

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

Tree Farm Licence 46

held by

Teal Cedar Products Ltd.

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

Effective May 24, 2011

**Jim Snetsinger, RPF
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 in making my determination, under Section 8 of the *Forest Act*, of the allowable annual cut (AAC) for Tree Farm Licence (TFL) 46. This document also identifies where new or better information is needed for incorporation in future determinations.

Statutory framework

Section 8 of the *Forest Act* requires the chief forester to consider a number of specified factors in determining AACs for timber supply areas (TSAs) and TFLs. Section 8 of the *Forest Act* is reproduced in full as Appendix 1 of this document.

Description of the TFL

Tree Farm Licence 46, held by Teal Cedar Products Ltd., is located on southern Vancouver Island between Cowichan Lake, Nitinat Lake and Port Renfrew. It is administered from the South Island Resource District office of the Ministry of Forests, Lands and Natural Resource Operations (FLNR) in Port Alberni. The TFL is roughly bounded to the south by the San Juan River and to the northeast by the E&N Land Grant boundary. Portions are also adjacent to the Arrowsmith TSA, and to TFL 44, the Carmanah-Walbran Provincial Park and the Pacific Rim National Park. The total land base of the TFL is 63 419 hectares, of which 59 989 hectares are considered to be productive forest. The current timber harvesting land base (THLB) for TFL 46 is 45 533 hectares, or 72 percent of the total TFL area.

Most areas of the TFL are located in watersheds with rivers flowing toward the west coast of the Island. Slopes vary from flat, alluvial river valleys to steep and rugged terrain, with more gentle topography in the Cowichan Valley portion. The terrain varies from lowland to mountainous. Most of the productive forest land falls within the Coastal Western Hemlock (CWH) biogeoclimatic zone. Cool wet summers and mild winters support stands of hemlock and Douglas-fir, with true fir and western redcedar occurring in lesser amounts. Less than three percent of the TFL area falls into the Mountain Hemlock zone, which occurs at higher elevations. A significant portion of the TFL has been previously logged and now supports second-growth stands ranging up to 80 years in age.

Six First Nations have traditional territory covering all or part of TFL 46: the Chemainus First Nation, the Cowichan Tribes, the Lake Cowichan First Nation, the Penelakut First Nation, the Ditidaht First Nation, and the Pacheedaht First Nation. Information related to First Nations is discussed below, under 'First Nations Considerations'.

History of the AAC

The most recent AAC for TFL 46 was determined at 510 000 cubic metres under Section 8 of the *Forest Act* on August 14, 2003, effective September 1, 2003. Since then a number of land-base changes have taken place that reduced the TFL area and AAC. Following an administrative adjustment to account for deleted private land, and a temporary reduction under Section 173 of the *Forest Act* for an area on Hill 60 designated Section 169 of the *Forest Act*, the AAC effective July 19, 2004 was 488 400 cubic metres.

Three deletions under the *Forestry Revitalization Act* followed, however the total AAC for the TFL remained at 488 400 cubic metres because the *Allowable Annual Cut Administration Regulation* that effects AAC reductions associated with some land base deletions had not yet been promulgated. That AAC remained in effect until the Hill 60 Designated Area expired on June 30, 2009. As a result of the expiry the AAC reverted to 498 000 cubic metres.

On July 15, 2009, to account for the deletion of parcels of land near Rosander Creek and on the San Juan Ridge, which were transferred from the TFL to the Pacific TSA, and a parcel near Browns Creek deleted for a Woodlot licence, the AAC was reduced to 412 297 cubic metres under provisions of the *Allowable annual cut administration regulation*.. The AAC for TFL 46 remained at this level until this AAC determination.

New AAC determination

Effective May 24, 2011 the new AAC for TFL 46 is 403 000 cubic metres. 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

The information sources considered in determining this AAC for TFL 46 include references listed in the licensee's Information Package and Timber Supply Analysis Report and the following:

- Existing Stand Yields, accepted by Forest Analysis and Inventory Branch, January 19, 2010;
- Managed Stand Yields/Site Index, accepted by research staff at Forest Analysis and Inventory Branch, January 19, 2010;
- *Second-Growth Site Index Estimates for Douglas-fir, Western Hemlock, Pacific Silver Fir, and Western Redcedar on TFL 46*. J. S. Thrower & Associates Consulting Foresters Ltd. 2000;
- *Tree Farm Licence 46 – Vegetation Resources Inventory Statistical Adjustment*, Timberline Natural Resource Group. 2008;
- *Tree Farm Licence 46 Information Package*, submitted May 27, 2009, accepted by Forest Analysis and Inventory Branch July 29, 2009;
- *Tree Farm Licence 46 Timber Supply Analysis Report*, submitted March 10, 2010, accepted by Forest Analysis and Inventory Branch February 26, 2011;
- *Timber Supply Addendum for TFL 46*, submitted November 2, 2010;
- *Tree Farm Licence 46 Rationale for Allowable Annual Cut Determination*; August 14, 2003;
- 'Summary of dead potential volume estimates for the management units within the Coastal Forest Region', Ministry of Forests and Range, April 2006;
- *Identified Wildlife Management Strategy. Accounts and measures for managing identified wildlife: Coast Forest Region. Version 2004. Province of BC*;
- *Order Establishing Provincial Non-Spatial Old Growth Objectives*, 2004;
- *Vancouver Island Land Use Plan Higher Level Plan Order*, Effective December 1, 2000;
- *Forest and Range Practices Act – Regulations and amendments*, current to May 11, 2011;
- *Forestry Revitalization Act*, current to May 11, 2011;
- *Forest Act*, current to May 11, 2011;
- *Ministry of Forests and Range Act*, current to May 11, 2011;
- *Allowable Annual Cut Administration Regulation*, with amendments to December 6, 2010;
- *Forest Practices Code of British Columbia Act* and amendments and guidebooks, January 31, 2004;

- *Hill 60 Designated Area No. 2* (BC Reg. 189/2009);
- *Chief Forester Order – Section 173 of the Forest Act* (concerning the Hill 60 designated area), 2004;
- *Cowichan Lake Community Forest Cooperative Ltd. and The Teal-Jones Group Forest Stewardship Plan*. 2006;
- *Timber reallocation transition agreement*, Teal Cedar Products Ltd. and British Columbia, April 1, 2005;
- *Order to Establish Visual Quality Objectives for the South Island Forest District*, December 15, 2005;
- *Order-Fisheries Sensitive Watersheds – Vancouver Island*, effective December 28, 2005;
- *Order – Ungulate Winter Range #U1-002*. Ministry of Water, Land and Air Protection. 2003a;
- *Order – Ungulate Winter Range #U1-017*. Ministry of Water, Land and Air Protection. 2003b;
- *Tree Farm Licence 46, Instrument Number 28*, July 15, 2009;
- *Tree Farm Licence 46, Instrument Number 29*, July 15, 2009;
- *Tree Farm Licence 46, Instrument Number 30*, July 15, 2009;
- *Forestry Revitalization Act Order No. 3(2)23-4*, December 30, 2004;
- *Forestry Revitalization Act Order No. 3(2)21-3*, December 31, 2005;
- *Forestry Revitalization Act Order No. 3(4)21-1*, February 12, 2008;
- *Forestry Revitalization Act Order No. 3(4)21-2*, February 12, 2008;
- *Forestry Revitalization Act Order No. 3(4)21-3*, March 31, 2008;
- *Renfrew Aggregate Landscape Unit Plan (Draft V6)*. B.C. Integrated Land Management Bureau. Teal Jones Forest Ltd. et. al. 2006;
- *Sustainable Forest Management (SFM) Plan. The Teal-Jones Group*. 2006;
- *Pacheedaht First Nation Cedar Conservation Strategy*. April 22, 2008;
- *First Nation Consultation Summary, Tree Farm Licence 46 Timber Supply*, Ministry of Forests, Lands and Natural Resource Operations, November 1, 2010;
- Letter from the Minister of Forests and Range (now the Ministry of Forests, Lands and Natural Resource Operations) to the Chief Forester, dated July 4, 2006, stating the Crown's economic and social objectives for the province;
- Technical review and evaluation of current operating conditions on TFL 46 through comprehensive discussions with staff from the Ministry of Forests, Lands and Natural Resource Operations and the Ministry of Environment, including the AAC determination meeting held in Victoria, B.C. on February 9, 2011.

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 the 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 variation in physical, biological and social conditions. Ongoing 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 the 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 this AAC for TFL 46, 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 the 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) redetermining 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 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 when 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 or 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.

Where appropriate I will consider information on the types and extent of planned and implemented silviculture practices as well as relevant scientific, empirical and analytical evidence on the likely magnitude and timing of their timber supply effects.

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 judgement 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 TFL are addressed in various sections of 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 TFL 46. It is also independent of any decisions 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 steward of the forested land of British Columbia, of the mandate of the Ministry of Forests, Lands and Natural Resource

Operations 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 (FRPA)*.

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 (TSR) for timber supply areas (TSA) and TFLs.

For most AAC determinations, a timber supply analysis is carried out using an information package including data and information from three categories: land base inventory, timber growth and yield, and management practices. Using this set of data and a computer simulation model, a series of timber supply forecasts can be produced to reflect different starting harvest levels, rates of decline or increase, and potential tradeoffs 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 it 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 simulation 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. Judgements 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.

Timber supply analysis

The March, 2010 timber supply analysis for TFL 46 was prepared for the licensee by the TECO Natural Resource Group using its simulation model CASH6 (Critical Analysis by Simulation of Harvesting). The model uses a geographic approach to land base and inventory organization to develop harvest schedules integrating all resource management considerations. The forecasts

from this timber supply model were reviewed by ministry staff, who advised me about the function of the model, and any associated implications with the harvest projections.

The harvest flow objectives used in the analysis were to maintain the initial harvest level for as long as possible while limiting any necessary reductions in projected harvest levels to ten percent per decade. Other requirements included harvesting at least 180 000 cubic metres per year from second-growth stands (aged from 55 to 249 years old) over the next ten years, and achieving a maximum possible even-flow, long-term supply consistent with a stable growing forest.

In the base case, the initial harvest level of 367 363 cubic metres per year was maintained for five decades before a 9.9-percent drop to the long-term sustainable level of 332 500 cubic metres per year.

When the analysis process was initiated in December, 2008, the licensee expected the area known as the Hill 60 area would be deleted from TFL 46 by the time of this determination, as explained in more detail below, under 'Land base contributing to timber harvesting'. As this area has not yet been deleted, in November 2010 the licensee provided an addendum to the analysis that included a harvest forecast based on the current TFL 46 land base which includes the Hill 60 area. In this forecast an initial harvest level of 402 932 cubic metres per year could be maintained for four decades before falling to a long-term level 4.8 percent higher than that projected in the base case.

The 2010 timber supply analysis report also includes a number of sensitivity analyses conducted to assess the potential implications for timber supply arising from uncertainty in data assumptions and estimates. All of these sensitivity analyses have been of assistance to me in considering the factors leading to my determination.

Having reviewed in detail the assumptions and methodology incorporated in the base case and addendum, as well as the model output including species distribution over time, growing stock projections by age class over time, average age, area, and volume harvested annually, and other factors as described in my considerations below, for this determination I am satisfied that the base case harvest forecast and the addendum have provided suitable bases for my assessment of the timber supply for TFL 46.

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

I have reviewed the information for all of the factors required to be consideration under Section 8 of the *Forest Act*. Where I have concluded that the modelling of a factor in the base case 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 Table 1.

Table 1. List of factors for which base case modelling assumptions have been accepted

<i>Forest Act</i> section and description	Factors accepted as modelled
8(8)(a)(i) Composition of the forest and its expected rate of growth	<ul style="list-style-type: none"> • Forest cover inventory • Non-forest • Non-productive reductions • Existing roads, trails and landings • Future roads, trails and landings • Inoperable and inaccessible areas • Unstable terrain • Low productivity types • Deciduous • Community watersheds • Riparian reserves and management zones – streams • Riparian reserve zones – lakes and wetlands • Environmentally sensitive areas • Cultural heritage resource reductions • Recreation reductions • Site index and site index adjustments • Unmanaged stand yields • Managed stand yields • Operational adjustment factors • Minimum harvest age • Harvest sequencing
8(8)(a)(ii) Expected time it will take the forest to become re-established following denudation	<ul style="list-style-type: none"> • Regeneration delays • Not satisfactorily restocked areas
8(8)(a)(iii) Silvicultural treatments to be applied	<ul style="list-style-type: none"> • Silviculture regimes • Genetic improvement • Fertilization • Silvicultural systems
8(8)(a)(iv) Standard of timber utilization and allowance for decay, waste and breakage	<ul style="list-style-type: none"> • Utilization standards • Decay, waste and breakage

Forest Act section and description	Factors accepted as modelled
8(8)(a)(v) Constraints on the amount of timber produced by use of the area for purposes other than timber production	<ul style="list-style-type: none"> • Forest cover objectives • Archaeological sites • Watershed considerations • Visual quality considerations • Adjacent cutblock green-up • Landscape-level biodiversity • Stand-level biodiversity • Wildlife considerations
8(8)(a)(vi) Any other information	<ul style="list-style-type: none"> • Licence AAC and actual harvest performance • Vancouver Island Land Use Plan
8(8)(b) Short and long-term implications of alternative rates of timber harvesting from the area	See discussion below
8(8)(e) Abnormal infestations in and devastation of, and major salvage program planned for, timber on the area	<ul style="list-style-type: none"> • Non-recoverable losses

For other factors, where more uncertainty exists, or where I have concern about the information used, or the modelling technique, or where public or First Nations' input suggests contention regarding the information used, the modelling, or some other aspect under consideration, I have explained below how I have considered and accounted for the uncertainty, the information, the modelling, or any issue raised.

Factors requiring additional explanatory consideration

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

Factors considered under Section 8(8)(a)(i)

In addition to the factors listed under this section in Table 1, I have also considered the following factors requiring comment or discussion.

- *Land base contributing to timber harvesting*

- *Changes in area and their effect on AAC since the 2003 determination*

When the licensee initiated the analysis process in December 2008, it had to derive an initial harvest level as a starting point for producing a base case. This initial harvest level was intended to reflect all the land base deletions and associated AAC reductions that had occurred since the last AAC determination in 2003, as well as those that were expected to occur before this determination. Had all the deletions taken place, the AAC of TFL 46 would have been

367 363 cubic metres. This is the same as the AAC available to the licence holder after reservations of portions of the TFL 46 AAC made under the *Forestry Revitalization Act* for disposition to British Columbia Timber Sales (BCTS) and under other licences and area-based tenures. As a result, the licensee set the initial harvest level for the base case at this level.

When the licensee initiated the analysis in 2008, all the private land since the 2003 determination had been deleted from the TFL and the AAC reduced accordingly by 12 000 cubic metres. In addition, a woodlot licence for the Pacheedaht First Nation, an area at Muir Creek and an area at Shawnigan Lake were deleted by order under the *Forestry Revitalization Act*, however the AAC was not adjusted because the *Allowable Annual Cut Administration Regulation* that provides such adjustments had not yet been promulgated. The total volume attributable to those areas was estimated to be 9365 cubic metres per year.

At the time the analysis was initiated, the licensee expected an area at Rosander Creek, two areas near the San Juan River, and an area on Hill 60 would be deleted by the time of this determination. All but the Hill 60 area have been deleted and the AAC reduced accordingly under the *Allowable Annual Cut Administration Regulation*. Therefore, the AAC in effect immediately before this determination, after all the deletions and AAC adjustments, was 412 297 cubic metres. The difference between this AAC and the AAC available to the licence holder is attributable to: the 9365 cubic metre per year harvest volume associated with the area deletions for the Pacheedaht First Nation woodlot licence, the Muir Creek area and the area near Shawnigan Lake; the 21 991 cubic metre per year harvest volume associated with the Hill 60 area; and the 13 578 cubic metre per year harvest volume assigned to the Ditidaht First Nation. No area has been identified for deletion to account for the Ditidaht volume.

After accounting for the AAC associated with the three area deletions for which the AAC was not reduced, the initial harvest level that should have been considered as a starting point for the base case is 402 932 cubic metres per year. The land base should also have included the Hill 60 area. As mentioned above under ‘Timber supply analysis’, the licensee provided an addendum to the analysis that included a harvest forecast that includes the Hill 60 area and starts at 402 932 cubic metres per year.

The total area of TFL 46 used in the base case is 59 884 hectares, of which 56 600 hectares, or 95 percent, are considered to be productive forest land. With the inclusion of the Hill 60 area the total area is 63 419 hectares, of which 59 989 hectares—still 95 percent, are productive forest.

As part of the process used to define the THLB (the land base estimated to be biologically and economically available for harvesting) a series of deductions was applied to the productive forest land base. These deductions account for the factors that effectively reduce the suitability or availability of the productive forest area for harvest due to ecological or economic reasons. In the base case for TFL 46, the deductions result in a ‘current’ THLB of 42 508 hectares, or about 75 percent of the productive forest land base. With the Hill 60 area included, the THLB is 45 533 hectares, or 76 percent of the productive forest land base.

Having reviewed all of the land base deductions as applied in the analysis in deriving the THLB, I agree with the information already published for the factors listed above in Table 1. These comprise all of the relevant land base factors except for one. The single exception is the deduction in the case of the land base associated with Hill 60. On this account I find the harvest forecast provided in the addendum to the analysis more accurately represents the timber supply for TFL 46 than the base case. I note that in this forecast the initial harvest level of 402 932 cubic metres per year could be maintained for four decades before declining to the long-term harvest level. I will discuss this further under ‘**Reasons for Decision**’.

Section 8 (8) (a) (ii) the expected time that it will take the forest to become re-established on the area following denudation:

Factors considered under Section 8(8)(a)(ii)

Table 1 above lists each of the factors I have considered under this section for which I have agreed with the representation in already published information respecting current practice and with the modelling as incorporated in the analysis. No factors considered under this section require additional comment.

Section 8 (8) (a) (iii) silvicultural treatments to be applied to the area:

Factors considered under Section 8(8)(a)(iii)

Table 1 above lists each of the factors I have considered under this section for which I have agreed with the representation in already published information respecting current practice and with the modelling as incorporated in the analysis. No factors considered under this section require additional comment.

Section 8 (8) (a) (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:

Factors considered under Section 8(8)(a)(iv)

In addition to the factors listed under this section in Table 1 above, I have also considered the following factor which requires additional comment.

- *Coastal log grades*

On the coast of BC, logs from trees that were dead prior to harvest have been harvested, scaled and charged to the AAC. Dead western redcedar and old growth Douglas-fir stems can remain sound and potentially suitable for milling for many years. However, dead potential volume is not currently included in inventory volume estimates, and therefore has not been accounted for in previous AAC determinations. The yield tables incorporated in the 2010 timber supply analysis for TFL 46 also do not include estimates of dead-potential volumes.

The draft report *Summary of Dead Potential Volume Estimates for Management units within the Coastal Forest Region* does not include an estimate for dead-potential volume on TFL 46. Possible sources of data include inventory audit samples, VRI sample plots, and temporary and permanent sample plots, but this information is not available for TFL 46. The nearest management units for which such information is available are TFL 61, where the 'dead-potential' volume estimate adds 8.8 percent to existing mature stand volumes, and the Arrowsmith TSA, where the corresponding figure is 9.3 percent.

In considering whether these figures for nearby areas provide any guidance in assessing the corresponding 'dead-potential' figure for TFL 46, I have considered as follows. Given the extensive second-growth forest already present in TFL 46 and the advancing stage of the transition toward dependence on second-growth harvesting, it is reasonable to assume that the percentage of the harvestable volume that will be found from dead trees in TFL 46 is lower than in areas where the harvest still relies predominantly on existing unmanaged stands. For TFL 46, the 2010 timber supply analysis projects that after twenty years almost all of the volume harvested in the TFL will be from managed, second-growth stands. In addition, consistent with recent performance on TFL 46, in the base case the licensee assumed that for the next 10 years, at

least 180 000 cubic metres per year will be harvested in second-growth stands aged from 55 to 249 years.

In this situation, if, due to any unaccounted ‘dead-potential’ volume in the TFL, the licensee is able to realise more volume than anticipated from the remaining older existing stands, then any sound wood harvest so displaced will remain available to contribute to future sustainability in the timber harvest. From this, in the absence of local data, I consider it appropriate to recognise any potential for an unquantified—and in this case, at this stage in the forest transition, likely small—underestimation in the available timber volume, not as a reason to consider this factor as a potential increase in timber supply for this determination, but rather as an indication of robustness in the future timber supply, and of the presence of desirable flexibility in the management regime under which it will be harvested.

- (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:**

Factors considered under Section 8(8)(a)(v)

- *Integrated resource management objectives*

The Ministry of Forests, Lands and Natural Resource Operations 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.

I have reviewed the information presented to me regarding the base case assumptions for a number of factors related to integrated resource management. Table 1 above lists each of the factors considered under this section; in each case I have agreed with the representation in already published information respecting current practice and with the modelling as incorporated in the analysis. No factors considered under this section require additional comment.

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

Factors considered under Section 8(8)(a)(vi)

- Licence AAC and Actual Harvest performance

I note that as of the end of the fifth year of the most recent cut control period, the actual volume harvested over the past five years amounts to 99.9 percent of the AAC. This indicates current healthy productivity in creating a desirable level of economic and socially beneficial activity consistent with management for the range of resources and values on the TFL.

- First Nations considerations

Six First Nations have traditional territory covering all or part of TFL 46: the Chemainus First Nation, the Cowichan Tribes, the Lake Cowichan First Nation, the Penelakut First Nation, the Ditidaht First Nation, and the Pacheedaht First Nation. The first four of these are members of the Hul’qumi’num Treaty Group, whose mandate it is to jointly negotiate a comprehensive treaty with British Columbia and Canada in the BC Treaty Process.

Due to the fact that TFL 46 is at the periphery of the traditional territories of the Hul'qumi'num Treaty Group First Nations and their traditional territories substantially overlap, district staff assessed the relative strength of the aboriginal interests and the potential impact my decision may have on those interests as being at the lower end of the Haida consultation spectrum.

The Ditidaht First Nation's traditional territory also overlaps with that of several other First Nations within TFL 46, but there is one portion of TFL 46 in which there is no overlap. There is also a reasonable possibility that the Ditidaht First Nation may have a case for aboriginal title in some areas of TFL 46, likely along the northwest shore of Nitinat Lake, and a reasonable probability of the Ditidaht First Nation having aboriginal rights over some areas within TFL 46; therefore, the FLNR consulted with the Ditidaht First Nation at the middle to high end of the Haida consultation spectrum.

The Pacheedaht First Nation's traditional territory overlaps no other First Nation's traditional territory within TFL 46. There is a reasonable possibility that the Pacheedaht First Nation may have a case for aboriginal title in some areas of TFL 46, likely along the San Juan River, and a reasonable probability that the Pacheedaht First Nation has aboriginal rights over some areas within TFL 46. On this basis, the FLNR consulted with the Pacheedaht First Nation at the middle to high end of the Haida consultation spectrum.

The Hul'qumi'num Treaty Group has completed Stage Three of the BC Treaty Commission process, signing the Hul'qumi'num Framework Agreement on December 19, 1997. The Cowichan Tribes have entered into discussions on a Reconciliation Agreement with the Ministry of Aboriginal Relations and Reconciliation (MARR); however, to date there is no indication that this initiative is proceeding.

The Ditidaht and Pacheedaht also completed Stage Three, signing the Ditidaht/Pacheedaht Framework Agreement on January 30, 1997.

In 2001, the Province entered into a Treaty Related Measure with the Cowichan Tribes by designating an area, under Section 169 of the *Forest Act*, within TFL 46 on Hill 60. The designation expired on April 4, 2011. The subject area is within the larger Hill 60 area of TFL 46, and the larger area was identified as one of the areas that would accommodate a portion of the AAC taken under the *Forestry Revitalization Act* in 2004 and 2005. This area was assigned to BCTS under the 2005 'Timber reallocation transition agreement'. FLNR staff have informed me that a process is ongoing that will result in the deletion this area, which includes the formerly designated area, from TFL 46. The area will be added to the Pacific TSA where BCTS is currently the only operator. In view of the Cowichan Tribes' interest in the area, BCTS is not planning any operations in the former Hill 60 designated area.

Each of the six First Nations listed above have entered into an agreement with the province, such as a Forest and Range Agreement (FRA), a Forest and Range Opportunities agreement (FRO) or an Interim Measures Agreement Extension (IMAE). These agreements provide for revenue sharing and forest tenure opportunities. They also contain provisions for consultation on administrative decisions including AAC determinations, and these were followed by district staff. Some of these agreements have expired. The Province recently introduced the new Forestry Consultation and Revenue Sharing Agreement (FCRSA) to replace expired agreements.

At the time of this AAC determination, the Pacheedaht, Penelakut, and Ditidaht First Nations and the Cowichan Tribes have FCRSAs in place. These agreements all describe a level of consultation associated with specific decisions. Consultation on this AAC determination for TFL 46 was completed prior to these FCRSAs being signed.

On August 6, 2008, South Island Forest District staff sent a letter to the Lake Cowichan First Nation and the Cowichan Tribes, and on August 11, 2008, to the remaining four First Nations,

advising that the TSR process would soon commence and that Teal-Jones would share related information with the First Nations. On May 6, 2009, Teal-Jones sent a letter to the six First Nations advising them that the Information Package was available for review on its website and on June 4, 2009 it provided each First Nation with a copy of the Information Package. On June 10, 2009, and on July 28 to the Chemainus First Nation, South Island District staff sent a letter to the First Nations advising them that the TSR process had been delayed and confirming that they had access to the Information Package. On July 28, 2009 district staff sent another letter to the First Nations, requesting comments on the Information Package.

On April 21, 2010 South Island District staff sent a letter to the First Nations advising that the Timber Supply Analysis would soon commence and that Teal-Jones would provide the Timber Supply Report for review. On August 20, 2010, Teal-Jones sent a letter to the First Nations (except the Lake Cowichan First Nation) advising them that the Timber Supply Analysis Report was available for review. On September 14, 2010, South Island District staff sent a letter to the First Nations (except the Chemainus First Nation for reasons noted below) requesting comments on the Timber Supply Analysis by November 1, 2010.

On August 19, 2009, the Chemainus First Nation sent district staff an e-mail advising that TFL 46 is external to its core territory and that no further consultation was required.

On September 9, 2009, during review of the Information Package, the Cowichan Tribes sent a letter to district staff advising of their concern over access to cedar for cultural use, especially old-growth monumental cedar. They expressed a desire to enter into an agreement with Teal-Jones to ensure continued access to cultural cedar. On January 12, 2010, district staff responded to the Cowichan Tribes' letter, acknowledging the First Nations' interest in red and yellow-cedar and advising that the process is ongoing and that there would be further opportunity for comment. No further comment was received, but I note that the Cowichan Tribes have a Community Forest Agreement near Skutz Falls on the Cowichan River where opportunities for cedar may be found, and I am advised of Teal-Jones' preparedness to discuss cedar requirements with the First Nations.

On May 3, 2010, the Pacheedaht First Nation sent a letter to district and Teal-Jones staff outlining concerns about access to cedar and fish habitat. Specifically, concerns were raised over: low assumed harvestable ages and the resulting lack of production of cultural products found in older forest; reliance on clearcut harvest, and rates of cut in watersheds that may destabilize soils.

The Pacheedaht First Nation requested that in specified locations variable rotation lengths be used to manage frequency of harvest and to maintain older trees adjacent to streams, that riparian reserve zones be increased, especially on steep slopes adjacent to some fish streams; that the conservation of cedar, both individual trees and stands containing trees of cultural quality, be recognized in the analysis; and that the analysis should account for the need for second-growth cedar for recruitment of future cultural cedar, requiring 20 to 30 hectares of forest stands with a site index of from 25 to 30. Although the suggested area is small, it is important to the Pacheedaht First Nation that such areas be identified and that the appropriate management regimes be implemented.

I am advised that on May 31, 2010, Teal-Jones responded to the May 3 letter from the Pacheedaht First Nation, addressing each of the concerns raised. From this I understand that substantial areas of stands are identified with a view toward retention for First Nations' purposes, and that Teal-Jones is considering alternatives to clearcutting. It is also important to note that the harvestable ages assumed in the information package are averages; in practice stands may be harvested at lower, or higher—sometimes substantially higher—ages.

Respecting the request for increased width in riparian zones, Teal-Jones indicated that portions of riparian management zones are in fact often also reserved. The licensee is aware of the Pacheedaht Nation's concern regarding potential impacts of harvesting and road building on fish habitat, and it indicated it will continue to work to minimize or eliminate these impacts.

Teal-Jones also indicated that cedar conservation will be a primary consideration in retaining stands and/or individual trees to meet biodiversity requirements in the TFL. Also, in part, Teal-Jones selected Old Growth Management Areas with a view to conserving reasonably accessible cedar. Regarding the recruitment of cedar areas, the licensee believes that TFL 46 will supply an abundant source of cedar in future and that attempting to identify specific areas for recruitment now, among younger trees, would be premature, since the sought characteristics are not yet evident. As tree ages advance beyond the 'branchy' stage, desirable areas and individual trees will become increasingly evident. I note that the Pacheedaht also has opportunities to retain cedar on forest areas they themselves manage, such as TFL 61.

The Pacheedaht Nation's 60-page report, '*Pacheedaht First Nation Cedar Conservation Strategy*', focuses on the strategic objectives of identifying old, monumental cedar in realistic-sized existing areas while conserving others for future use, and recognizes that young trees for bark stripping will become available through regular forest management.

No information was received from the Lake Cowichan, Penelakut, or Ditidaht First Nations in response to this consultation effort.

In addition to reviewing the information received through the formal consultation process, I have been advised on the existence, nature and content of various other sources of information available for detailed operational consideration by ministry and licensee staff in respect of First Nations' interests. This applies in particular to: Strength of claim; cultural heritage resources; archaeological resources; traditional use sites; the management of elk and deer and other hunting and fishing interests; and sites identified in a traditional use survey that range from sensitive to extremely sensitive. I am advised that for some years now the licensee has avoided working in a number of such areas of concern to First Nations. I note also that in the base case, 1167 hectares were excluded from the THLB for ungulate winter range, and 52 hectares specifically for elk. The designated area on Hill 60, a possible treaty area, expired on April 4, 2011, but under management by BCTS it is unlikely to be harvested in the short term and other protection measures are currently being contemplated by FLNR. Any related information that First Nations can make available during TSR processes is always helpful not just operationally in appropriately protecting First Nations' interests, but also in reducing uncertainty in timber supply projections.

I note in this regard that the Pacheedaht First Nation maintains good working relationships both with the licensee and with the FLNR district office. I am encouraged that this will continue to provide an example of the benefits of open communication for the resolution of any issues that may arise as all parties move forward in taking advantage of economic opportunities while ensuring the appropriate management of other important interests.

The Ditidaht First Nation has conducted and documented Traditional Use Studies and has previously expressed, in earlier consultation processes, interest in the availability of, and access to and use of old-growth, red and yellow-cedar, for cultural purposes. The Ditidaht First Nation has also expressed concern over potential logging impacts to culturally important and sensitive areas—which have been the subject of Treaty discussions—and also over the impact of logging and road building on watershed integrity and fish habitat, resources which I note are inevitably managed to *Forest and Range Practices Act* (FRPA) standards. The Ditidaht First Nation has also expressed interest in elk as a cultural heritage resource.

In the First Nations' Consultation Summary, district staff provided recommendations regarding accommodation for Ditidaht First Nation concerns, including: requesting that the licensee share information about cutblock and road operational decisions; placing a priority on monitoring the implementation of the accommodation of aboriginal interests; and participating in dialogue between the FLNR and the Ditidaht First Nation regarding its aboriginal interests.

I am satisfied that for this AAC determination for TFL 46, the South Island Forest District has engaged in consultation with all potentially affected First Nations in accordance with government direction and with the provisions outlined in the First Nations' FRO/FRA agreements. The level of consultation was appropriate, given the aboriginal interests expressed by each First Nation, the available information regarding their respective interests, and the potential impact that this AAC determination may have on those interests. The determination of an AAC does not, in itself, change the forest practices, the management method, the layout of operations on the ground, or the consideration of aboriginal interests at the operational level. Under current practice, the TFL area will be managed under the FRPA legislation, which maintains a level of protection for a range of forest values such as watershed integrity, wildlife and biodiversity. For operational and administrative decisions subsequent to this AAC determination, consultation with First Nations will continue.

From the information I have received it is reasonable to conclude that the concerns of the Pacheedaht and Ditidaht First Nations regarding cedar supply, watershed integrity, and fish and wildlife habitat values are significant factors that may affect current and future management on TFL 46. I therefore recommend that district staff, the licensee and the Pacheedaht First Nation should meet and discuss the Pacheedaht First Nation Cedar Conservation Strategy and determine how it might be implemented in the Pacheedaht First Nation's traditional territory that overlaps TFL 46. In that regard, I am encouraged by the helpful communication and progress so far, and any quantifiable implications for timber supply that may arise through ongoing discussion can be identified and accounted for as necessary in future analyses and AAC determinations. Also, the Ditidaht First Nation, the licensee and district staff should meet to discuss the management practices that reasonably address the Ditidaht's concerns.

While the cedar, watershed, fish and elk values may affect on-the-ground operational layout and management, it appears generally that at this time the required management adjustments can be, and are being, made operationally, without incurring changes in the projected timber supply as currently analysed. I note that measures are already in place to deal with ungulate winter range and other specific operational issues such as cultural sites. Encouraging a good level of operational dialogue in TFL 46 should help the First Nations to meet their needs for monumental cedar, particularly considering also the opportunities outside the TFL, in tenure areas held by First Nations.

Overall, I believe a good foundation has been established in TFL 46 from which to move forward in managing the TFL on the basis of continuing good dialogue and cooperation.

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

- alternative rates of harvest

In addition to the base case, the licensee provided two alternative harvest flows which, in the addendum to the analysis, were also projected against the amended base case land base that includes the Hill 60 area.

The first alternative forecast showed that the highest sustainable, even-flow harvest level, with stable growing stock levels by the end of the forecast period, was 365 000 cubic metres per year.

The second alternative forecast showed that the highest initial harvest level that could be achieved without a subsequent decline exceeding 10 percent per decade was 455 000 cubic metres per year, falling by 35 000 cubic metres per decade for three decades to the same long-term harvest level as in the base case.

In my determination I have been mindful of the viability of both of these projections in relation to the AAC I have determined.

(c) repealed [2003-31-2 (B.C. Reg. 401/2003)]

This section of the *Forest Act* has been repealed [2003-31-2 (B.C. Reg. 401/2003)].

(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

Economic and social objectives; Section 8(8)(d)

- Minister's letter

The Minister of Forests and Range (now the Minister of Forests, Lands and Natural Resource Operations) 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). Two of the government's stated goals are to create more jobs per capita than anywhere else in Canada, and to lead the world in sustainable environmental management. The Minister asked for consideration, during AAC determinations, of the importance of a stable timber supply in maintaining a competitive and sustainable forest industry while being mindful of other forest values. In respect of this, in the base case projection and in the alternative harvest flow projections described above, a primary objective in the harvest flow has been to attain a stable, long-term harvest level where the growing stock also stabilizes. 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.

The letter notes the period of significant change and transition being experienced in coastal areas. The Minister asks that when making AAC determinations, the chief forester 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. I note that the harvest flow and other assumptions incorporated in the base case are consistent with this objective.

Finally, the Minister suggested that the chief forester should consider the local social and economic objectives expressed by the public, and relevant information received from First Nations.

Seeking public input, the licensee advertised in the Cowichan Valley Citizen, the Lake Cowichan Gazette, the News Leader, the Sooke Mirror, the Times Colonist, and the Alberni Valley Times, inviting comments on the Information Package between February 2, 2009 and April 2, 2009. The licensee received no comments.

Information obtained from the First Nations' consultation process is discussed earlier in this document under '*First Nations considerations*'.

- Employment and community dependence

In context of the Minister's letter I have also reviewed the number of person-years of employment, 366, deriving directly from the harvesting, silviculture, and processing of timber

from TFL 46, using provincial coefficients and an assumed harvest level of 370 000 cubic metres. In ‘Licence AAC and actual harvest performance’, I noted the current healthy productivity in creating a desirable level of economic and socially beneficial activity consistent with management for the range of resources and values on TFL 46.

From all of these considerations, I am satisfied that this AAC determination is made in consistency with the objectives of government as expressed by the Minister.

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

Factors considered under Section 8(8)(e)

For the only factor considered under this section, ‘non-recoverable losses’, I have accepted the assumptions as applied in the base case projection, as indicated earlier in Table 1.

Reasons for decision

In reaching my AAC determination for TFL 46 I have considered all of the factors required to be considered under Section 8 of the *Forest Act* and have reasoned as follows.

In the base case the initial harvest rate of 367 363 cubic metres per year was projected to be sustainable for 50 years before falling by 9.9-percent to the long-term, sustainable level of 332 500 cubic metres per year. This initial harvest rate was set at the AAC available to the licence holder at the time the analysis was being prepared. It is equal to the most recently determined AAC for TFL 46 under Section 8 of the *Forest Act*, effective September 1, 2003, less the adjustments necessary to account for areas and/or volumes that, at the time of preparation of the analysis, either had been removed or were expected to be removed from the TFL prior to this AAC determination. As noted earlier in ‘Changes in area and their effect on AAC since the 2003 determination’, in all but three cases, these removals are already accounted for at this time by corresponding formal adjustments to the AAC.

The three unaccounted factors comprise 21 991 cubic metres attributable to the expected removal of the Hill 60 area; 13 578 cubic metres assigned to the Ditidaht First Nation by the Minister as a separate volume reservation under the *Forestry Revitalization Act*, but not assigned to a particular area for removal from the TFL; and 9365 cubic metres for three area deletions under the *Forestry Revitalization Act*.

Dealing with these factors in order, I note the following. As discussed earlier in this document, in the base case no volume contribution to the harvest was assumed from the Hill 60 area, in expectation of the removal of the 3500-hectare area and its agreed contribution of 21 991 cubic metres currently assigned to BCTS. However, although no harvesting is anticipated to take place in this area under management by BCTS, the area has not yet been formally deleted from the TFL and therefore the Hill 60 volume must be assumed to continue to contribute to the AAC for the TFL. On this account the initial harvest level in the base case projection has been underestimated by 21 991 cubic metres per year.

The volume of 13 578 cubic metres per year assigned to the Ditidaht First Nation by the Minister as a separate volume reservation under the *Forestry Revitalization Act* remains as assigned but is not attributable to a specific area of the TFL and as such cannot be accounted for as a volume reduction from the AAC of the TFL. As a result the initial harvest level in the base case was underestimated by a further 13 578 cubic metres per year.

The deletions of the three noted areas under the *Forestry Revitalization Act*, which formerly contributed 9365 cubic metres to the TFL AAC, have all formally taken place as planned. These

areas did not contribute to the base case timber harvesting land base and therefore contributed no volume to the base case initial harvest level. No adjustment to the base case initial harvest level is therefore required on this account.


With the area and volume adjustments applied for the Hill 60 area and the volume assigned to the Ditidaht First Nation, the starting harvest level for the analysis would have been 402 932 cubic metres per year. As described earlier, analysis showed this to be a viable projection for the TFL—a harvest flow starting at this level (9.7 percent higher than the base case) could be maintained for four decades before falling to a long-term level 4.8 percent higher than that projected in the base case. For this determination, having identified no other factors requiring any adjustment to the base case harvest projection at this time, I consider the revised harvest projection to reflect the current timber supply situation on TFL 46. I therefore determine an appropriate harvest level for TFL 46 at this time is 403 000 cubic metres.

Determination

Having considered all of 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 decade, and that reflects current management practices as well as the socio-economic objectives of the Crown, can best be achieved in TFL 46 at this time by establishing an AAC of 403 000 cubic metres.

This determination is effective May 24, 2011 and will remain in effect until a new AAC is determined, which must take place within 10 years after the effective date 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.



Jim Snetsinger, RPF
Chief Forester



May 24, 2011

Appendix 1: Section 8 of the *Forest Act*

Section 8 of the *Forest Act*, Revised Statutes of British Columbia 1996, c. 157, (consolidated to May 11, 2011), 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 tree farm licence areas, community forest agreement areas and 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 regional manager or district manager must determine an allowable annual cut for each woodlot licence area, according to the licence.

(7) The regional manager or the regional manager's designate must determine an allowable annual cut for each community forest agreement area, in accordance with

(a) the community forest agreement, and

(b) any directions of the chief forester.

(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* (consolidated to May 11, 2011) 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
3rd 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

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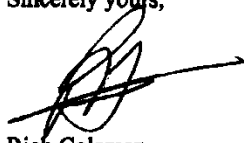
Jim Snetsinger

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