors that Section 8 of the *Forest Act* requires the chief forester to take into account in determining AACs, I intend to reflect, as closely as possible, those forest management factors that are a reasonable extrapolation from current practices. It is not appropriate to base my decision on unsupported speculation with respect to factors that could affect the timber supply that are not substantiated by demonstrated performance or are beyond current legal requirements.

In many areas, the timber supply implications of some legislative provisions remain uncertain, particularly when considered in combination with other factors. In each AAC determination I take this uncertainty into account to the extent possible in context of the best available information.

It is my practice not to speculate on timber supply impacts that may eventually result from land-use decisions not yet finalized by government. However, where specific protected areas, conservancies, or similar areas have been designated by legislation or by order in council, these areas are deducted from the timber harvesting land base (THLB) and are not considered to contribute any harvestable volume to the timber supply in AAC determinations, although they may contribute indirectly by providing forest cover to help in meeting resource management objectives such as for biodiversity.

In some cases, even where government has made a formal land-use decision, it is not necessarily possible to fully analyse and account for the consequent timber supply impacts in a current AAC determination. Many government land-use decisions must be followed by detailed implementation decisions requiring, for instance, further detailed planning of legal designations such as those provided for under the *Land Act* and the *Forest and Range Practices Act (FRPA)*. In cases where there is a clear intent by government to implement these decisions that have not yet been finalized, I will consider information that is relevant to the decision in a manner that is appropriate to the circumstance. The requirement for regular AAC reviews will ensure that future determinations address ongoing plan-implementation decisions.

Some persons have suggested that, given the large uncertainties present with respect to much of the data in AAC determinations, any adjustments in AAC should wait until better data are available. I agree that some data are incomplete, but this will always be true where information is constantly evolving and management issues are changing. The requirement for regular AAC reviews will ensure that future determinations incorporate improved information.

Others have suggested that, in view of data uncertainties, I should immediately reduce some AACs in the interest of caution. However, any AAC determination I make must be the result of applying my judgment to the available information, taking any uncertainties into account. Given the large impacts that AAC determinations can have on communities, no responsible AAC determination can be made solely on the basis of a response to uncertainty. Nevertheless, in making my determination, I may need to make allowances for risks that arise because of uncertainty.

With respect to First Nations' issues, I am aware of the Crown's legal obligation resulting from recent court decisions to consult with First Nations regarding asserted rights and title (aboriginal interests) in a manner proportional to the strength of their aboriginal interests and the degree to which the decision may impact these interests. In this regard, I will consider the information provided to First Nations to explain the timber supply review (TSR) process and any information brought forward respecting First Nations' aboriginal interests, including how these interests may be impacted, and any operational plans and actions that describe forest practices to address First Nations' interests, before I make my decision. As I am able, within the scope of my authority under Section 8 of the *Forest Act*, where appropriate I will seek to address aboriginal interests that will be impacted by my decision. When aboriginal interests are raised that are

outside my jurisdiction, I will endeavour to forward these interests for consideration by appropriate decision makers. Specific concerns identified by First Nations in relation to their aboriginal interests within the TSA are addressed in this rationale.

The AAC that I determine should not be construed as limiting the Crown's obligations under court decisions in any way, and in this respect it should be noted that my determination does not prescribe a particular plan of harvesting activity within the Sunshine Coast TSA. It is also independent of any decision by the Minister of Forests, Lands and Natural Resource Operations with respect to subsequent allocation of wood supply.

Overall, in making AAC determinations, I am mindful of my obligation as a steward of the forest land of British Columbia, of the mandate of the Ministry of Forests, Lands and Natural Resource Operations (formerly the Ministry of Forests and Range) as set out in Section 4 of the *Ministry of Forests and Range Act*, and of my responsibilities under the *Forest and Range Practices Act* and *Forest Act*.

### **The role of the base case**

In considering the factors required under Section 8 of the *Forest Act* to be addressed in AAC determinations, I am assisted by timber supply forecasts provided to me through the work of the timber supply review program for timber supply areas (TSA) and tree farm licences (TFL).

For most AAC determinations, a timber supply analysis is carried out using an information package that includes data and information from three categories: land base inventory, timber growth and yield, and management practices. Using this set of data and a computer model, a series of timber supply forecasts can be produced to reflect different starting harvest levels, rates of decline or increase, and potential trade-offs between short- and long-term harvest levels.

From a range of possible forecasts, one is chosen in which an attempt is made to avoid both excessive changes from decade to decade and significant timber shortages in the future, while ensuring the long-term productivity of forest lands. This is known as the 'base case' forecast and forms the basis for comparison when assessing the effects of uncertainty on timber supply. The base case is designed to reflect current management practices.

Because the base case represents only one in a number of theoretical forecasts, and because it incorporates information about which there may be some uncertainty, the base case forecast is not an AAC recommendation. Rather, it is one possible forecast of timber supply, whose validity—as with all the other forecasts provided—depends on the validity of the data and assumptions incorporated into the computer model used to generate it.

Therefore, much of what follows in the considerations outlined below is an examination of the degree to which all the assumptions made in generating the base case forecast are realistic and current, and the degree to which resulting predictions of timber supply must be adjusted to more properly reflect the current and foreseeable situation.

These adjustments are made on the basis of informed judgment using currently available information about forest management, and that information may well have changed since the original information package was assembled. Forest management data are particularly subject to change during periods of legislative or regulatory change; or during the implementation of new policies, procedures, guidelines or plans.

Thus, in reviewing the considerations that lead to the AAC determination, it is important to remember that the AAC determination itself is not simply a calculation. Even though the timber supply analysis I am provided is integral to those considerations, the AAC determination is a synthesis of judgment and analysis in which numerous risks and uncertainties are weighed.

Depending upon the outcome of these considerations, the AAC determined may or may not coincide with the base case forecast. Judgments that in part may be based on uncertain information are essentially qualitative in nature and, as such, are subject to an element of risk. Consequently, once an AAC has been determined, no additional precision or validation would be gained by attempting a computer analysis of the combined considerations.

## **Base case for the Sunshine Coast TSA**

The original Sunshine Coast TSA Timber Supply Analysis Discussion Paper was completed on July 28, 2011. Following release, a modelling error was identified. The error was corrected and a revised version of the Public Discussion Paper was published on September 23, 2011. The base case for the Sunshine Coast TSA is the one described in the revised Public Discussion Paper.

The base case shows that an initial harvest level of 1 363 000 cubic metres per year can be maintained for 100 years before increasing over 50 years to a non-declining, long-term level of 1 404 000 cubic metres per year. The total harvest level projected in the base case includes 98 000 cubic metres per year of deciduous-leading stand volume for the first 10 years before decreasing over 70 years to a non-declining level of 42 000 cubic metres per year for the rest of the forecast period.

The base case initial harvest level is about 14 percent higher than the current AAC of 1 197 949 cubic metres.

The current AAC came into effect on January 1, 2002. Since then, several changes have occurred to the land base and forest management information that are reflected in the timber supply analysis, including the base case. The major changes are:

- improved (spatial) modelling of: landscape-level biodiversity requirements, riparian areas, known archaeological and cultural use areas, and roads;
- establishment of Wildlife Habitat Areas (WHAs) for grizzly bear and marbled murrelet;
- improved productivity estimates (site index adjustments) for second-growth stands;
- establishment of four new Woodlots (W2034, W2049, W2062, W2058);
- establishment of four Community Forests (Sliammon, Sechelt, Powell River and Klahoose);
- elimination of one Tree Farm Licence (TFL 10-Toba) part of which became TSA area;
- change from *Forest Practices Code Act of BC* to *Forest and Range Practices Act*; and
- construction of several new hydro power line corridors associated with new energy facilities.

In the first 50 years of the base case, the average area of forest stands harvested in the Sunshine Coast TSA is about 2454 hectares per year, at an average age of 148 years. Through the remainder of the harvest forecast, the average area of forest stands harvested is 2779 hectares per year, at an average 89 years of age.

Total growing stock on the THLB starts at 72.2 million cubic metres and then gradually rises to 93.6 million cubic metres over the course of the forecast period. Available growing stock during the first 80 years decreases from 51.5 million cubic metres to 18.6 cubic metres and then increases to 38.1 million cubic metres over the forecast period. Growing stock rises over time because growth rates and volumes of managed stands are based on the adjusted site index rather than the inventory site index. In addition, as managed stands become suitable for harvest, the total and available volumes increase. Total growing stock increases over the forecast period as a result of the forest transitioning from natural stands to faster growing and higher yielding managed stands.

I have reviewed the assumptions and methodology incorporated in the base case harvest forecasts and I am satisfied, subject to the considerations discussed in this rationale, that the information presented to me regarding the base case provides a suitable basis from which I can assess the timber supply for the Sunshine Coast TSA. In addition to the base case, I was provided with a number of sensitivity analyses. This and other information, in the following sections, have been helpful in the considerations and reasoning leading to my determination.

### **Consideration of factors as required by Section 8 of the *Forest Act***

I have reviewed the information for all of the factors that require consideration under Section 8 of the *Forest Act*. Where I have concluded that the modelling of a factor appropriately represents current management or the best available information, and uncertainties about the factor have little influence on the timber supply projected in the base case, no discussion is included in this rationale. These factors are listed in the Table 2.

*Table 2. List of factors for which the base case assumptions have been accepted*

<b>Forest Act section and description</b>	<b>Factors accepted as modelled</b>
8(8)(a)(i) Composition of the forest and expected rate of growth	<ul style="list-style-type: none"> <li>- Parks and protected areas</li> <li>- Community forests</li> <li>- Woodlots</li> <li>- Non-forest, non-productive and non-commercial</li> <li>- Lands not administered by FLNR</li> <li>- Environmentally sensitive areas</li> <li>- Sites with unstable terrain</li> <li>- Low sites and problem forest types</li> <li>- Minimum harvestable age</li> </ul>
8(8)(a)(ii) Expected time for the forest to be re-established following denudation	<ul style="list-style-type: none"> <li>Regeneration delay</li> <li>Not-satisfactorily-restocked (NSR) areas</li> </ul>
8(8)(a)(iii) Silvicultural treatments to be applied	<ul style="list-style-type: none"> <li>Silviculture systems</li> <li>Silvicultural treatments</li> </ul>
8(8)(a)(iv) Standard of timber utilization and allowance for decay, waste, and breakage	<ul style="list-style-type: none"> <li>Utilization standards</li> <li>Decay, waste and breakage</li> </ul>
8(8)(a)(v) Constraints on the amount of timber produced by use of the area for other purposes	<ul style="list-style-type: none"> <li>Patch size distribution</li> <li>Research installations and growth and yield plots</li> <li>Riparian management</li> <li>Stand-level biodiversity</li> <li>Recreation</li> </ul>
8(8)(a)(vi) Other information	<ul style="list-style-type: none"> <li>Harvest performance</li> </ul>
8(8)(b) Short and long-term implications of alternative rates of timber harvesting from the area	<ul style="list-style-type: none"> <li>Harvest sequencing</li> <li>Alternative harvest flows</li> </ul>
8(8)(d) Economic and social objectives of the government	<ul style="list-style-type: none"> <li>Economic and employment implications</li> </ul>
8(8)(e) Abnormal infestations in and devastations of, and major salvage programs planned for, timber on the area	<ul style="list-style-type: none"> <li>Unsalvaged losses</li> </ul>

For other factors, where more uncertainty exists, or where public or First Nations' input indicates contention regarding the information used, modelling, or some other aspect under consideration, this rationale incorporates an explanation of how I considered the essential issues raised and the reasoning leading to my conclusions.

**Section 8 (8)**

**In determining an allowable annual cut under this section the chief forester, despite anything to the contrary in an agreement listed in section 12, must consider**

**(a) the rate of timber production that may be sustained on the area, taking into account**

**(i) the composition of the forest and its expected rate of growth on the area:**

Land base contributing to timber harvest

*- general comments*

The total area of the Sunshine Coast TSA is 1.56 million hectares of which about 425 863 hectares is productive forest land managed by the Crown.

As part of the process used to define the timber harvesting land base (THLB), a series of deductions was made from the productive Crown forest land base. These deductions account for economic or ecological factors that operate to reduce the forest area available for harvesting. In reviewing these deductions, I am aware that some areas may have more than one classification. To ensure accuracy in defining the THLB, care must be taken to avoid any potential double-counting associated with overlapping objectives. Hence, a specific deduction for a given factor reported in the analysis or the AAC rationale does not necessarily reflect the total area with that classification; some portion of it may have been deducted earlier under another classification.

For the Sunshine Coast TSA, I acknowledge that the above approach was used in the timber supply analysis, resulting in a long-term THLB – the area available for harvesting – of 222 894 hectares, which represents about 14 percent of the total TSA area and 52 percent of the productive Crown forest land base. This means that nearly one-half (about 48 percent) of the productive Crown forest land is unavailable for timber harvesting for a variety of reasons.

*- operability*

The timber supply analysis used operability mapping for the TSA that was completed by the district in 1992, updated in 1998, and further updated in 2010. The 2010 update considered the feedback from several major licensees who were asked to review their chart areas and provide an estimate of where future harvest would occur beyond the current operable areas. The total area excluded from the THLB to account for physically and economically inoperable areas was 132 408 hectares.

There was forest licensee comment that a new economic operability assessment is needed for the TSA. Some licensees also indicated that, depending on how many proposed clean energy projects get approved, there could be an impact on future operability due to the harvest limitations created when above ground power lines are utilized for these projects.

District staff reviewed past harvesting with the updated 2010 mapping, and they concluded that the operability line provides a reasonably good indicator of harvest activity.

Operability assessments are always subject to some degree of uncertainty as they rely on uncertain economic information. For this determination, I am satisfied that the operability assumptions used in the analysis reflect licensee input and have been reviewed by District staff and represent the best available information, and are therefore appropriate for use in making my determination.

Regarding clean energy projects, it is important that the routing of power lines be done in a manner that meets the needs of the project while not unduly isolating timber. I discuss this further under the factor entitled '*clean energy projects*'.

*- roads*

Large roads appear as non-forest polygons in the forest inventory and smaller roads in managed forest (second growth) polygons are considered unproductive, both are excluded from the THLB. The amount of unclassified road appears to be stable over time because while older roads are overgrown by forest, new road is also always being built each year. The net result is that unclassified roads will usually total about 4670 kilometres.

Each of the major licensees participating in the TSR technical team submitted information on forest access road width. The technical team reviewed these data and derived an average road width of 10 metres. This width also accounts for some loss in productive forest due to trails and landings. Application of this road width resulted in the exclusion of 4670 hectares from the THLB to account for both current and future unclassified roads.

There was public input that road beds may eventually become overgrown but that this takes an extremely long time, and that given regeneration delay and low site productivity on road beds, the assumptions regarding unclassified roads in the timber supply analysis were not realistic.

District staff have observed that roads in regenerating stands appear to return to a productive forest state. They noted that one licensee was of the opinion that red alder harvested on overgrown road beds represented some of the best alder in the TSA.

Based on the information presented to me, I am satisfied that the assumptions used in the base case represent the best available information and are, therefore, appropriate for use in this determination.

Existing forest inventory

*- current inventory*

The Sunshine Coast TSA was re-inventoried between 1991 and 1993 and this information was continually updated until 1999. Since 1999, information from satellite imagery (Landsat), Forest Development Plans and the ministry RESULTS database has been used for ad hoc depletion updates until 2009. The inventory was also updated to 2009 to account for growth. This updated forest inventory was used in the timber supply analysis.

In 2002, licensees initiated a project to update the inventory to Vegetation Resource Inventory (VRI) standards; however, the project has not been completed.

In 2007, part of the area previously included in TFL 10 – Toba Inlet, was transferred to the Sunshine Coast TSA. The inventory information for this area, which represents 5.4 percent of the THLB, is outdated and its reliability is unknown; however, newer information is not available at this time, therefore this inventory was used in the timber supply analysis.

The updated forest inventory that was used in the analysis represents the best available information and I consider its use as appropriate in support of this determination. I am aware that there is some uncertainty regarding the reliability of the inventory for areas transferred from TFL 10, but also note that this area represents a very small proportion of the THLB – so uncertainty in the inventory in the portion of TFL 10 that has transferred to the TSA should not pose a significant risk to timber supply in the TSA. Under '**Implementation**', I encourage Forest Analysis and Inventory Branch to: (i) investigate what needs to be done to update the existing inventory for depletions in a more thorough manner; and (ii) assess options for completing the VRI for the Sunshine Coast TSA.

*- volume estimates for existing stands*

Timber volume yields for existing natural stands were estimated in the analysis using the Variable Density Yield Prediction model version 7 (VDYP7) and the current inventory, as previously described. A project that involved 111 ground sample plots was undertaken in 2001 in order to assess the accuracy of the inventory. The ground samples indicate that the VDYP7 projections underestimate volumes for existing natural stands on average by about four percent. In the timber supply analysis, inventory volumes were not adjusted to account for the ground sample plot information.

I have considered the information regarding the volume estimates for existing natural stands as applied in the analysis, and on this basis, I will account for about a four percent underestimation in the base case short- and mid-term harvest level, as discussed under '**Reasons for Decision**'.

Expected rate of growth

*- site productivity estimates*

Inventory data includes estimates of site productivity for each forest stand, expressed in terms of site index. The productivity of a site largely determines how quickly trees grow, and the site index is based on the stand's height as a function of its age. The rate of tree growth in turn affects the time seedlings will take to reach green-up conditions, the volume of timber that can be produced, and the ages at which a stand will satisfy mature forest cover requirements and reach a merchantable size.

In general, forest stands between 30 and 150 years of age provide the most accurate measurements of site productivity. Site indices determined from younger stands and older stands may not accurately reflect potential site productivity. In stands younger than 30 years, growth often depends as much on recent weather, stocking density, and competition from other vegetation as it does on site quality. In stands older than 150 years, which have not been subject to management of stocking density, the trees used to measure site productivity may have grown under intense competition or may have been damaged, and therefore may not reflect the true growing potential of the site. This has been verified in many areas of the province where old-growth site index studies suggest that actual site indices may be higher than those indicated by existing data from mature forests.

In his 2001 determination, the chief forester recognized a high probability that site productivity was underestimated in the Sunshine Coast TSA, and emphasized the need for localized data. As a result a site index adjustment project was initiated, ground sample plot measurements were collected, and the report *Site Index Adjustment of the Sunshine Coast TSA* was prepared in March 2010 and accepted by the Forest Analysis and Inventory Branch. Based on the report findings, the average potential site index (PSI) values are considerably higher than estimated in the forest inventory for the three species considered: Douglas-fir (35 percent higher), western redcedar (10 percent higher), and western hemlock (38 percent higher). Resource Practices Branch staff found that the adjusted PSI estimates were consistent with findings from RESULTS data where site index values are derived using a growth intercept method.

No adjusted PSI estimates were available for the part of the TSA that came from the elimination of the former TFL 10 in 2007; as noted earlier this represents about 5.4 percent of the THLB.

The adjusted PSI values were used in the timber supply analysis except in the area transferred to the TSA from TFL 10. I am satisfied that site index values assumed in the base case represent the best available information and are appropriate for use in the analysis.

*- volume estimates for managed stands*

In the timber supply analysis, existing stands less than 35 years of age and future stands are considered to be managed stands. Currently, about 28 percent of the THLB is occupied by stands less than 35 years of age. The Table Interpolation Program for Stand Yields (TIPSY) version 4.1d was used to estimate the growth and yield of managed stands. Genetic gain through tree improvement was factored into the yield curves for managed stands.

Operational adjustment factors (OAFs) were applied to TIPSY projections for managed stands in the analysis: OAF 1 accounts for less than ideal tree distribution, small non-productive areas, endemic pests and disease, and random risk factors such as wind throw; and OAF 2 accounts for decay, waste and breakage. For most stands, standard OAF yield reductions of 15 and 5 percent were applied for OAF 1 and 2, respectively. For Douglas-fir leading managed stands on good and medium sites, an OAF 2 reduction of 12 percent was applied in the analysis. These adjusted OAF 2 values were applied based on information on losses due to laminated root rot.

The *Sunshine Coast TSA: Timber Supply Review Data Package* (data package) identifies the other assumptions made in the analysis such as regarding regeneration method, genetic gain, regeneration delay, species composition, and initial and thinned density of regeneration. Potential site index estimates (see ‘*site productivity estimates*’ above) were used in creating managed stand yield curves where available.

The Sunshine Coast Regional District made this request; “...model all fertilized stands as natural stands in order not to overestimate performance of these stands.” FLNR staff responded indicating that fertilization treatments were not being modelled for managed or natural stands.

Several requests were received for clarification of information in the data package and FLNR staff provided additional information.

In reviewing this factor with District staff, I am satisfied that volume estimates for managed stands are based on the appropriate information to support my determination.

**(ii) the expected time that it will take the forest to become re-established on the area following denudation:**

As noted in Table 2, I accept as modelled the factors considered under this section, and I will not discuss them further.

**(iii) silvicultural treatments to be applied to the area:**

As noted in Table 2, I accept as modelled the factors considered under this section, and I will not discuss them further.

**(iv) the standard of timber utilization and the allowance for decay, waste and breakage expected to be applied with respect to timber harvesting on the area:**

*- log grade changes*

Under the log grading system used in the previous timber supply analysis, a log was scaled according to whether the tree it came from was alive or dead at the time of harvest, and logs from dead trees were not charged to the AAC. Under the grading system now in use, grades are based on the size and quality of logs at the time they are scaled, without regard to whether they were alive or dead when harvested. Dead trees that are potentially merchantable (‘dead potential’ trees) therefore should now be accounted for in timber supply determinations. This is not reflected in the base case, however, as the VDYP model used to estimate existing stand volumes did not account for dead potential volume.

The best source of data regarding dead potential timber in the Sunshine Coast TSA is from the VRI sample plots. The 76 VRI sample plots indicate the overall dead potential is about 4.2 percent of the total live volume.

Based on this information, I conclude that the base case underestimated the timber supply in the short term because it did not account for dead potential volumes. There is some uncertainty, however, about the actual utilization of dead potential volumes. Consequently, I consider this factor to represent an unquantified but less than four percent underestimation of timber supply in the short term in my 'Reasons for Decision'.

- (v) **the constraints on the amount of timber produced from the area that reasonably can be expected by use of the area for purposes other than timber production:**

#### Integrated resource management objectives

The Ministry of Forests, Lands and Natural Resource Operations (formerly the Ministry of Forests and Range) is required under the *Ministry of Forests and Range Act* to manage, protect and conserve the forest and range resources of the Crown and to plan the use of these resources so that the production of timber and forage, the harvesting of timber, the grazing of livestock and the realization of fisheries, wildlife, water, outdoor recreation and other natural resource values are coordinated and integrated. Accordingly, the extent to which integrated resource management (IRM) objectives for various forest resources and values affect timber supply must be considered in AAC determinations.

Although the Sunshine Coast TSA does not have a provincial government approved land use plan, protected areas have been established in the TSA and these areas were deducted from the THLB. Resource management objectives are also applied in the timber supply analysis considering legal designations for community watersheds, landscape-level biodiversity (old forest retention), identified wildlife, ungulate winter ranges (UWR), First Nations archaeological sites, scenic areas (visual quality objectives) and other values. The analysis also applied resource management objectives to reflect current practices such as in the community interface zone.

#### *- community interface*

About 26 970 hectares (12 percent) of the THLB are in the community interface zone where special forest cover requirements were applied in the timber supply analysis to account for current practices near communities. The forest cover requirements applied a maximum allowable disturbance area of 25 percent and a minimum green-up height of five metres.

Although the community interface zone has not been legally established, I am satisfied based on my review of this factor with District staff, that the assumptions used in the base case reflect current practices and are, therefore, appropriate for use in my determination.

#### *- community watersheds*

Twenty-six community watersheds, which range in size from about 5 to 13 000 hectares, have been designated within the Sunshine Coast TSA. Community watersheds provide water for human consumption, are licensed for waterworks purpose and require special management. Government may establish water quality objectives for community watersheds: (a) to conserve the quality, quantity and timing of water flow, or (b) to prevent cumulative hydrological effects that would have a material adverse effect on the water.

Operationally, watershed assessments are conducted by hydrologists in community watersheds to determine whether planned operations can be conducted without a material adverse effect on the water. A watershed assessment considers the cumulative effects of forest practices on the

watershed hydrology. Using the results of an assessment, forest managers can make recommendations concerning the level of further harvesting, if any, in the watershed.

In the timber supply analysis, a forest cover constraint was applied which limited the amount of harvesting within each watershed to one percent of the productive Crown forest land base each year. This constraint was developed based on guidance in the *Community Watershed Guidebook* that indicates that in the absence of completed coastal watershed assessment procedures, harvesting activity should be limited to five percent of the productive forest area over a five-year period. The recommended constraint was correlated to a one percent per year limit in the analysis.

In its public input, the Sunshine Coast Regional District indicated that they would like all community watersheds and watershed reserves excluded from the THLB. There were other public comments expressing concern about harvesting in community watersheds.

I have considered the information about community watersheds, and discussed the information with District staff. With regard to the input received regarding timber harvesting in community watersheds, I note that in order to avoid potential adverse effects, community watersheds are assessed by a hydrologist prior to harvesting. Further protection is afforded community watersheds by the current Provincial guidelines that specify the permissible level of disturbance within these areas. For this determination, I am satisfied that the level of constraint assumed in the base case reasonably accounts for the constraints applied operationally in community watersheds.

- *landscape-level biodiversity*

Biodiversity is defined as the full range of living organisms, in all their forms and levels of organization. It includes the diversity of genes, species, and ecosystems, and the evolutionary and functional processes that link them. Biodiversity in a given management unit is usually assessed and managed at the level of both the forest stand and the landscape.

A major consideration in managing for biodiversity at the landscape level for forest ecosystems is leaving sufficient and appropriately located mature forests for species dependent on, or strongly associated with, old-growth forests. At the stand level, retention of wildlife tree patches and coarse woody debris are the major biodiversity concerns. As noted in Table 2, I accept the modelling assumptions applied in the base case for stand-level biodiversity.

The *Order Establishing Provincial Non-Spatial Old Growth Objectives*, effective June 30, 2004, sets legal old-seral stage targets by landscape unit across the province. When old growth management areas (OGMAs) are spatially and legally approved in landscape units, the provincial non-spatial order no longer applies. OGMAs have been approved for 8 out of 25 landscape units in the Sunshine Coast District, and draft OGMAs for 11 other landscape units within the District were available for use in the timber supply analysis. The approved and draft OGMAs were excluded from the THLB in the base case to represent the achievement of old-seral stage targets. The approved and draft OGMAs represent about 36 610 hectares of the Crown productive forest land base in the Sunshine Coast TSA. For the remaining six landscape units, the old-seral targets in the provincial order were applied.

Based on my review with staff, I conclude that landscape-level biodiversity and old-seral stage forest retention was appropriately addressed in the timber supply analysis. Particularly given the absence of a provincial government approved strategic land use plan for the TSA, under '**Implementation**' I encourage District staff to work with licensees to finalize implementation of OGMAs in the remaining landscape units.

- *identified wildlife*

'Identified wildlife' are species at risk and regionally important wildlife in BC that have been designated as requiring special management attention. Habitat needs for many wildlife species can be addressed through parks and protected areas, the productive Crown forest land base that is outside the THLB, and in the THLB through existing management strategies such as those for biodiversity, riparian management, ungulate winter range or through the application of forest cover constraints.

The Identified Wildlife Management Strategy (IWMS) provides direction and guidance for managing identified wildlife where their habitat needs are not already addressed. According to provincial policy, in the absence of strategic plan direction, all habitat requirements for identified wildlife are to be addressed within a one percent THLB impact limit. This impact limit has generally been applied to each management unit.

Consistent with the IWMS, the Ministry of Environment issued a Notice in March 2006 under Section 7 (2) of the *Forest Planning and Practices Regulation* that provided indicators of the amount, distribution and attributes of wildlife habitat required for the survival of species at risk in the Sunshine Coast District. Species at risk identified in the Notice were grizzly bear, marbled murrelet, Vananda Creek sticklebacks, "Queen Charlotte" goshawk (also known as the Northern goshawk), and coastal tailed frog.

For grizzly bear and marbled murrelet, the timber supply analysis accounted for designated wildlife habitat areas and most of the targeted area in the Notice.

At the time of the analysis, 221 hectares were excluded from the THLB to account for a draft wildlife habitat area (WHA) for Vananda Creek sticklebacks. This approximates the 237-hectare maximum impact provided in the Notice.

The analysis did not account for "Queen Charlotte" goshawk and coastal tailed frog as no wildlife habitat areas have been established. Based on the Notice, 233 hectares of mature THLB have been targeted for protection for these two species – about 0.1 percent of the THLB.

In total, the timber supply analysis excluded about 0.8 percent of the THLB to account, via wildlife habitat areas and the Notice, for grizzly bear, marbled murrelet and Vananda Creek sticklebacks. As noted earlier, policy direction is for up to one percent of the THLB in management units such as TSAs to be used to protect habitat for identified wildlife. Staff have come a long way towards implementing the IWMS in the Sunshine Coast TSA, but there is still some work ahead to establish wildlife habitat areas for each of the species identified in the Notice. In order to address full implementation of the IWMS, I conclude the base case harvest levels have been overestimated by 0.2 percent across the entire forecast period and I will account for this in my determination, as discussed in '**Reasons for Decision**'. Also under '**Implementation**', I encourage staff to work with the Ministry of Environment and forest licensees to complete the IWMS for the TSA.

- *ungulate winter range*

Ungulate winter range (UWR) management has been on-going for over 20 years in some portions of the province. Formal legal establishment of UWRs and associated objectives began under the Forest Practices Code and continues under FRPA. According to provincial policy, in the absence of strategic plan direction, ungulate winter range habitat requirements in general should have timber supply impacts similar to those assumed in the previous timber supply review (TSR 2). The May 2003 *Memorandum of Understanding on Establishment of UWRs and Related Objectives* supports the implementation of this policy.

Consistent with provincial policy, a Notice was issued in 2004 under Section 7 (2) of the *Forest Planning Practices Regulation* for the Sunshine Coast TSA regarding mountain goat winter range. A similar Notice was issued in 2004 for TFL 10 and the affected area is now part of the Sunshine Coast TSA. An Order for mountain goat (U-2-003) is expected to be issued in the near future that will establish the boundaries, objectives and general wildlife measures for these UWRs. Once the Order takes effect, the requirements in the 2004 Notices will no longer apply. The mountain goat UWR identified in the pending Order encumbers a smaller THLB area than previously identified. According to the ‘supporting information’ for the pending Order, any THLB budget not used for mountain goat UWR is intended to support the development of a black-tailed deer UWR plan. The timber supply analysis modelled the mountain goat UWR requirements in the pending Order.

Under the pending Order, 928 hectares of THLB (as defined in TSR 2) previously required for mountain goat UWR are to be used to establish black-tailed deer UWR. In addition to this area, the 1579-hectare area of THLB transferred from the former TFL 10 to the TSA is subject to forest cover constraints for black-tailed deer. Application of the forest cover constraints to this area results in an equivalent THLB impact of 316 hectares. At the time of this determination, 72 candidate deer UWRs had been identified; however, a black-tailed deer plan had not been completed. No assumptions for deer UWR were included in the base case.

I accept that the areas soon to be established as mountain goat winter range have been identified and are currently being managed as such, furthermore, government has committed to implementing the new provisions; therefore, I conclude that these areas were appropriately accounted for in the base case. However, based on my discussions with staff, I conclude that the base case did not account for the 928 hectares of THLB budget now available for black-tailed deer UWR nor the 316 hectare THLB impact associated with the area formerly part of TFL 10 that is subject to forest cover constraints for black-tailed deer. In total, these two areas represent about a 0.5 percent overestimation in the size of the THLB used in the base case and I will account for this in my determination, as discussed under ‘**Reasons for Decision**’.

I encourage district and Ministry of Environment staff to work with licensees to complete and implement a black-tailed deer management plan, as described under ‘**Implementation**’.

- *scenic areas*

Scenic areas and visual quality objectives (VQOs) for the Sunshine Coast TSA have been legally established or grandparented under the *Forest and Range Practices Act*, to reduce the visual impact of harvesting in visually-sensitive areas. In total, 103 854 hectares of THLB – about 47 percent of the total THLB area in the TSA – has designated scenic areas with VQOs. A five-metre visually effective green-up (VEG) was assumed for all scenic areas in the timber supply analysis. The VEG height was used to define the maximum disturbance limits by VQO class (preservation, retention, partial retention and modification).

*Procedures for Factoring Visual Resources into Timber Supply Analysis* provide a range of disturbance limits for each VQO class. In the analysis, for preservation, the maximum disturbance limit of one percent was modelled. For retention and modification, the mid-point within the range was modelled. For partial retention, the maximum disturbance limits were within the range in the procedures document but varied based on visual absorption capacity – the component of the visual landscape inventory that rates the relative capacity of a landscape to absorb visual alterations and still maintain its visual integrity.

During the 2009 and 2010 field seasons, staff working on the Forest and Range Evaluation Program (FREP) reviewed visual quality management for 24 cutblocks within the TSA. The

results indicate that in 29 percent of the blocks, maximum disturbance levels assumed in the procedures document were exceeded.

Based on this FREP study, assumptions used to define the base case may have overestimated timber supply relative to current practices. I recognize this in my '**Reasons for Decision**' as an unquantified overestimation of timber supply in the short- to long-term of the base case.

*- clean energy projects*

The penstocks and the transmission lines associated with existing clean energy projects in the Sunshine Coast TSA have been mapped in the inventory as non-forest polygons. This includes about 100 kilometres of transmission line with widths varying from 20 to 100 metres.

There is also a new proposed project in the Bute Inlet area that, if approved, could result in another 300 kilometres of transmission line.

Another timber supply impact from clean energy projects has the potential to isolate timber as it may be difficult to access stands beyond the transmission lines. For example, there may be truck clearance issues under the power line or additional insurance requirements for heli-logging activities over power lines making harvesting prohibitively expensive.

As part of the public input, forest licensees expressed concerns about potential impacts associated with additional power lines on timber operability. There was input from a First Nation that expressed concern that the impacts from these projects will not be sufficiently accounted for in the timber supply analysis.

In reviewing this factor with staff, and in consideration of the public input, I conclude that the analysis appropriately accounted for the impacts of existing clean energy projects. I also recognized in my '**Reasons for Decision**' the potential for additional projects. It is important that clean energy project proponents, forest licensees and District staff to work on power line locations that serve the needs of the proponent while reducing impacts on timber supply in the TSA.

*- First Nations archaeological sites*

Archaeological resource values primarily relate to First Nations historic village sites and shell middens, as well as culturally modified trees (CMTs). Historic village sites and shell middens are most frequently identified close to marine shorelines; whereas CMTs are generally found within remaining old-growth forest types, most often western redcedar or yellow-cedar leading stands.

Archaeological sites have been discovered and catalogued during archaeological impact assessments. In the timber supply analysis, these sites, which are protected under the *Heritage Conservation Act*, received a 50-metre buffer, and the total area was excluded from the THLB.

In total a 187-hectare of productive Crown forest land was deducted from the THLB to account for this factor. I have considered the information about archaeological sites, and I am satisfied that they were appropriately accounted for in the timber supply analysis.

**(vi) any other information that, in the chief forester's opinion, relates to the capability of the area to produce timber;**

Other information

*- harvest performance and undercut*

In the period 2001 to 2010, an average of 85 percent of the AAC was harvested in the Sunshine Coast TSA. The undercut portion of the AAC was mainly in hemlock and balsam stand types. With improvements in the coast timber market, the next cut control period is expected to

have less undercut accumulation. The accumulated undercut is reflected in the forest inventory that was used in the base case. In response to recent direction to manage the provincial undercut, the ministry has requested a plan to harvest approximately 80 000 cubic metres of the undercut in the Sunshine Coast TSA.

I have considered the undercut and stand types that are primarily associated with it (hemlock and balsam stands), and the potential sale of some of the undercut volume. I conclude that although the undercut was accounted for in the base case through the use of updated forest inventory information, the potential volume being considered for sale is sufficiently small to have no significant impact on the AAC. Therefore, I am satisfied that for this determination, allocation of the undercut will have no significant impact on timber supply.

*- deciduous partition*

The 2002 AAC determination included a partition of 95 000 cubic metres attributable to red-alder leading stands with at least 50 percent deciduous species by volume, and a further 3000 cubic metres per year to other deciduous-leading stands. This partitioned volume represents about eight percent of the current AAC, and although recent economic conditions have not been favourable, a portion of this partition continues to be utilized and I expect that performance in these stands will likely improve over time.

In the base case, harvesting of deciduous-leading stands is maintained at 98 000 cubic metres per year for the first 10 years of the forecast, and then declines over 70 years to a non-declining long-term level of 42 000 cubic metres per year.

As part of the public input, the forest licensee who has been apportioned the 95 000 cubic metre per year portion for red-alder leading stands, has requested that the deciduous partition be continued in this determination.

In reviewing this factor with staff, I am satisfied that deciduous-leading stands were appropriately modelled in the base case and that the existing partitions can be maintained at their current levels until the next determination. Further discussion regarding continuation of the deciduous partitions can be found under '**Reasons for Decision**'.

**(b) the short and long term implications to British Columbia of alternative rates of timber harvesting from the area;**

As noted in Table 2, I accept as modelled the factors considered under this section, and I will not discuss them further.

**(d) the economic and social objectives of the government, as expressed by the minister, for the area, for the general region and for British Columbia;**

Economic and social objectives

*- Minister's letter*

The Minister of Forests, Lands and Natural Resource Operations (formerly the Minister of Forests and Range) has expressed the economic and social objectives of the Crown for the province in a letter to the chief forester, dated July 4, 2006 (attached as Appendix 3). The letter stresses the importance of a stable timber supply to maintain a competitive and sustainable forest industry while being mindful of other forest values. In respect of this, in the base case and in the alternative harvest flow projections with which I have been provided for reference in this determination, a primary objective in the harvest flow has been to attain a stable, long-term harvest level where the growing stock also stabilizes. In my determination, I have been mindful

of the need for the allowable harvest in the short term to remain consistent with maintaining the integrity of the timber supply projection throughout the planning horizon. I have also considered with care the adequacy of the provisions made both in current practice, and assumed in the analyses, for maintaining a range of forest values.

I am therefore, satisfied that this determination accords with the objectives of government as expressed by the Minister.

*- summary of public input*

The Minister's letter of July 4, 2006 suggests that the chief forester consider important social and economic objectives that may be derived from public input during the timber supply review, where these are consistent with government's broader objectives as well as any relevant information received from First Nations (see '*First Nations consultation*' below). To this end, two 60-day public review periods were provided, one for the data package and one for the public discussion paper. The submissions received during these reviews were either used to amend the data package on which the timber supply analysis was based and/or were presented for my consideration prior to determining a new AAC for the Sunshine Coast TSA.

Submissions were received from local residents, First Nations, Sunshine Coast Regional District, forestry consultants, licensees, and other organizations and individuals. At the determination meeting with staff, I was provided the public input for each of the factors that I considered in my determination. I discuss some of the input in this rationale under the appropriate factor.

There were also some issues raised as part of the public review that did not relate to a specific factor. For example, there was input from some forest licensees and others that the AAC should be maintained or not increased, and there was input from others that felt the AAC should be reduced. There was no expressed support for increasing the AAC. I reflect on this public input in my '**Reasons for Decision**'.

I would like to thank all of the individuals and groups who participated in this timber supply review and note that their input has helped to inform my considerations in determining an AAC for the Sunshine Coast TSA.

*- First Nations consultation*

The Crown has a duty to consult with, and accommodate if necessary, those First Nations for whom it has knowledge of the potential existence of aboriginal interests that may be impacted by a proposed decision, including strategic-level decisions such as AAC determinations. As chief forester, I must therefore consider information arising from the consultation process with First Nations respecting aboriginal interests and treaty rights that may be affected by my AAC determination. As well, I will consider other relevant information available to the ministry regarding aboriginal interests, including information gathered during other consultation processes.

The Sunshine Coast TSA overlaps with the asserted traditional territories of 14 First Nations. Five of the First Nations also have reserve lands (the *shíshálh* Nation, the Sliammon First Nation, the Xwémalhkwa First Nation, the Klahoose First Nation and the Squamish Nation). These five First Nations have a combined population of over 5900 people located both on and off their various reserves. The other nine First Nations with traditional territory are the We Wai Kai First Nation, Wei Wai Kum First Nation, Kwiakah First Nation, the Snaw'Naw'As First Nation, Qualicum First Nation, Líl'wat First Nation, Tsleil-Waututh First Nation, Ulkatcho First Nation, and the K'ómoks First Nation.

The *shíshálh* Nation are a self-governing First Nation and their traditional territory, which covers Jervis, Sechelt, Narrows and Clowhom Inlets as well as the Sechelt Peninsula, includes former

Indian Reserves that are now held by the *shíshálh* Nation as ‘Sechelt Band Lands’. The majority of the members reside in Sechelt. The Sliammon First Nation has six reserves and traditional territory extending from Lang Bay in the south to Desolation Sound in the north and inland through the Stillwater Valley and up Powell Lake to the headwaters of the Daniels and Powell Rivers, with most of their members residing in the community of Sliammon, north of the City of Powell River. The Klahoose First Nation has a reserve and office in Squirrel Cove on Cortes Island and other reserves and traditional territory extending up Toba Inlet into the Toba River Valley. The Squamish Nation has reserves and traditional territory in Howe Sound, the Squamish Valley and the lower mainland with their offices located in North Vancouver. The Xwémalkwu First Nation has relocated their primary reserve to Campbell River with their ‘core’ traditional territory located in Bute Inlet with reserves at the mouths of the Orford, Bear and Homathko Rivers.

All of the First Nations who assert traditional territory within the Sunshine Coast TSA also assert traditional uses or occupancy in the past and currently. These uses form integral parts of their heritage and ‘connection to the land’.

The *shíshálh* Nation has developed and adopted a Strategic Land Use Plan which outlines a variety of land use zones that define the cultural heritage resources found in each zone, general statements on how those resources were used and how they would like to see development occur (or not) within these zones. The Sunshine Coast District Manager has been considering the provisions in the Strategic Land Use Plan when making determinations for applications, within their asserted territory. The *shíshálh* Nation has also developed a traditional use study to make a preliminary database of sites within their asserted traditional territory.

The Xwémalkwu, Lil’wat, Sliammon, Tsleil-Waututh and Squamish have also developed traditional use studies in order to help locate traditional use areas within their asserted traditional territories. The Xwémalkwu First Nation’s traditional use study was recently updated and completed but it has not been shared yet with the Government of BC.

Participation in the forest industry in the Sunshine Coast TSA by the First Nations, whose asserted territories are overlapped by the Sunshine Coast District, encompasses a variety of tenures including woodlots, community forest agreements and several timber sale licences.

The Ministry of Forests, Lands and Natural Resource Operations (FLNR) has forest and range agreements, such as Forest Consultation and Revenue Sharing Agreements, with most of the First Nations whose asserted territories overlap the TSA. As the timber supply review process progressed, previous agreements between the First Nations and FLNR expired and new agreements were brought into force, some with varying consultation procedures. Some First Nations do not have an agreement with FLNR and therefore the *Updated Procedures for Meeting Legal Obligations when Consulting First Nations* was used to ensure the consultation process was completed appropriately.

All First Nations whose traditional territories are overlapped by the Sunshine Coast TSA were sent the initial letters on December 17, 2009 with follow-up calls in February 2010 to determine if they wanted to receive the data package. The data package letters on July 21, 2010 contained internet links to the information. The consultation letters assessing strengths of claim and impact assessments were sent out on January 25, 2011 and internet links to the Public Discussion Paper was sent out on August 3, 2011.

The Xení Gwet’in First Nations were initially consulted but consultation was not continued as their participation in the Tsilqot’in National Government Strategic Engagement Agreement resulted in no overlap with the Sunshine Coast TSA.

As per the Interim Measures Agreement signed in 2008, the Snaw'Naw'As First Nation has been provided with all of the information pertaining to this administrative decision; however no response has been received.

The Tsleil-Waututh First Nation was not initially consulted as their consultation area did not overlap the Sunshine Coast TSA; however with the acceptance of a Forest Consultation and Revenue Sharing Agreement, their consultative area expanded to include a small portion of the TSA. The Tsleil-Waututh First Nation was provided with the link to the Data Package as well as an assessment of their strength of claim and potential impacts to their asserted aboriginal interests. They responded that due to the Sunshine Coast TSA being outside of their 'core' territory, they defer comment to neighbouring First Nations within the Sunshine Coast TSA.

The only First Nation to respond with specific comments during the consultation process was the *shíshálh* Nation. The *shíshálh* Nation's concerns were regarding the lack of a spatial breakdown in the THLB, the lack of a netdown table for determining the THLB, and a description of the criteria used to describe the THLB. They further stated that they have a vested interest in the determination of the AAC within the TSA and within their traditional territory. They requested a base case analysis of the volume of timber coming strictly from their asserted territory in order to ensure it is not disproportionate to the entire TSA. This base case should also include sensitivity analyses of the effect of removing the Conservation Areas and limiting harvesting in their Cultural Emphasis Areas, from their Strategic Land Use Plan, on the harvest volumes. The requests to run base case scenarios of their territory alone is in support of their efforts to manage the cultural heritage resources found in their asserted traditional territory, as they have designated in their Strategic Land Use Plan.

The *shíshálh* Nation also expressed concern about the use of inventory data from 1993 when new inventory data is going to be available in the near future. To that end, they requested that the chief forester consider reassessing the AAC within the next five years with the updated data. Furthermore they also noted concern about the use of old inventory data with updated potential site index (PSI) tables which may significantly increase the harvest rate without the certainty of updated inventory data. Lastly, they are concerned with the effects of Independent Power Production (clean energy projects) transmission lines on the THLB. Their concerns were reviewed by Sunshine Coast District staff who responded to their comments and requests for information on November 23, 2010.

I am mindful of *shíshálh* Nation's concerns about the inventory that has also been raised by others during the timber supply review process. I have addressed the inventory used to support the timber supply analysis and conclude that it represents the best available information in support of this determination. I have also addressed potential site index (PSI) under 'site productivity estimates' and am satisfied that site index values assumed in the base case were appropriately used in the timber supply analysis. The base case accounted for the impacts of existing clean energy projects, and the potential future impacts of new projects is a factor that I have considered in my determination.

The *shíshálh* Nation has expressed a strong desire to protect a traditional use site in Jervis Inlet at Soda Creek. A & A Trading Limited holds a volume-based license to harvest in the Sunshine Coast TSA and their operations include the area in question. A & A Trading Limited has voluntarily established a 100-metre no work zone (approximately 1.6 hectares) around the mouth of Soda Creek in order to ensure it is not disturbed.

The other First Nations who assert traditional territories within the Sunshine Coast TSA have either not responded to consultation efforts or have responded in support of a determination of a new AAC for the Sunshine Coast TSA with the proviso that any impacts or infringements may be dealt with through other forums such as treaty negotiation processes.

From my review of the consultation process, I conclude that District staff engaged at an appropriate level of consultation with First Nations during the timber supply review for the Sunshine Coast TSA, given the aboriginal interests information available for each First Nation and the potential impact that this AAC determination may have on them. I note that District staff continue to be available to meet and consult with First Nations on specific issues at the operational planning level.

Based on the information provided, I conclude that the AAC I determine is unlikely to impact the asserted rights and titles of First Nations in the TSA. The determination of a new AAC for the Sunshine Coast TSA will not restrict access to the lands by First Nations for the practice of their aboriginal rights to hunt, fish and gather. As noted above under '*First Nations archaeological sites*', all sites protected under the *Heritage Conservation Act*, received a 50-metre buffer, and the total area was excluded from the THLB.

In my determination I need to account for current practice. The *shíshálh* Nation have an interest to protect some areas in their Strategic Land Use Plan and a desire to protect a traditional use site in Jervis Inlet, where the licensee has voluntarily established a no work zone. This was not accounted for in the analysis. Given this I recognize in my '**Reasons for Decision**' a small, unquantified overestimation in timber supply relative to the base case to account for this First Nations interest.

I am satisfied that the consultation efforts regarding this determination are appropriate and I recognize in my determination that further consultation will be undertaken with the First Nations on any relevant administrative and/or operational decisions within their asserted traditional territory. It is during these processes that the FLNR will again be able to assess the degree of impact any proposed decisions may have on First Nations aboriginal interests on a more site-specific basis.

If new information regarding First Nations' aboriginal interests becomes available that significantly varies from the information that was available for this determination, I am prepared to revisit this determination sooner than the 10 years required by legislation.

**(e) abnormal infestations in and devastations of, and major salvage programs planned for, timber on the area.**

As noted in Table 2, I accept as modelled the factors considered under this section, and I will not discuss them further.

## **Reasons for Decision**

In reaching my AAC determination for the Sunshine Coast TSA I have considered all of the factors required under Section 8 of the *Forest Act* and I have reasoned as follows.

The base case, presented in the revised *Sunshine Coast TSA Timber Supply Review Timber Supply Analysis Public Discussion Paper* (September 23, 2011), shows that an initial harvest level of 1 363 000 cubic metres per year can be maintained for 100 years before increasing over 50 years to a non-declining, long-term level of 1 404 000 cubic metres per year. The total harvest level projected in the base case includes 98 000 cubic metres per year of deciduous-leading stand volume for the first 10 years, after which it decreases over 70 years to a non-declining level of 42 000 cubic metres per year for the rest of the forecast period.

The base case initial harvest level is about 14 percent higher than the current AAC of 1 197 949 cubic metres.

I am satisfied that the assumptions applied in the base case for the majority of the factors applicable to the Sunshine Coast TSA were appropriate, as detailed in Table 2 or elsewhere in this rationale. Following is my consideration of those factors for which I consider it necessary in this determination to further take into account implications to the timber supply projected in the base case.

In determining an AAC for the Sunshine Coast TSA, I have identified a number of factors that, considered separately, indicate that the timber supply may be either greater or less than projected in the base case. Some of these factors can be readily quantified and their impact on the harvest level assessed with reliability. Others may influence timber supply by adding an element of risk or uncertainty to the decision, but cannot be reliably quantified at this time.

I have identified the following factors in my considerations as indicating that the timber supply projected in the reference forecast may have been overestimated:

- *Identified wildlife:* the base case accounted for 0.8 percent impact on the THLB to help protect species at risk and regionally significant species. Government's timber supply budget for implementation of the Identified Wildlife Management Strategy (IWMS) is up to one percent of the provincial THLB. The one percent budget has generally been applied to each district and TSA. As a consequence, I recognize a 0.2 percent overestimation in short- to long-term timber supply to account for full implementation of the IWMS in the TSA.
- *Ungulate winter range:* the base case did not account for the 928-hectare THLB budget that has been established as black-tailed deer winter range in the Sunshine Coast TSA. A portion of the previous TFL 10 was added to the TSA in 2007 that included 1579 hectares of THLB subject to forest cover constraints for deer winter range that were also not addressed in the base case. About 20 percent of this forest cover constraint area – about 316 hectares – can be assumed to have the equivalent of a netdown impact on the THLB. In total, 1244 hectares of THLB were not accounted for in the base case – which represents about a 0.5 percent overestimation in short- to long-term timber supply.
- *First Nations:* the base case included a relatively small area around the mouth of Soda Creek that has been voluntarily excluded from harvesting by the licensee. The *shíshálh* Nation also have an interest to protect some areas in their Strategic Land Use Plan, therefore, I am accounting for a small, unquantified overestimation in the harvest levels projected in the base case to better reflect current practices needed to accommodate the *shíshálh* Nation's aboriginal interests.

I have identified the following factors in my considerations as indicating that the timber supply projected in the base case may have been underestimated:

- *Volume estimates for existing stands:* Volumes estimated from ground sampling were higher on average than inventory volumes. The base case did not adjust the inventory volumes to account for the ground sampling work. Use of unadjusted inventory volumes resulted in about a four percent underestimation of short- to mid-term timber supply.
- *Log grades:* harvesting of dead potential volume is now charged to the AAC and as such must be accounted for in my determination. Not including this volume in the base case results in an unquantified underestimation in timber supply in the short term.
- *Scenic areas:* the base case applied the mid-point in the range of maximum disturbance limits for several visual quality objectives (VQOs). A recent study in the TSA indicates that 29 percent of the cutblocks exceeded the maximum disturbance level for that area's VQO. This suggests that the analysis underestimated timber supply relative to

current practices. I therefore account for an unquantified underestimation in the short- to long-term for this factor in my determination.

In addition to the quantified and unquantified upward and downward pressures on timber supply noted above, the following factors were also considered in my determination:

- *Existing forest inventory:* although the inventory used in the base case represents the best available information for the timber supply analysis, the inventory has only received ad hoc updates since 1999 and the inventory was originally done about 20 years ago (before current Vegetation Resource Inventory standards). The inventory in the previous TFL 10 that was transferred to the TSA is in an uncommon format and its quality unknown. Consequently there is some uncertainty about the use of the inventory that I need to account for in my determination. I also address this uncertainty under ‘**Implementation**’.
- *Land use:* there is no provincial government sponsored strategic land use plan in the TSA as there are for most management units across the Province. There are 14 First Nations whose traditional territories are overlapped by the TSA. A relatively high percent of the TSA’s THLB is near communities where there are interface issues, such as community watersheds and scenic areas. There is the potential for additional clean energy projects in the TSA. All of these land use-related issues suggest there could be additional downward pressures on the timber supply in the future that were not accounted for in the base case as they do not represent current practice at this time.
- *Clean energy projects:* the footprint (e.g. penstocks and power lines) of existing clean energy projects in the TSA was accounted for in the base case as the area was mapped as non-forest in the inventory. There is a new proposed project in the Bute Inlet area that, if approved, could impact timber supply in the future.
- *AAC demand:* in the period 2001 to 2010 an average of 85 percent of the AAC was harvested in the TSA. There was input from forest licensees to maintain or not increase the AAC, some public input to reduce the AAC, but no input was received that supported increasing the AAC. There appears, therefore, to be little expressed demand to increase the AAC based on the public input received from the timber supply review process for the Sunshine Coast TSA.

The Sunshine Coast TSA has a robust timber supply as demonstrated in the base case. This robustness allows the ministry to have the flexibility to deal with the increasing pressure on the forested land base that may emerge in the future, such as those related to land and use (e.g. clean energy projects, First Nations accommodation) and improved information (e.g. inventory).

When I take into account the over- and underestimation of harvest levels relative to the base case, considerations related to the inventory, land use and AAC demand, and the advantages for maintaining a robust timber supply to address emerging pressures, I conclude that the AAC for the Sunshine Coast TSA should be maintained at 1 197 949 cubic metres.

The 2002 AAC has an existing partitions of 95 000 cubic metres for red alder-leading stands with at least 50 percent deciduous by volume, and a further 3000 cubic metres per year to other deciduous-leading stands. Based on my considerations discussed under *deciduous partition*, I will also continue these partitions in this AAC.

## Determination

I have considered and reviewed all the factors as documented above, including the risks and uncertainties of the information provided. It is my determination that a timber harvest level that accommodates objectives for all forest resources during the next 10 years and that reflects current management practices as well as the socio-economic objectives of the Crown, can be best achieved in the Sunshine Coast TSA by establishing an AAC of 1 197 949 cubic metres, which includes a partition of 95 000 cubic metres attributable to red alder-leading stands with at least 50 percent deciduous species by volume, and a further partition of 3000 cubic metres attributable to other deciduous-leading stands.

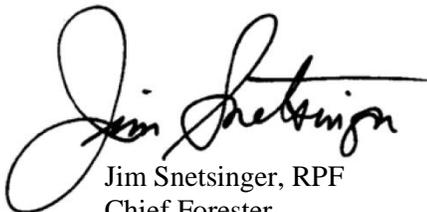
This determination is effective January 16, 2012, and will remain in effect until a new AAC is determined, which must take place within 10 years of this determination.

If additional significant new information is made available to me, or major changes occur in the management assumptions upon which I have predicated this decision, then I am prepared to revisit this determination sooner than the 10 years required by legislation.

## Implementation

In the period following this decision and leading to the subsequent determination, I encourage Ministry of Forests, Lands and Natural Resource Operations (FLNR) staff and licensees to undertake or support the tasks and studies noted below, the particular benefits of which are described in appropriate sections of this rationale document. I recognize that the ability of staff and licensees to undertake or support these projects is dependent on available resources, including funding. These projects are; however, important to help reduce the risk and uncertainty associated with key factors that affect the timber supply in the Sunshine Coast TSA.

1. I request that Forest Analysis and Inventory Branch (FAIB) assess the requirements for updating the existing inventory for depletions and to ensure that this information is incorporated in future timber supply reviews; and assess options for completing the Vegetation Resource Inventory for the Sunshine Coast TSA.
2. I encourage ministry staff to finalize implementation of old growth management areas in landscape units, complete implementation of the Identified Wildlife Management Strategy for the Sunshine Coast TSA and to develop and implement a black-tailed deer management plan that includes ungulate winter range designation.



Jim Snetsinger, RPF  
Chief Forester

January 16, 2012



## **Appendix 1: Section 8 of the *Forest Act***

Section 8 of the *Forest Act*, Revised Statutes of British Columbia 1996, c. 157, (current to January 4, 2012), reads as follows:

### **Allowable annual cut**

8 (1) The chief forester must determine an allowable annual cut at least once every 10 years after the date of the last determination, for

(a) the Crown land in each timber supply area, excluding the Crown land in the following areas:

- (i) tree farm licence areas;
- (ii) community forest agreement areas;
- (iii) first nations woodland licence areas;
- (iv) woodlot licence areas, and

(b) each tree farm licence area.

(2) If the minister

(a) makes an order under section 7 (b) respecting a timber supply area, or

(b) amends or enters into a tree farm licence to accomplish a result set out under section 39 (2) or (3),

the chief forester must make an allowable annual cut determination under subsection (1) for the timber supply area or tree farm licence area

(c) within 10 years after the order under paragraph (a) or the amendment or entering into under paragraph (b), and

(d) after the determination under paragraph (c), at least once every 10 years after the date of the last determination.

(3) If

(a) the allowable annual cut for the tree farm licence area is reduced under section 9 (3), and

(b) the chief forester subsequently determines, under subsection (1) of this section, the allowable annual cut for the tree farm licence area,

the chief forester must determine an allowable annual cut at least once every 10 years from the date the allowable annual cut under subsection (1) of this section is effective under section 9 (6).

(3.1) If, in respect of the allowable annual cut for a timber supply area or tree farm licence area, the chief forester considers that the allowable annual cut that was determined under subsection (1) is not likely to be changed significantly with a new determination, then, despite subsections (1) to (3), the chief forester

(a) by written order may postpone the next determination under subsection (1) to a date that is up to 15 years after the date of the relevant last determination, and

(b) must give written reasons for the postponement.

(3.2) If the chief forester, having made an order under subsection (3.1), considers that because of changed circumstances the allowable annual cut that was determined under subsection (1) for a timber supply area or tree farm licence area is likely to be changed significantly with a new determination, he or she

(a) by written order may rescind the order made under subsection (3.1) and set an earlier date for the next determination under subsection (1), and

(b) must give written reasons for setting the earlier date.

(4) If the allowable annual cut for the tree farm licence area is reduced under section 9 (3), the chief forester is not required to make the determination under subsection (1) of this section at the times set out in subsection (1) or (2) (c) or (d), but must make that determination within one year after the chief forester determines that the holder is in compliance with section 9 (2).

(5) In determining an allowable annual cut under subsection (1) the chief forester may specify that portions of the allowable annual cut are attributable to one or more of the following:

(a) different types of timber or terrain in different parts of Crown land within a timber supply area or tree farm licence area;

(a.1) different areas of Crown land within a timber supply area or tree farm licence area;

(b) different types of timber or terrain in different parts of private land within a tree farm licence area.

(c) [Repealed 1999-10-1.]

(6) The minister must determine an allowable annual cut for each woodlot licence area, in accordance with the woodlot licence for that area.

(7) The minister must determine an allowable annual cut for

(a) each community forest agreement area in accordance with the community forest agreement for that area, and

(b) each first nations woodland licence area in accordance with the first nations woodland licence for that area.

(8) In determining an allowable annual cut under subsection (1) the chief forester, despite anything to the contrary in an agreement listed in section 12, must consider

(a) the rate of timber production that may be sustained on the area, taking into account

(i) the composition of the forest and its expected rate of growth on the area,

(ii) the expected time that it will take the forest to become re-established on the area following denudation,

(iii) silviculture treatments to be applied to the area,

(iv) the standard of timber utilization and the allowance for decay, waste and breakage expected to be applied with respect to timber harvesting on the area,

(v) the constraints on the amount of timber produced from the area that reasonably can be expected by use of the area for purposes other than timber production, and

(vi) any other information that, in the chief forester's opinion, relates to the capability of the area to produce timber,

(b) the short and long term implications to British Columbia of alternative rates of timber harvesting from the area,

(c) [Repealed 2003-31-2.]

(d) the economic and social objectives of the government, as expressed by the minister, for the area, for the general region and for British Columbia, and

(e) abnormal infestations in and devastations of, and major salvage programs planned for, timber on the area.

(9) Subsections (1) to (4) of this section do not apply in respect of the management area, as defined in section 1 (1) of the **Haida Gwaii Reconciliation Act**.

(10) Within one year after the chief forester receives notice under section 5 (4) (a) of the **Haida Gwaii Reconciliation Act**, the chief forester must determine, in accordance with this section, the allowable annual cut for

(a) the Crown land in each timber supply area, except the areas excluded under subsection (1) (a) of this section, and

(b) each tree farm licence area

in the management area, as defined in section 1 (1) of the **Haida Gwaii Reconciliation Act**.

(11) The aggregate of the allowable annual cuts determined under subsections (6), (7) and (10) that apply in the management area, as defined in section 1 (1) of the **Haida Gwaii Reconciliation Act**, must not exceed the amount set out in a notice to the chief forester under section 5 (4) (a) of that Act.

## **Appendix 2: Section 4 of the *Ministry of Forests and Range Act***

Section 4 of the *Ministry of Forests and Range Act* (current to January 4, 2012) reads as follows:

### **Purposes and functions of ministry**

- 4 The purposes and functions of the ministry are, under the direction of the minister, to do the following:
- (a) encourage maximum productivity of the forest and range resources in British Columbia;
  - (b) manage, protect and conserve the forest and range resources of the government, having regard to the immediate and long term economic and social benefits they may confer on British Columbia;
  - (c) plan the use of the forest and range resources of the government, so that the production of timber and forage, the harvesting of timber, the grazing of livestock and the realization of fisheries, wildlife, water, outdoor recreation and other natural resource values are coordinated and integrated, in consultation and cooperation with other ministries and agencies of the government and with the private sector;
  - (d) encourage a vigorous, efficient and world competitive
    - (i) timber processing industry, and
    - (ii) ranching sectorin British Columbia;
  - (e) assert the financial interest of the government in its forest and range resources in a systematic and equitable manner.

### Appendix 3: Minister's letter of July 4, 2006



JUL 04 2006

Jim Snetsinger  
Chief Forester  
Ministry of Forests and Range  
3<sup>rd</sup> Floor, 1520 Blanshard Street  
Victoria, British Columbia  
V8W 3C8

Dear Jim:

**Re: Economic and Social Objectives of the Crown**

The *Forest Act* gives you the responsibility for determining Allowable Annual Cuts—decisions with significant implications for the province's economy, communities and environment. This letter outlines the economic and social objectives of the Crown you should consider in determining Allowable Annual Cuts, as required by Section 8 of the *Forest Act*. This letter replaces the July 28, 1994 letter expressing the economic and social objectives of the Crown, and the February 26, 1996 letter expressing the Crown's economic and social objectives for visual resources. The government's objective for visual quality is now stated in the *Forest Practices and Planning Regulation of the Forest and Range Practices Act*.

Two of this government's goals are to create more jobs per capita than anywhere in Canada and to lead the world in sustainable environmental management. The Ministry of Forests and Range supports these objectives through its own goals of sustainable forest and range resources and benefits. In making Allowable Annual Cut determinations, I ask that you consider the importance of a stable timber supply in maintaining a competitive and sustainable forest industry, while being mindful of other forest values.

The interior of British Columbia is in the midst of an unprecedented mountain pine beetle outbreak. Government's objectives for management of the infestation are contained in British Columbia's Mountain Pine Beetle Action Plan. Of particular relevance to Allowable Annual Cut determinations are the objectives of encouraging long-term economic sustainability for communities affected by the epidemic; recovering the greatest value from dead timber before it burns or decays, while respecting other forest values; and conserving the long-term forest values identified in land use plans.

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Minister of  
Forests and Range  
and Minister Responsible  
for Housing

Office of the  
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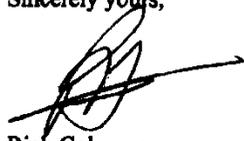
Jim Snetsinger

To assist the province and affected communities in planning their responses to the beetle infestation, it would be best to have realistic assessments of timber volumes that can be utilized economically. Therefore, in determining the best rate of harvest to capture the economic value from beetle-killed timber, I ask that you examine factors that affect the demand for such timber and products manufactured from it, the time period over which it can be utilized, and consider ways to maintain or enhance the mid-term timber supply.

The coast of British Columbia is experiencing a period of significant change and transition. In making Allowable Annual Cut determinations I urge you to consider the nature of timber supply that can contribute to a sustainable coast forest industry, while reflecting decisions made in land and resource management plans.

You should also consider important local social and economic objectives expressed by the public during the Timber Supply Review process, where these are consistent with the government's broader objectives as well as any relevant information received from First Nations.

Sincerely yours,

A handwritten signature in black ink, appearing to be 'Rich Coleman', with a long horizontal stroke extending to the right.

Rich Coleman  
Minister