BRITISH COLUMBIA
MINISTRY OF FORESTS

Tree Farm Licence 44

Issued to Weyerhaeuser Company Ltd.

Rationale for Allowable Annual Cut (AAC) Determination

Effective August 1, 2003

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Deputy Chief Forester

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Objective of this Document

This document is intended to provide 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) 44. This document also identifies where I believe new or better information is needed for incorporation in future determinations.

Description of the TFL

TFL 44 is located in west central Vancouver Island in the vicinity of the communities of Port Alberni, Ucluelet and Bamfield. It extends from Strathcona Park in the north to Walbran Creek in the south, including land from the Pacific Ocean to the Beaufort Range and Mount Arrowsmith. The TFL is held by Weyerhaeuser Company Ltd. (the "licensee") and is administered from the British Columbia Forest Service (BCFS) South Island District Office in Port Alberni, within the Coast Forest Region.

The TFL was modelled as two separate areas for the base case. These are the Alberni East and West Working Circle (Alberni Working Circle) which contains the main portion of TFL 44 (96 percent of the total area), and the Clayoquot Working Circle which contains Upper Kennedy Lake/Marion Creek areas and private lots mostly in the Kennedy Lake and lower Kennedy river areas (four percent of the total area).

An *Agreement to Amend TFL 44 in the Area of the Ucluelet Working Circle* was signed October 9, 2002 by the Minister of Forests and Weyerhaeuser. Subject to satisfactory fulfilment of each party's respective commitments, the Agreement specifies that the Ucluelet Working Circle area will be deleted from TFL 44 no later than October 9, 2003 (or such later date agreed to in writing by the parties). The Ucluelet Working Circle was therefore removed from the land base for this analysis. The BCFS analyst, not the licensee, removed the timber supply contribution of the Ucluelet Working Circle from the licensee's modelled base case.

The major tree species on the TFL area include western hemlock, western red-cedar, balsam (amabalis fir), Douglas-fir and yellow cedar. The total area of TFL 44 is 310 795 hectares, of which 258 201 or 83% is productive forest land. In the base case, 168 013 hectares (65 percent) of the total productive land base were assumed to constitute the long-term timber harvesting land base.

History of the AAC

TFL 44 was originally issued in August 1984 to MacMillan Bloedel Limited. This original TFL was an amalgamation of Tree Farm Licences No. 20 (Tofino) and 21 (Alberni). The AAC set for Management Plan (MP) No. 1 in 1985 was 2.838 million cubic metres. The AAC determination for MP No. 2 of 2.42 million was appealed by the company. This resulted in an AAC of 2.680 million cubic metres being set by the appeal board, with a requirement that the chief forester determine an AAC for TFL 44 for a period beginning January 1, 1994.

The AAC set by the appeal board lasted from January 1, 1991 to December 31, 1993.

The chief forester determined an AAC of 2.45 million cubic metres, effective January 1, 1994. Management Plan No. 2 was then extended for one year to allow the incorporation of recommendations resulting from the Clayoquot Sound Scientific Panel and interagency planning teams for the special management areas in Clayoquot Sound.

In June 1994, the AAC was temporarily reduced under Part 15 [now Part 13] of the *Forest Act* to 2.228 million cubic metres. This reduction reflected the timber supply impacts of the Clayoquot Sound Land Use Decision of April 1993. The temporary reduction expired on December 31, 1997.

The AAC effective January 1, 1998 for MP No. 3 was 1.890 million cubic metres. The major decrease was due to a partition which limited harvest in the Clayoquot Working Circle to a maximum AAC of 130 000 cubic metres. On October 27, 1999 the Minister consented to a subdivision of the TFL, with most of the Clayoquot Working Circle being removed to become TFL 57. Consequently the TFL 44 AAC decreased to 1.7662 million cubic metres.

New AAC determination

Effective August 1, 2003, the new AAC for TFL 44 will be 1 700 000 cubic metres — 3.7 percent lower than the current AAC of 1 766 200 cubic metres. Of this AAC, the harvest in the Clayoquot Working Circle (the remaining portion in TFL 44) should average no more than 36 hectares per year over the next 5 years—one percent of the timber harvesting land base within Clayoquot Sound per year.

This AAC will remain in effect until a new AAC is determined, which must take place within five years of this determination unless the re-determination date is formally postponed according to the provisions of Section 8 of the *Forest Act*.

Information sources used in the AAC determination

Information considered in determining the AAC for TFL 44 include the following:

- Existing stand yield tables for TFL 44, accepted by the Ministry of Sustainable Resource Management, Terrestrial Information Branch, May 6, 2002;
- Managed stand yield tables, accepted by BCFS Research Branch, April 17, 2002;
- Managed stand site index estimates, accepted by BCFS Research Branch, April 17, 2002;
- *Management Plan Number 4 (MP No. 4), Weyerhaeuser Company Ltd., Tree Farm License No. 44 (TFL 44),* approved December 18, 2002;
- *Timber Supply Analysis for MP No. 4, Weyerhaeuser Company Ltd., Tree Farm License No. 44 (TFL 44)*, accepted October 18, 2002;
- *Information Package for MP No. 4, Weyerhaeuser Company Ltd., Tree Farm License No. 44 (TFL 44),* accepted April 25, 2002;

- *Twenty-year Harvest Plan for Management Plan 4*, *Weyerhaeuser Company Ltd*., *Tree Farm License No. 44*, accepted March 03, 2003;
- Identified Wildlife Management Strategy, February 1999;
- Landscape Unit Planning Guide, BCFS and MELP, March 1999;
- Higher Level Plans: Policy and Procedures, BCFS and MELP, December 1996;
- Forest Practices Code of British Columbia Act (Forest Practices Code), consolidated to May 2002;
- Forest Practices Code of British Columbia Act Regulations and Amendments, current as of May 2002;
- Forest Practices Code of British Columbia Guidebooks, BCFS and MELP;
- Vancouver Island Summary Land Use Plan, February, 2000;
- Vancouver Island Land Use Plan Higher Level Plan Order, December, 2000;
- Letter from the Deputy Ministers of Forests and Environment, Lands and Parks (MELP), dated August 25, 1997, conveying government's objectives regarding the achievement of acceptable impacts on timber supply from biodiversity management;
- Letter from the Minister of Forests to the Chief Forester, dated July 28, 1994, stating the Crown's economic and social objectives;
- Memorandum from the Minister of Forests to the Chief Forester, dated February 26, 1996, stating the Crown's economic and social objectives with regard to visual resources;
- Technical review and evaluation of current operating conditions on TFL 44 through comprehensive discussions with BCFS and Ministry of Water, Land, and Air Protection staff.

Role and limitations of the technical information used

Section 8 of the *Forest Act* requires the chief forester to consider biophysical as well as social and economic information in AAC determinations. A timber supply analysis, and the inventory and growth and yield data used as inputs to the analysis, typically form the major body of technical information used in AAC determinations. Timber supply analyses and associated inventory information 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.

However, the analytical techniques used to assess timber supply are necessarily simplifications of the real world. There is uncertainty about many of the factors used as inputs to timber supply analysis due in part to variations in physical, biological and social conditions, although ongoing science-based improvements in the understanding of ecological dynamics will help reduce some of this uncertainty.

Furthermore, technical analytical methods such as computer models cannot incorporate all of the social, cultural and economic factors that are relevant when making forest

management decisions. Therefore, technical information and analysis do not necessarily provide complete answers or solutions to forest management problems such as AAC determinations. The information does, however, provide valuable insight into potential impacts of different resource-use assumptions and actions, and thus forms an important component of the information required to be considered in AAC determinations.

In determining the AAC for TFL 44, I have considered known limitations of the technical information provided, and I am satisfied that the information provides a suitable basis for my determination.

Statutory framework

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

In accordance with Section 23(3) of the *Interpretation Act*, the deputy chief forester is expressly authorized to carry out the functions of the chief forester which include those required under Section 8 of the *Forest Act*.

The chief forester has expressed the importance of consistency of judgement in making AAC determinations. I also recognize the need for consistency of approach. I am familiar with the guiding principles that the chief forester has employed in making AAC determinations. I find these principles to be reasonable and appropriate, and I have adopted them as described below in making my AAC determination for TFL 44.

Guiding principles for AAC determinations

Rapid changes in social values and in our understanding and management of complex forest ecosystems mean that there is always some uncertainty in the information used in AAC determinations. When a large number of determinations for many forest management units are made over extended periods of time, administrative fairness requires a reasonable degree of consistency of approach in incorporating these changes and uncertainty. The principles that guide my determinations are set out below. If in some specific circumstance I believe it is appropriate to deviate from these principles, I will provide a detailed reasoning in the considerations that follow.

Two important ways of dealing with uncertainty are:

(i) minimizing risk, in respect of which in making AAC determinations, I consider the uncertainty associated with the information before me, and attempt to assess the various potential current and future social, economic and environmental risks associated with a range of possible AACs; and

(ii) re-determining AACs frequently, to ensure they incorporate current information and knowledge, a principle that has been recognized in the legislated requirement to re-determine AACs every five years. The adoption of this principle is central to many of the guiding principles that follow.

In considering the various factors that Section 8 of the *Forest Act* requires the chief forester to take into account in determining AACs, I attempt to reflect as closely as possible operability and forest management factors that are a reasonable extrapolation of current practices. It is not appropriate to base my decision on unsupported speculation with respect either to factors that could work to increase the timber supply—such as optimistic assumptions about harvesting in unconventional areas, or using unconventional technology, that are not substantiated by demonstrated performance—or to factors that could work to reduce the timber supply, such as integrated resource management objectives beyond those articulated in current planning guidelines or the *Forest Practices Code of British Columbia Act* and its associated regulations (the Forest Practices Code).

The *Forest Practices Code of British Columbia Regulations* were approved by the Lieutenant Governor in Council on April 12, 1995, and released to the public at that time. The *Forest Practices Code of British Columbia Act* was brought into force on June 15, 1995.

Although the Forest Practices Code has been fully implemented since the end of the transition period on June 15, 1997, the timber supply implications of some of its provisions, such as those for landscape-level biodiversity, still remain uncertain, particularly when considered in combination with other factors. In each AAC determination the chief forester takes this uncertainty into account to the extent possible in the context of the best available information. In making my determination for TFL 44, as deputy chief forester, I have followed the same approach.

More recently, on November 21, 2002, government passed the new *Forest and Range Practices Act*, which has not yet come into effect but will ultimately replace the *Forest Practices Code of British Columbia Act.*

On December 17, 2002 streamlining amendments to *the Forest Practices Code of British Columbia Act* and regulations came into effect. The amended Forest Practices Code allows for the transition period between the passing of the new *Forest and Range Practices Act* and its full implementation, anticipated by April 2005. The amendments streamline planning and are not expected to impact AAC determinations.

As the timber supply implications of the new Act and any pursuant regulations become clear and measurable, they will be accounted for in AAC determinations. Uncertainties will continue to be handled as they have been under the current legislative regime.

As British Columbia progresses toward completion of strategic land-use plans, the timber supply impacts associated with the land-use decisions resulting from the various planning processes are important to AAC determinations. Where specific protected areas have been designated by legislation or by order-in-council, these areas are no longer considered to be part of the timber harvesting land base or to contribute to the timber supply in AAC determinations.

Because the outcomes of planning processes are subject to significant uncertainty until formal approval by government, it has been and continues to be the position of the chief forester that in determining AACs it would be inappropriate to attempt to speculate on the timber supply impacts that will eventually result from land-use decisions that have not yet

been taken by government. I consider this approach to be reasonable and appropriate. Like the chief forester, I will therefore not take into account the possible impacts of existing or anticipated recommendations made by such planning processes, nor attempt to anticipate any action the government could take in response to such recommendations.

Moreover, even where government has made a formal land-use decision, it may not always be possible to fully analyze and account for the consequent timber supply impact in a current AAC determination. In many cases, government's land-use decisions must be followed by a number of detailed implementation decisions. For example, a land-use decision may require the establishment of resource management zones and resource management objectives and strategies for these zones. Until such implementation decisions are made it would be impossible to fully assess the overall impacts of the land-use decision. Nevertheless, the legislated requirement for five-year AAC reviews will ensure that future determinations address ongoing plan implementation decisions.

TFL 44 lies within the area covered by the Vancouver Island Summary Land Use Plan (VISLUP). Therefore forest management activities in the TFL are required to be consistent with aspects of the plan that incorporate Higher Level Plan (HLP) direction as provided under the Forest Practices Code. The statutory decision-makers periodically advise licensees of how they will consider this advice or information in operational plan decisions. I believe the timber supply analysis and my considerations in this AAC determination are consistent with the direction from the statutory decision-makers to licensees as representative of current management.

A number of intensive silviculture activities have the potential to affect timber supply, particularly in the long term. As with all components of an AAC determination, like the chief forester, I require sound evidence before accounting for the possible effects of intensive silviculture on timber supply. Nonetheless, I will consider information on the types and extent of planned and implemented practices as well as relevant scientific, empirical and analytical evidence on the likely magnitude and timing of any timber supply effects of intensive silviculture.

Some 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 not complete, but this will always be true where information is constantly evolving and management issues are changing. Moreover, in the past, waiting for improved data created the extensive delays that resulted in the urgency to re-determine many outdated AACs between 1992 and 1996. In any case, the data and models available today are improved from those available in the past, and will undoubtedly provide for more reliable determinations.

Others have suggested that, in view of data uncertainties, the chief forester should immediately reduce some AACs in the interest of caution. However, any AAC determination made by the chief forester or myself must be the result of applying our individual 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 have made allowances for risks

that arise because of uncertainty.

Overall, in making this AAC determination, as deputy chief forester, I am mindful of the mandate of the Ministry of Forests as set out in Section 4 of the *Ministry of Forests Act* and of the chief forester's responsibilities under the *Forest Practices Code of British Columbia Act* and the *Forest Act*.

Guiding principles with respect to First Nations

With respect to First Nations' issues, I am aware of the Crown's legal obligations, particularly as clarified in judgements by the British Columbia Court of Appeal and the Supreme Court of Canada. The AAC that I have determined should not in any way be construed as limiting those obligations under these decisions, and in this respect it should be noted that my determination does not prescribe a particular plan of harvesting activity within TFL 44.

The British Columbia Forestry Revitalization Plan (March 2003) introduced new tools to address First Nations' aboriginal interests – the ability to share stumpage revenue with First Nations, and the expansion of AAC available for direct award to First Nations.

As part of the Revitalization Plan, the *Forestry Revitalization Act* allows government to reallocate about 20 percent of long-term licences over the next several years. A portion of this volume that is reallocated from existing tenures will be targeted to First Nations who enter into First Nation Forestry Agreements with the province. Increasing First Nations' access to timber is expected to open up opportunities for them to develop local forest resources, create more jobs, and bring more timber to market. It is currently uncertain if there will be any impact to a management unit AAC resulting from the re-apportionment. Any impact will be accounted for in future AAC determinations.

The British Columbia Court of Appeal has indicated that the Crown has an obligation to consult with First Nations with respect to asserted aboriginal rights and title in a manner proportional to the apparent strength of the interests. As a matter of course, I consider any information brought forward respecting First Nations' aboriginal interests. In particular I consider information related to actions taken to address aboriginal interests, including operational plans that describe forest practices designed to address First Nations' interests. In this context, I re-iterate that my AAC determination does not prescribe a particular plan of harvesting activity, nor does it involve allocation of the timber supply to any particular party.

Subsequent to a determination, if I become aware of information respecting First Nations' aboriginal interests that would substantially alter my understanding of relevant circumstances, I may revisit my determination sooner than as required by the *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 as part of the Timber Supply Review program.

For each AAC determination for a TFL, 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 model, a series of timber supply forecasts is produced, reflecting different starting harvest levels, rates of change over time, and potential trade-offs between short- and long-term harvest levels.

From this range of forecasts, one is chosen which attempts to avoid 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.

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 for a TFL is not a portrayal of AACs over time. 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. In some cases, an AAC is determined that coincides with the base case starting point. In other cases, an AAC is determined which differs significantly from the modelled starting point.

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

These adjustments are made on the basis of informed judgement, using current available information about forest management, which may 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 it is important to remember, in reviewing the considerations which lead to the AAC determination, that while the timber supply analysis with which I am provided is integral to those considerations, the AAC determination itself is not a calculation but rather is a synthesis of analysis and judgement 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 initial harvest level in a base case forecast. Judgements that may be based in part 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 may be gained by attempting a computer analysis of the combined considerations to confirm the exact AAC determined.

Timber supply analysis

The timber supply analysis for TFL 44 was prepared by Timberline Forest Inventory Consultants (Timberline) under the direction of licensee staff. Timberline used its proprietary timber supply model Critical Analysis of Schedules for Harvesting,

version 6 (CASH 6). This model can be used to project spatially-implicit or spatially-explicit timber supply forecasts. Spatially explicit in this context means that the model accounts for the spatial relationship between mapped cutblocks, while spatially implicit means that the model does not track cutblocks (i.e., it does not track the spatial relationship between cutblocks), but rather it approximates the timber supply impacts of implementing spatial restrictions using forest cover constraints.

For this analysis, the licensee used CASH 6 in a spatially-implicit mode for the timber supply analysis, but initiated with the approved Forest Development Plan cutblocks. The spatially-explicit mode was used to develop the associated twenty-year plan. Based on a review by BCFS staff, as well as my previous experience reviewing the results of this model, I am satisfied that the spatially-implicit version of CASH 6 is capable of providing a reasonable projection of timber supply.

The base case for this analysis has an initial harvest level of 1 703 700 cubic metres per year, which is about 3.5 percent lower than the current AAC. However, the current AAC includes a contribution from the Ucluelet Working Circle, which is being deleted from the TFL, whereas the base case does not. The modelled initial harvest level is 1.5 percent lower than the current AAC after removing the Ucluelet Working Circle contribution. In the base case model, the initial harvest is slowly stepped down over 15 years to a long-term harvest level of 1 583 700 cubic metres per year.

The licensee proposed an AAC of 1 703 000 cubic metres, and provided various sensitivity analyses to assess the potential implications of uncertainty in data assumptions and estimates. All the sensitivity analyses prepared for this determination were based on the assumptions used in the base case.

As discussed throughout this rationale, and in consideration of the items described above, I am satisfied that the information presented to me provides an adequate basis from which I can assess the timber supply for TFL 44 for this determination.

Consideration of Factors as Required by Section 8 of the *Forest Act*

Section 8 (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,

Land base contributing to timber harvesting

In deriving an assumed timber harvesting land base for the purposes of a timber supply analysis, the licensee deducted certain areas from 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, ecological, economic or social (e.g., parks) reasons. Each assumption has been explicitly documented in the licensee's Information Package and Timber Supply Analysis.

For TFL 44 these deductions result in a long-term timber harvesting land base (THLB) of 168 013 hectares, or approximately 65 percent of the productive forest land. I have considered all of the deductions applied in the derivation of the THLB. In this document I will not discuss deductions with which I have no concern, namely those for inventory, non-forest, non-productive forest, deciduous-leading stands, site index, aggregation of inventory, existing mature stand yield, existing second growth and future regenerated stands, operational adjustment factors for second-growth stands, and, minimum harvest age. The other deductions are discussed below along with the public comment received regarding minimum harvest age.

- *minimum harvest age*

Public concern was raised that young rotation ages for second-growth forests would lead to soil nutrient and mineral loss. The licensee responded that it expects harvest ages in second growth to vary substantially depending upon species, site productivity and management objectives. Some areas will be harvested near the modelled minimum harvest age of 40 to 50 years of age while other areas (for example in some visually sensitive landscapes) may not be harvested until they are 120 to 150 years of age or older. The average harvest age is expected to be between 70 and 90 years. I am not aware of any evidence that such a harvesting regime will degrade the soils in the TFL 44 area.

- *roads, trails, and landings*

In the timber supply analysis, a percentage of the productive forest was excluded from the THLB to account for the losses resulting from the construction of roads, trails, and landings. Separate estimates were made for both existing and future roads, trails, and landings, to reflect current access as well as anticipated road network requirements.

For existing roads on TFL 44, the licensee identified a total of 5986 kilometres from its Geographic Information System (GIS) database. A 13.4-metres road width was assumed, resulting 8021 hectares of existing permanent roads being excluded from the THLB. The licensee, however, also provided road-width data measured on 65 blocks indicating that average road width for the sample was in fact 14.0 metres.

To account for future roads, trails and landings, a component of each stand was placed into a category that remains unproductive in perpetuity. Generally these stands provide harvest volume on the first entry but not on further entries. A percentage reduction was applied to reduce the area within each forest class the first time it is harvested. This percentage was seven percent for conventional harvesting in mature stands (stand age greater than 125 years) and five percent for second-growth stands (stand age greater than 60 years and less than 125 years). The seven-percent reduction was based on a survey of road areas from the 1990s. The second-growth reduction for future roads, trails and landings is assumed to be lower than that for mature stands because second-growth stands are mostly on relatively easy terrain and enjoy partial access from existing road systems. The total area reduction for future roads was 4559 hectares.

Having reviewed and discussed the information provided regarding existing roads, trails, and landings with BCFS staff, I believe that road-width allowances for existing roads

should have been 14.0 metres. This would result in a further reduction to the THLB of about 400 hectares. For future roads, trails and landings, I note that district staff believe the five-percent road reduction on second-growth stands may be low because current harvesting methods such as grapple yarding require higher road percentages than the highlead systems used during the first harvest. As a result, there is likely a small downward pressure on the long-term timber supply, which I discuss below in "Reasons for Decision".

- *operability*

Areas considered physically inaccessible, and non-merchantable stands that are typically not harvested due to poor economics, were excluded from the THLB.

The physically inoperable timber is located on productive land area that is so steep and/or rocky that the timber cannot be safely felled and yarded, or a significant proportion of the volume cannot be recovered. An area of 9454 hectares is excluded from the working land base as physically inoperable.

The licensee classifies stands for economic operability according to species, percentage of low grades for balsam and cedar stands, volume per hectare and harvest method. Harvest methods are categorized as either conventional – using ground based systems, or, non-conventional – using aerial systems necessary due to terrain considerations. An area of 8502 hectares is excluded from the base case as currently uneconomic.

Mature stands assumed to require non-conventional harvesting methods make up 17 percent of the total TFL 44 timber harvesting land base volume. During the period 1994 to 2001, eight percent of the mature harvest came from such non-conventional stands. Mature economically marginal stands make up six percent of the THLB volume and during the same 1994 to 2001 period made up three percent of the mature harvest.

I note that the actual non-conventional harvest and marginal economic harvest from 1994 to 2001 was low compared to the inventory representation of such stands. However, the licensee's annual report for 2000 shows that 20 percent of the mature-timber harvest came from stands in the non-conventional operability class, indicating that the proportion of harvesting on non-conventional stands is increasing. I accept the licensee's operability classification as suitable for timber supply analysis and reflective of current practice. However, I ask that the licensee further monitor the harvesting percentage on non-conventional and economically marginal sites and report performance in time for the next determination.

- *Nahmint Old-Growth Reserve*

The Nahmint Old-Growth Reserve is 121 hectares of productive forest located in the Upper Nahmint Valley. This area contains very large old-growth Douglas-fir and was entirely netted out of the THLB. The majority of the area has been proposed by Ministry of Water, Land and Air Protection (MWLAP) staff as a marbled murrelet (MAMU) wildlife habitat area (WHA). Had the licensee not decided to deduct the entire area from the THLB, all but 19 hectares would have been deducted for the purposes of either MAMU or ungulate winter range (UWR).

The Nahmint Old-Growth Reserve is part of Special Management Zone (SMZ) 13 under the Vancouver Island Summary Land Use Plan (VISLUP). This zone has a high draft biodiversity emphasis with one objective being to "maintain high proportions of old forest, including large Douglas-fir in the Nahmint Old-Growth Area." Given this stated objective, Ministry of Sustainable Resource Management (MSRM) staff feel it is likely that a large proportion of the Nahmint Old-Growth Reserve will be designated as an old-growth management area (OGMA) once landscape unit planning is completed. BCFS district staff note that the VISLUP does not include special provisions for creating an old-growth reserve other than applying a high biodiversity emphasis. The Nahmint SMZ is classified as old-growth zone under the licensee's "forest project" (see Stewardship Zone and Variable Retention) which requires a 70-percent retention level.

I note that the majority of the 121 hectares of the Nahmint Old-Growth Reserve overlaps with a MAMU area and UWR and has been deducted from the timber harvesting land base for those reasons. The MAMU area has not yet been approved as a WHA, however it has been grandparented and is thus appropriately deleted in its entirety from the THLB. Approximately 40 percent of the Nahmint Old-Growth Reserve is UWR, which at the moment has legal standing that may or may not continue. If the full 121 hectares were to go back in as THLB (not a likely scenario due to the MAMU and UWR), the model would assume 70-percent retention due to the old-growth zone designation. Therefore the difference in terms of land base reduction between netting the area out in its entirety and managing it as an old-growth zone is negligible. For these reasons I accept the licensee's treatment of the Nahmint Old-Growth Reserve in the base case.

- sensitive soils

The licensee has mapped the terrain stability of most of the TFL using either 5-class terrain mapping or Environmentally Sensitive Area (ESA) mapping. For the 5-class terrain mapping, unstable areas classified as having either a moderate likelihood (terrain class IV) or a very high likelihood (terrain class V) of landslide initiation following harvest or road construction, had netdowns applied of 9 to 90 percent.

Where 5-class terrain mapping was not available, ESA mapping for soils was used to apply partial netdowns. Areas with an ESA classification of E1 (highly sensitive) or E2 (moderately sensitive) were partially excluded from the THLB. (Netdowns ranged from 6 to 90 percent.)

Areas with overlapping terrain stability mapping (5-class and ESA soils mapping) allowed the calibration of the older ESA mapping using the more current 5-class terrain mapping system. In areas without any terrain stability mapping, slope classes were used to estimate appropriate netdowns. This was done by extrapolating from netdowns on areas with similar slope classes where terrain stability mapping was complete. Terrain stability and slope classifications resulted in the exclusion of 15 793 hectares from the THLB. Subsequent to the analysis, the licensee noted that the Nahmint watershed netdowns for unstable terrain were inappropriately derived from an extrapolation of 5-class terrain mapping from the Bulson and Tofino watersheds to the slope classes within the Nahmint. It was determined that the Nahmint would be more similar to the neighbouring Henderson and Sproat Lake Watersheds. This comparison resulted in a

reduction in the total unstable terrain netdown of approximately 456 hectares.

I note that these procedures, including the modification to the Nahmint numbers, were reviewed by the Coast Forest Region soils specialist and are considered appropriate. I accept the advice of the regional geomorphologist who has reviewed this work in detail. I note there is a small upward pressure to timber supply over the full forecast period due to the over-estimation of unstable terrain in the Nahmint Watershed. This is of the same order of magnitude as the downward pressure due to roads (see roads, trails and landings) and I discuss this below in "Reasons for Decision".

- harvest rules

The "oldest-first" rule was used for harvest scheduling in the base case. With this modelling rule, the oldest merchantable and available stand in the TFL is harvested first, with the following exception. Recent harvest figures show that second-growth stands made up about 14 percent of the volume harvested between 1997 and 2001 on the TFL. The base case reflected this by forcing second-growth harvesting at about 15 percent of the volume harvested for the first 10 years. This level gradually increases over time until the transition to second-growth harvest is largely complete.

Operationally, stands are likely not harvested strictly "oldest first" for various practical reasons. To explore the potential impacts of operational practices on harvest volumes, a number of harvest rule sensitivity analyses were carried out. Using CASH 6 it is not possible to model the harvest using a randomized harvest rule. Therefore, the licensee utilized the forest estate model Forest Stand Simulator (FSSIM) to run the sensitivities. The most operationally probable of the sensitivities carried out a two-stage harvest priority rule coupled with a random harvest rule. In the first stage, a random priority was applied to available areas with 600 cubic metres per hectare or more. If the harvest target could not be met in stands over 600 cubic metres per hectare, then the model would randomly harvest additional available stands above minimum harvest age to make up the difference. The outcome of these sensitivities indicated that short and mid-term base case harvest targets could be met, but long-term harvest was reduced by about eight percent to 1.425 million cubic metres per year.

I take considerable comfort in the base case initially utilizing 15 percent second-growth harvest volume, and that percentage increases over time. The 15 percent is close to the actual harvest history of second-growth forests. The harvest rule sensitivity, giving highest priority to stands over 600 cubic metres per hectare, resulted in an eight percent decrease in harvest in the long term compared to the base case. Because of the considerable uncertainty in this regard, and because any impact would be decades in the future, I accept the base case as modelled on this account.

- riparian habitat

Riparian areas occur along streams, and around lakes and wetlands. The *Forest Practices Code Act of British Columbia – Operational and Site Planning Regulation* requires the establishment of riparian reserve zones (RRZs), which exclude timber harvesting, and riparian management zones (RMZs), which restrict harvesting, to protect riparian and

aquatic habitats.

The licensee maintains an inventory of stream classifications. This inventory is submitted with its Forest Development Plans and updated as operational inventories are completed for planned cutblocks. Stream reaches that are currently not inventoried are classified according to local knowledge and relation to inventoried stream reaches. In general, the licensee has netted out of its base case THLB the maximum retention for RRZs and RMZs as defined in the Riparian Management Area Guidebook. A total area of 9266 hectares for riparian reserve zones and 7156 hectares for riparian management zones were netted out.

Unmapped streams are thought to be small, and are generally not expected to contain fish. A netdown of 1784 hectares, or one percent of the net land base, is made as an additional allowance for these areas.

The base case netdowns for RRZs and RMZs around wetlands and smaller lakes are consistent with the Riparian Management Area Guidebook. Larger management zone widths (30 metres) have been applied to "L1" lakes based on local planning experience. The Nahmint LRUP was followed for Nahmint and Gracie Lakes. The RRZs for lakes and wetlands are included in the 9266 hectares of riparian reserve netted out of the THLB previously referenced. For lake and wetland RMZs, an additional 451 hectares were excluded from harvest.

The licensee received public input raising concern about logging in the riparian management zones of small streams (S4, S5, and S6 tributaries). The licensee replied that riparian netdowns meet those listed in the Riparian Management Area Guidebook and that considerable detail is assessed when developing site-specific riparian management strategies. The licensee states that using them as anchor points for variable retention patches provides additional protection to small streams. The licensee is currently involved in an ongoing experiment with the Department of Fisheries and Oceans and the University of British Columbia – comparing the ecological value of linear versus patch retention on small stream.

I have reviewed and discussed this riparian management information with district staff and I accept the base case assumptions as being adequate, and I have made no adjustments on this account.

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

<u>Expected time for forest to be re-established following harvest</u>

I have reviewed the information regarding regeneration delay, not-satisfactorily–restocked (NSR) areas, and, impediments to regeneration and am satisfied that the assumptions for these factors in the analysis were appropriate.

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

Silvicultural treatments to be applied

I have reviewed the information regarding the use of silvicultural systems, regeneration, tree breeding gains, fertilization, juvenile spacing and commercial thinning for TFL 44 and I am satisfied that the base case assumptions for these factors were appropriate.

(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,

Timber harvesting

I have reviewed the information regarding decay, waste and breakage factors assumed in the analysis for TFL 44, and I am satisfied that this factor was appropriately modelled. The deductions accounting for timber utilization standards are discussed below.

- *utilization standards*

Utilization standards define the species, dimensions and quality of trees that must be harvested and removed from an area during harvesting operations. For the TFL 44 timber supply analysis, the utilization standards assumed for mature stands aged 125 years and older were a 22.5-centimetre minimum diameter at breast height (dbh) with a 30-centimetre stump and 15-centimetre top inside bark. The minimum dbh of 22.5 reflects utilization standards at the time the mature inventory was undertaken. Utilization standards modelled for regenerating stands were 12.5-centimetre minimum dbh with a 30-centimetre stump and 10-centimetre top inside bark.

BCFS district staff note that a 17.5-centimetre minimum dbh is specified cutting permits for mature stands (versus the 22.5-centimetre minimum dbh used in the base case). Therefore, the value modelled in the timber supply analysis is not fully consistent with current utilization standards. BCFS Resources Inventory Branch staff (now MSRM) reviewed this factor during MP No. 3 and concluded that the difference in harvestable volume between the 17.5-centimetre minimum dbh used in cutting permits for mature stands versus the 22.5-centimetre minimum dbh used in the timber supply analysis would amount to something less than one percent. This means the base case assumptions regarding old-growth utilization standards have led to an under-estimation of less than one percent in the timber supply throughout the short and medium terms. I have taken this into account as discussed below, under "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 is required under the *Ministry of Forests 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 co-ordinated 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 analysis assumptions for adjacency, avalanche prone areas, community watersheds, visual quality management, stand level biodiversity and landscape level biodiversity, and I am satisfied that the analysis has appropriately reflected the values and operational constraints for these factors. Other IRM objectives will be discussed below.

- *recreation*

The recreation inventory used in the analysis was completed in 1995 to the 1991 Ministry of Forests standards. The timber supply analysis excluded recreation areas from the base case THLB as per the recreation feature significance and recreation management class of the polygon. BCFS district and regional recreation specialists and licensee staff agreed on applicable netdowns to be used. In particular there was revision to the global application of a 50-percent netdown to polygons designated as C1A – moderate recreation feature significance of local importance. This netdown was decreased due to excessively wide polygons along streams and shorelines, subsequent visual landscape inventories which made some recreation designations redundant, and application of recreation designation to large polygons when recreation activities only apply to small areas within the polygon. There are 5919 hectares of recreation reductions to the THLB in the TFL 44 base case.

Public input was received on MP No. 4 expressing concern that carbonate deposits and significant karst features were not identified in the management plan, thus limiting public opportunity to participate in karst resource management. In response, and in the final MP No. 4, the licensee stated its strategy regarding karst management is to "continue to cooperate with MoF and local caving groups in managing and protecting sensitive caves and Karst resources." The licensee explained that this includes undertaking surface inventories in karst areas prior to development, and utilizing the existing MoF cave/karst management handbook for the Coast Forest Region as an interim measure until new provincial management guidelines have been finalized and approved for general use. Cave locations are not shown on most distributed maps to assist in protecting these sensitive features. I commend the licensee for this strategy and accept the base case as representing current management of recreation values for TFL 44.

- *wildlife habitat*

1. *ungulate winter range*

Deer and elk winter ranges were defined and mapped as ESA habitat in the 1980s and early 1990s. These winter ranges have been refined over the years and were grandparented in 1998. Deer winter ranges are similar to those applied in MP No. 3. A total of 4489 hectares were excluded from the base case THLB to account for ungulate winter range.

The *Operational and Site Planning Regulation* states that an ungulate winter range identified in a wildlife management plan or strategy approved before October 15, 1998 ceases to be an ungulate winter range on October 15, 2003 unless confirmed by the Deputy Minister of WLAP. Currently BCFS and MWLAP staff are working with the licensee to confirm the grandparented ungulate winter ranges before the expiry deadline. A Memorandum of Understanding between the BCFS and MWLAP guides this confirmation process. Along with ensuring that adequate biological value is captured, this Memorandum also requires that the timber supply impacts do not exceed those of MP No. 3.

Public concern was raised that critical ungulate winter range is being lost and not necessarily replaced. The licensee responded that grandparented ungulate winter ranges have been established on more than 6000 hectares of the TFL. The ongoing review of the winter ranges is focusing on improving habitat suitability without unduly adding to constraints on timber harvesting.

I have discussed the ungulate winter range information with BCFS district staff and conclude that management of ungulate winter range is adequately reflected in the base case timber supply analysis. I will revisit this factor in the next AAC determination.

2. identified wildlife

Identified wildlife refers to species at risk (red- and blue-listed) as well as regionally significant species that are potentially affected by forest management activities and that have not been adequately accounted for through existing management strategies. While the biodiversity and riparian provisions of the *Forest Practices Code* are intended to provide for the needs of most wildlife species, some species that are considered to be "at risk" require special management practices. The Province's *Identified Wildlife Management Strategy* (IWMS) — released in February 1999 — provides mechanisms for managing critical habitat for identified wildlife species including Wildlife Habitat Areas (WHAs), General Wildlife Measures (GWMs) and higher level plan recommendations.

Government has limited the impact of management for identified wildlife in the short term to a maximum of one percent of the harvest level for the province.

Northern goshawk, marbled murrelet, Cassin's auken and Keen's long-eared myotis are identified wildlife species listed in *Managing Identified Wildlife Volume 1* which are expected to occur on or near TFL 44. Only one WHA, for Queen Charlotte goshawk, has been established on the TFL that contributes to the harvest level impact. The WHA impact was not explicitly accounted for in the base case; however, much of the area reserved in this goshawk WHA corresponds to existing netdowns for a deer winter range zone and a marbled murrelet area.

Public concern was raised that two WHAs per district for the Queen Charlotte goshawk and a 200-metre buffer around remaining nests are insufficient to address the raptor's needs. The licensee argues that it routinely takes MWLAP goshawk inventories into account when doing its operational planning for the TFL. When goshawks are encountered, the information is provided to MWLAP and interim measures are applied

until WHAs are determined for any identified goshawk nest site.

3. marbled murrelet

As noted above, marbled murrelet (MAMU) is an identified wildlife species. Protection of MAMU area has been part of current practices in TFL 44 for almost ten years. MAMU areas totalling 4812 hectares of productive forest were excluded from the THLB when the previous timber supply review was done, despite not being officially designated as WHAs at the time.

Since then, 1965 hectares have been signed off as MAMU-related WHAs by the MWLAP. Licensee, BCFS district and MWLAP staff have agreed to an additional 1140 hectares of MAMU area being added to the Corrigan Landscape Unit and the locational shifting of other areas. For the current base case, 4934 hectares of productive forest have been excluded from the THLB to account for MAMU areas. If all other netdowns were considered first, 2806 hectares of productive land have been netted out for the sole purpose of MAMU areas. If MAMU areas were excluded first, 5988 hectares of productive forest area would have been identified as such.

The Forest Practices Code Joint Steering Committee recently recommended that for the purposes of OGMA establishment, MAMU habitat areas netted out in previous timber supply analyses should not be considered part of the THLB. This recommendation reinforces the MSRM staff consensus that the majority of MAMU habitat areas netted out in the previous timber supply analysis will likely become OGMAs. That is less certain for the more recent MAMU areas in the Corrigan Landscape.

The true impact of the 5988 hectares of MAMU area will be clearer once OGMAs are spatially deployed. For this determination, I conclude that it is reasonable to have netted out the 4934 hectares of productive forest for MAMU habitat.

I expect that there will ultimately be an additional impact of at least one percent on the TFL harvest level for identified wildlife species. I note that this allowable one-percent harvest impact is a provincial average and will likely vary throughout the province. In particular, the west coast of Vancouver Island has a great diversity of fish and wildlife species and habitats, including identified wildlife species, and may need more than one percent. I therefore expect at least one-percent downward pressure on the long-term timber supply.

- stewardship zones and variable retention

The licensee has subdivided the TFL into three stewardship zones: Old growth, Habitat, and Timber. Stewardship zones and variable retention are part of the licensee's strategy for meeting land-use objectives including landscape unit planning and the Vancouver Island Summary Land Use Plan. Each zone is subject to different objectives, silvicultural systems and levels of tree retention, as follows:

- **Old-growth zone**: Areas of high biodiversity and/or environmental sensitivity. High cultural and recreation values are also priority criteria.

  The primary management objective is the conservation of old-growth values. About

two-thirds of the landscape will be retained as old-growth reserves. Harvesting on the remaining third is based on uneven-aged management such as group selection and irregular shelterwood systems. Minimum stand-level long-term retention is 20 percent on the one-third of the landscape that will be harvested. The old-growth zone makes up five percent of the total area for TFL 44.

- **Habitat zone**: Areas that have high biodiversity values and a moderate amount of old growth.

  The primary management emphasis is maintenance of wildlife habitat diversity. Silvicultural systems in this zone include various types of shelterwood, group selection and group retention, and a mix of even and uneven-aged management. Minimum stand-level long-term retention is 15 percent. The habitat zone makes up 26 percent of the total area for TFL 44.

- **Timber zone**: Areas of land designated as low biodiversity emphasis.

  The primary management objective is timber management built on a solid forest stewardship base. Silvicultural systems include group retention and various types of shelterwood with even-aged management. Minimum stand-level long-term retention is 10 percent. The timber zone makes up 69 percent of the total area for TFL 44.

The licensee assumed that half of the minimum levels of stand-level retention for the stewardship zones would be obtained from other reserves such as wildlife tree retention. The base case model therefore netted down 7.5 percent stand-level retention in the habitat zone (half of the 15-percent minimum) and five percent in the timber zone (half of the 10-percent minimum). Stand level retention for the old-growth zone was netted out at 10 percent for the 33 percent of the zone where harvesting may occur.

The *T-iitskin Paawats* is a group of five mountain peaks and the valley they define, a total of 3012 hectares of forested land on the west shore of Henderson Lake. The Nuu-chah-nulth Tribal Council recognizes this area as a sacred site and strongly support the preservation of the area. The licensee has designated the *T'iitskin Paawats* as an old-growth zone. Normally this would mean removal of 70 percent of the area from the THLB. Due to the significance of the area to the First Nations people, however, the licensee has removed the area in its entirety from the THLB. This is reflected in the stewardship zones base case netdowns as part of the old-growth zone reduction.

Stand-level retention within the three stewardship zones resulted in 13 110 hectares being removed from the THLB. The licensee received approximately 34 public input letters that requested classification of various combinations of the Upper Walbran, Nahmint and Klanawa watersheds as old-growth stewardship zones with no harvest activity. The licensee responded that:

- The Weyerhaeuser BC Coastal Group target of 10-percent old-growth zones applies across all the Group's BC Coast tenures and not just to TFL 44.
- Small areas in the Nahmint and Klanawa watersheds have been classified as old-growth zones.
- Special management zone classifications in the Nahmint and Upper Walbran

provides additional emphasis on non-timber resources in these areas.

I note that the licensee has sampled a large number of variable retention stands and intends to fine-tune its retention targets for the stewardship zones for the next timber supply analysis. I accept that the modelling of stewardship zones and variable retention adequately reflects the licensee's current approved management practices.

- forest ecosystem networks

Forest ecosystem networks (FENs) were established in TFL 44 during the early 1990's to provide for natural connectivity of mature and old-growth forests and to maintain biodiversity values. Landscape Unit Planning using Old-Growth Management Areas (OGMAs) has taken precedence since the FENs were established, and therefore FENs were scheduled to expire on June 15, 2003 as stipulated in the *Operational and Site Planning Regulation*.

The intent of the pre-set expiration date was to maintain unharvested FENs until OGMA establishment was complete. In anticipation of the June 15, 2003 deadline, the Forest Practices Code Joint Steering Committee of senior ministry staff recommended to elected officials that the *Regulation* be amended so that FENs would be retained until such time as OGMAs are established within each landscape unit. In May, 2003, the Chief Forester wrote to Weyerhaeuser explaining that recommendation and encouraging the licensee to expedite landscape unit planning on the TFL. My understanding is that Wehyerhaeuser has agreed to refrain from proposing the harvest of any FEN area in a given landscape unit until after OGMAs have been conclusively identified in the landscape unit. For the purposes of the base case modelling, however, the FENs remain within the THLB.

A large number of public comments were received expressing concern about the inclusion of FENs within the THLB. The licensee responded to all of these letters and described the measures it will use to achieve the habitat and biodiversity objectives that were initially sought from FENs. These measures include:

- In completing landscape unit planning, FENs will be considered as "non-contributing" and thus will be priority areas for the creation of OGMAs.
- Additional reserved areas will be maintained in old-growth stewardship zones and in stand-level retention distributed across the forest landscape.

FENs occupy 17 260 hectares of the THLB within the Alberni Working Circle. Licensee staff recognize that OGMAs will be established in some FEN areas and this will have a negative impact on timber supply relative to what is portrayed in the base case. The licensee has estimated that 4000 to 8000 hectares of productive forest land in the currently assumed THLB may be needed to establish OGMAs on the TFL.

A sensitivity analysis was done for the Alberni Working Circle to assess the impact of removing the entire FEN area from the THLB. It was therefore reduced by 17 260 hectares (10 percent) to 149 319 hectares. The result was that with or without the application of old seral retention requirements, the modelled long-term harvest level dropped to about 1.4 million cubic metres, about 10 percent less than the Alberni Working Circle base case long-term harvest level. The 10 percent reduction in harvest

level correspond well to the modelled 10 percent reduction in land base.

I have discussed FENs with district staff and recognize the input from MSRM, WLAP, licensee staff, and the public, as well as the recommendations of the Forest Practices Code Joint Steering Committee. I note that ministry and licensee staff expect to utilize an unknown portion of the FEN areas for establishment of OGMAs. A downward pressure on the base case over the planning horizon is therefore very likely and will be discussed in "Reasons for Decisions".

- *culturally modified trees*

Culturally modified trees (CMT) are defined as a cultural heritage resource under the *Forest Act*. CMTs that predate 1846 are protected under the *Heritage Conservation Act*. The impact on the THLB of protecting CMTs was assessed during the last AAC determination. A consulting archaeologist reviewed data from old-growth blocks surveyed in 1996 within the Alberni east Working Circle. Out of 87 blocks, 53 blocks (60 percent) had potential to contain CMTs or archaeological sites, and 38 percent did contain sites (20 blocks of 87). The archaeologist suggested that on average, 15 percent of a block containing CMTs would need to be reserved to protect these resources. This information suggested that 3.4 percent of the old-growth area, or 1231 hectares, would be reserved for archaeological sites or CMTs in Alberni east. This amounts to 1.2 percent of the net THLB. Coast Forest Region staff noted that extrapolation of this percentage to Alberni west should be considered with caution, as the distribution of cultural heritage sites may differ there due to less remaining old-growth timber and steeper terrain than in Alberni east.

A second approach was therefore considered during the last AAC determination. This approach considered that the licensee's mapped information showed that most of the sites containing CMTs were located below 300 metres in elevation. The mapped sample indicated that out of 53 blocks surveyed, 23 percent contained sites. In this case, 10 percent of each affected block was assumed to be reserved to protect these resources. This information suggested that 437 hectares, or 0.75 percent of the old growth remaining in the THLB, needed to be reserved.

For this determination, operational planning data for 19 recent Franklin operation harvest blocks with CMTs was assessed. Most of the CMTs did not result in further netdowns because they were located in wildlife tree patches or variable retention patches, or were left as individual trees. The total estimated netdown area specific to CMTs was 0.3 percent of the estimated harvest area represented by the total sample of the 19 harvest blocks.

In the current base case this result has been rounded up to an incremental netdown of 0.5 percent for CMTs. This was applied to mature timber in the base case and resulted in an additional netdown area of 283 hectares from the THLB.

I note that there are high levels of stand-level retention on TFL 44 due to variable retention and wildlife tree retention (see *stewardship zones and variable retention*). I am confident that, along with the 283 hectares of netdown specific to CMTs, the licensee can manage for CMTs largely using these other retention strategies. The assumptions in the

analysis reasonably reflect CMT management practices on TFL 44.

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

I have reviewed the information presented on the twenty-year plan and the Vancouver Island Summary Land Use Plan, and conclude that they are adequately reflected in the base case.

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

Alternative rates of harvest

The nature of the transition from harvesting old-growth forests to harvesting second-growth forests is a major consideration in determining AACs in many parts of the province. In the short term, the presence of large timber volumes in older forests often permits harvesting above long-term levels without jeopardizing future timber supply. In keeping with the objectives of good forest stewardship, AACs in British Columbia have been and continue to be determined to ensure that current and mid-term harvest levels will be compatible with a smooth transition toward the usually (but not always) lower long-term harvest level. Thus, timber supply should remain sufficiently stable so that there will be no inordinately adverse impacts on current or future generations. To achieve this, the AAC determined must not be so high as to cause later disruptive shortfalls in supply nor so low as to cause immediate social and economic impacts that are not required to maintain forest productivity and future harvest stability.

The licensee provided two alternative harvest flow projections for the Alberni Working Circle:

- In one scenario, the initial Alberni Working Circle harvest level of 1.675 million cubic metres per years was maintained for 50 years, rather than for five years as in the base case. This resulted in a long-term harvest level reduction of about three percent below the base case level. Maintaining this initial harvest level for 50 years also resulted in a reduction in growing stock, shorter rotation ages and a reduction in mean annual increment.
- In another scenario, a non-declining harvest flow for the Alberni Working Circle resulted in a harvest of 1.558 million cubic metres per year over the full planning horizon with the long-term harvest level only marginally higher (0.2 percent) than that of the base case.

I note that the alternative scenarios indicate it is possible to harvest significantly higher levels in the next 50 years before dropping to only slightly below the Alberni base case long-term harvest level. This indicates that the base case represents a conservative approach to timber supply modelling and that the short-term timber supply is not under any significant pressure.

Community dependence on the forest industry

The licensee states that timber harvesting in TFL 44 supports approximately 2700 direct jobs in timber harvesting, silviculture, transport, processing and government. Approximately 2300 of these jobs occur in the Port Alberni area.

The licensee estimated for 2000, that close to 60 percent of the logs from TFL 44 went to company sawmills and the NorskeCanada paper mill in Port Alberni. A further 20 percent were directed to company sawmills on the east side of Vancouver Island and on the Lower Mainland. Of the remaining 20 percent, half were delivered to sawmills on Vancouver Island. These external sales are offset to a large extent by mill purchases as logs are traded to better suit mill requirements.

Public concern was raised regarding jobs and the economic health of the Alberni Valley. Other comments encouraged the company to maintain existing value-added processing facilities and to develop new facilities to encourage social and economic sustainability within the region. The licensee responded that it is currently focusing on improving the poor financial performance of its operations in the Alberni Valley. This includes initiatives for improving worker safety, reducing costs and improving performance. In response to the value-added comments, the licensee stated that it has a track record of making logs available to local processors. Initiatives include working with other local companies to direct fibre to the most appropriate mill so that participants benefit from a more efficient use of the timber resource. I have reviewed the information and am mindful that the volume harvested from TFL 44 is very important to employment in the local area.

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

Timber processing facilities

In 2001, 58 percent of the volume harvested on TFL 44 went directly to Weyerhaeuser sawmills in Port Alberni, Chemainus, Nanaimo, New Westminster, and Vancouver, and Custom Cut. Approximately 18% of the 2001 harvest was sold to other users in the Port Alberni area, including NorskeCanada, Meeker and Nagaard Sawmills. Of the remaining 22 percent, more than half was delivered to sawmills and cedar shake mills on southern Vancouver Island.

In response to public concern over log exports, Weyerhaeuser noted that its ability to export logs had helped it weather difficult market conditions in recent years, and that log exports made up less then five percent of total log production in 2000.

I have reviewed the information, and understand that the licensee has significant log surplus relative to its processing needs. Although a reduction in the AAC for TFL 44 would likely not impact Weyerhaeuser sawmills it could well impact other sawmills on southern Vancouver Island.

(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 and memorandum

The Minister has expressed the economic and social objectives of the Crown for the province in two documents to the chief forester—a letter dated July 28, 1994, (attached as Appendix 3) and a memorandum dated February 26, 1996, (attached as Appendix 4).

This letter and memorandum include objectives for forest stewardship, a stable timber supply, and allowance of time for communities to adjust to harvest-level changes in a managed transition from old-growth to second-growth forests, so as to provide for community stability.

The Minister stated in his letter of July 28, 1994, "any decreases in allowable cut at this time should be no larger than are necessary to avoid compromising long-run sustainability." He placed particular emphasis on the importance of long-term community stability and the continued availability of good forest jobs. To this end he asked that the chief forester consider the potential impacts on timber supply of commercial thinning and harvesting in previously uneconomic areas. To encourage this the Minister suggested consideration of partitioned AACs.

The Minister's memorandum addressed the effects of visual resource management on timber supply. It asked that pre-Code constraints applied to timber supply in order to meet VQOs be re-examined when determining AACs in order to ensure they do not unreasonably restrict timber supply.

I have considered the contents of the letter and memorandum in my determination of an AAC for TFL 44. In this context believe that the licensee has taken a conservative approach to modelling harvest levels based on a gradual decline to an apparently stable long-term harvest level.

- local objectives

The Minister's letter of July 28, 1994, suggests that the chief forester should consider important social and economic objectives that may be derived from the public input in the timber supply review where these are consistent with government's broader objectives.

The licensee indicated that it actively solicited input on its draft management plan, which it received primarily in respect of wildlife issues, forest ecosystem networks and First Nations' issues. I have considered the input in this determination and commented on it in the relevant sections of this rationale.

BCFS district staff have reviewed the licensee's public consultation process and confirm that the licensee satisfactorily met its public input obligations. I agree and conclude that no specific issues were identified in public review that would significantly alter acceptability of the base case assumptions.

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

Unsalvaged losses

I have reviewed the information on forest health issues and non-recoverable losses and agree they have been accounted for satisfactorily in the base case.

Clayoquot Working Circle

The majority of the factors, previously presented, apply equally to both the Alberni and the Clayoquot Working Circles. The factors and description presented in this section are specific to the Clayoquot Working Circle. The procedure used by the licensee in the TFL 44 timber supply analysis for the Clayoquot Working Circle is consistent with that used by other tenure holders in Clayoquot Sound, such as Iisaak Forest Resources Ltd. in TFL 57.

(vi) 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

- Clayoquot Sound additional area reductions

The Clayoquot Sound portion of TFL 44 is within the licensee's Habitat stewardship zone (see *stewardship zones and variable retention*), thus requiring 15 percent of stands to be left as reserves in harvested areas. However to fully reflect all of the planning requirements of the April 1995 Clayoquot Sound Scientific Panel (CSSP), further netdowns were required. For example the CSSP requires allowances for hydro-riparian and watershed plan ecosystem reserves.

The licensee examined the netdowns used in the draft Information Package for TFL 57 and felt that they better reflect the CSSP recommendations. The THLB within TFL 57 is approximately 40 percent of the productive forest. The initially derived THLB of the Clayoquot Sound portion of TFL 44 (5047 hectares) was therefore reduced by an additional 1476 hectares so that the resultant THLB of 3571 hectares is approximately 40 percent of the productive forest area.

I accept that this base case netdown applicable to the Clayoquot Sound portion of TFL 44 adequately reflects the recommendations of the CSSP.

- Clayoquot Sound watersheds and basins

Consistent with the CSSP, two cover class constraints were applied to the Clayoquot portion of TFL 44 in the base case:

1. At least 40 percent of the forest must be older than 140 years within watershed level planning units at all times.

2. A maximum of five percent of the total area of a watershed basin can be harvested in a five-year period.

The first constraint was mistakenly applied in the analysis at the watershed basin level rather than at the level of the watershed planning units of Upper Kennedy and Lower Kennedy, as was the intent of the licensee. I believe this modelled constraint is higher than necessary, and results in a negative impact on modelled timber supply.

I note that for the two major watersheds units in the TFL 44 portion of Clayoquot Sound, the THLB of 3571 hectares makes up just 27 percent of the total land area. The second constraint of five percent is therefore not a significant issue – as there is considerable inoperable area (73 percent) in the Clayoquot Working Circle. Within the bounds of the two cover constraints, 127 hectares could be harvested annually and the full THLB could therefore be harvested in 28 years. The licensee has, however, proposed a much more conservative, flat line harvest rate of 28 000 cubic metres per year. I agree with the approach taken in the base case and note this is very conservative compared to what is actually available after considering the cover constraints.

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

Alternative rates of harvest

The base case for the Clayoquot Working Circle was a non-declining harvest flow. An alternative to this is to maximize harvest over the first 50 years. For the Clayoquot, an initial harvest level of 33 700 cubic metres per year can be maintained for 50 years without disrupting the base case long-term harvest level of 28 700 cubic metres per year. The impact of the 50 years of maximizing harvesting is a reduction in growing stock.

I note that in the base case, the average area harvested annually in the Clayoquot Working Circle over the full planning horizon is close to 35 hectares. The average is about 40 hectares in the first 10 years of the analysis, which is dramatically less than the 127-hectare maximum set by the CSSP.

First Nations interests

The following 10 First Nations' groups identified traditional territory on TFL 44. Six of these groups also have reserves located on the TFL:

- Cowichan Tribes
- Pacheedaht First Nation
- Ucluelet Band – 1 reserve
- Ditidaht First Nation – 5 reserves
- Hupacasath First Nation – 2 reserves
- Qualicum First Nation
- Tseshaht Band – 2 reserves
- Huu-ay-aht First Nation – 3 reserves
- Uchucklesaht First Nation – 2 reserves
- Cowichan Lake First Nation

Licensee staff began their First Nations' consultation regarding MP No. 4 with an October 2000 meeting in Port Alberni. This meeting outlined the purpose and schedule of the proposed management plan, and the licensee offered send staff to the First Nations' communities for further consultation. I understand that no such meeting was requested.

The management plan was further discussed in a May 2001 meeting with the Huu-ay-aht, Uchucklesaht and Ditidaht First Nations. In September 2001 the licensee wrote to all the First Nations groups, inviting discussion and review of the management plan. Representatives of all the First Nations groups attended a November 2001 meeting at which the licensee distributed copies of the management plan.

The licensee initially requested First Nations' comments on the management plan by December 15, 2001, a date which was extended several times over the following year. Data in the form of digital map files, graphical summary of the Timber Supply Analysis results, draft MP No. 4, the report on Public Review, and an updated Information Package were sent to First Nations during August 2002. Copies of the twenty-year plan were distributed in September 2002.

The Deputy Chief Forester and district and licensee staff met with the Huu-ay-aht First Nation and the Uchucklesaht First Nation on October 18, 2002. The First Nations outlined their concerns including insufficient time to review the material contained in the Information Package, Timber Supply Analysis, Management Plan and Twenty-year Plan. District staff extended the deadline for submission of review comments to December 31, 2002 in order to accommodate First Nations who had not yet commented.

Over a 2-year period very active dialogue occurred among the First Nations, BCFS and licensee staff. The Uchucklesaht, Tseshaht, Huu-ay-aht, Ditidaht and Pacheedaht First Nations provided comments on the timber supply review and raised the following points:

- They stressed the importance of access to old-growth cedar for traditional, cultural and contemporary uses. In response to a BCFS request to quantify their needs, the Uchucklesaht, Huu-ay-aht, Ditidaht and Pacheedaht First Nations estimated, with some hesitancy, that each need 15 000 cubic metres per year.
- The *T-iiski-in Paawats* area was identified as an important First Nations' area of interest that should not be included in the THLB. The Huu-ay-aht and Uchucklesaht First Nations assert that the *T–iisk–in Paawats* is a sacred area and that its removal from the THLB is supported by the entire Nuu-chah-nulth Tribal Council.
- The First Nations groups estimated that a minimum reduction to the THLB of 3.4 percent, applicable to old-growth forest types in the base case, is necessary to account for archaeological sites, traditional use sites and culturally sensitive sites.
- The base case netdown of 283 hectares for culturally modified trees was thought to be insufficient.

The First Nations generally assert that the harvest rate is too high for old-growth cedar. They recommend that old-growth cedar be protected by decreasing the rate of harvest of old growth, increasing the harvest of second-growth, and partitioning the cut by species to avoid overcutting cedar.

A Cedar Access Task Team was formed in January 2002 to examine the First Nations' concerns regarding short-term and long-term access to red- and yellow cedar. The team includes representatives from the Huu-ay-aht and Uchucklesaht First Nations, the BCFS and the licensee. The team has discussed traditional and cultural uses of cedar and has shared information on cedar inventory. The inventory summaries include red- and yellow cedar areas and volumes by First Nations' traditional territory, broad age classes, netdown types and the THLB. The team has begun to develop strategies to ensure short-term and long-term access to cedar (particularly old growth) for traditional and cultural use. The licensee has committed to this task team process within the term of MP No. 4.

The use of variable retention on this TFL has increased retention levels in cutblocks compared with other areas of the province, as evident in the 21 percent retention in the licensee's sample of 109 harvest blocks. With this relatively high level of retention, I am confident that field staff can accommodate the resource values of culturally modified trees, cultural heritage resources, archaeological heritage sites and traditional use sites within the array of netdowns made in the base case.

As mentioned above, in response to First Nations' requests the licensee removed the *T-iiski-in Paawats* area in its entirety from the THLB.

The recent logging history by species shows that logging percentages of cedar are close to inventory levels. Cedar made up 26.1 percent of the harvested volume between 1997 and 2001 in the Alberni Working Circle. In 2000, cedar made up 22.9 percent of the volume in mature stands (older than 125 years) on the THLB in the Alberni Working Circle. If it is assumed that 50 percent of second-growth stands over 50 years of age are also considered merchantable, cedar makes up about 19.8 percent of the merchantable volume in the Alberni Working Circle.

Considerable volume of cedar is found in the inoperable areas of TFL 44, notably 5.6 million cubic metres in the Alberni Working Circle. A portion of this cedar may be of suitable quality and available for a range of cultural uses. Thirty-seven percent of the trees planted in the Alberni Working Circle during 1997 to 2001 were cedar, indicating that cedar should remain well represented within the THLB in the long-term.

I am aware that the Huu-ay-aht and Uchucklesaht First Nations have been invited to apply for a timber sale licence of 265 000 cubic metres. In addition, the recent enactment of the *Forest Revitalization Act* will provide economic and cultural opportunities for First Nations to access timber. The government has stated that approximately eight percent of provincial AAC will be made available to First Nations. At this time, it is unclear to what extent this will increase economic opportunities for the First Nations with traditional territories in TFL 44.

After considering all of the relevant input, I am confident that base case modelling has done a reasonable job of reflecting First Nations' interest in the TFL 44 land base.

Reasons for Decision

I have considered the information discussed throughout this document, and I have reasoned as follows:

For the reasons stated in 'Timber Supply Analysis' and from reviewing the considerations recorded above, I accept the licensee's base case as an adequate basis from which to assess timber supply for this AAC determination.

In determining this AAC, I have identified factors which, considered separately, indicate that the timber supply may be either greater or less than that projected in the base case. Generally some of these factors can be quantified and their impacts assessed with some 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. These latter factors are accounted for in determinations in more general terms.

Several factors indicate that the timber supply projected in the base case may be over-estimated. The factor that can be quantified with some certainty is:

- existing roads, trails, and landings – I believe the THLB is over-estimated by about 400 hectares due to modelled road widths being slightly narrower than documented in a measured sample.

Several other factors also indicate that timber supply may be over-estimated in the base case, but to a degree that cannot be well quantified. They are:

- *identified wildlife* – Due to the great diversity of fish and wildlife species on the west coast of Vancouver Island, including identified wildlife species, I expect there will ultimately be at least a one-percent impact on the TFL harvest level due to netdowns for identified wildlife species. Considering the allowed one-percent timber harvest impact is a provincial number, it is likely that this south coast area may ultimately incur a higher than one-percent impact.

- *forest ecosystem networks* – I expect that some FENs will become OGMAs, thus resulting in a further netdown of the THLB. If all FENs became OGMAs this would have a maximum 150 000 cubic metre downward impact on the timber supply in the long term. This is an outer bound of the potential impact as it is likely that only a portion of the area within FENs will become OGMAs.

Several factors indicate that the timber supply projected in the base case may be under-estimated. The factor that can be quantified with some certainty is:

- *sensitive soils* – I believe an error in assessing sensitive soils resulted in about 400 hectares too many being netted out of the base case timber harvesting land base. I believe this essentially cancels out the over-estimate of the timber harvesting land base due to road rights-of-way.

The other factor indicating that timber supply may be under-estimated in the base case, but to a degree that cannot be well quantified, is:

- *utilization standards* – Inventory volume is slightly under-estimated because old-growth utilization was modelled at a minimum 22.5 cm dbh, whereas actual practice is to employ a standard of 17.5 cm dbh. This is a small upward pressure on the base case THLB.

From considering the above factors suggesting over-estimation or under-estimation of the timber supply in the base case projection, I conclude that their combined influences on timber supply result approximately in a mutual offset, with little or no significant net risk to the viability of the base case projection. I note that the timber supply is robust with a stable growing stock in the Alberni Working Circle and a small, insignificant decline in the Clayoquot.

The base case illustrates a very stable timber supply, including alternative harvest forecast showing that the current harvest level can be maintained for 50 years before declining to a lower mid- and long-term harvest level. The base case steps down in very modest increments to a long-term harvest level that is not much different from the initial harvest level.

I believe the licensee has ensured good communication with First Nations groups that have an interest in the TFL land base, and that the base case modelling has adequately incorporated those interests.

Determination

I have considered and reviewed all the factors 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 five years, that reflects current management practices as well as the socio-economic objectives of the Crown, and that reflects First Nations' issues, can best be achieved by establishing an AAC of 1 700 000 cubic metres, which represents a decrease of 3.7 percent from the previous AAC. Of this AAC, the harvest in the Clayoquot Working Circle should average no more than 36 hectares per year over the next five years – one percent of the timber harvesting land base within Clayoquot Sound per year.

As explained under "First Nations", the information provided with regard to cedar harvest and regeneration leads me to believe that there is no need at this time to partition by species to protect cedar from being over-harvested relative to its presence on the land base. I will, however, examine this matter closely at the time of the next AAC determination, taking into account whatever information can be garnered in the meantime.

This determination is effective August 1, 2003 and will remain in effect until a new AAC is determined, which must take place within five years of the date of this determination unless the re-determination date is formally postponed according to the provisions of Section 8 of the *Forest Act*.

As stated in *Guiding Principles*, I re-iterate that my AAC determination does not prescribe where harvesting should or should not occur, nor does it prescribe who should harvest the timber. If additional significant new information is made available to me in respect of the management assumptions upon which I have predicated this decision, or First Nations' interests, then I am prepared to revisit this determination sooner than the five years required by legislation.

Implementation

In the period following this determination and leading to the subsequent determination, I request that the licensee:

- document harvest levels in the non-conventional and economically marginal sites;
- document the volume of cedar harvested relative to the volume of cedar in the inventory profile; and
- continue the work initiated by the Cedar Access Task Team to ensure that First Nations have a stable supply of cedar for traditional and cultural uses.

Ken Baker
Deputy Chief Forester
July 10, 2003

Appendix 1: Section 8 of the *Forest Act*

Section 8 of the *Forest Act*, Revised Statutes of British Columbia 1996, reads as follows:

Allowable annual cut

8. (1) The chief forester must determine an allowable annual cut at least once every 5 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 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 the result set out under section 39 (1) (a) to (d),

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 5 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 5 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 5 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 10 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 portions of the allowable annual cut attributable to

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

(b) different types of timber and 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 a rate of timber harvesting 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) the nature, production capabilities and timber requirements of established and proposed timber processing facilities,

(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.

1998-29-2; 1999-10-1; 2000-6-2; 2002-25-21.

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Appendix 2: Section 4 of the *Ministry of Forests Act*

Section 4 of the *Ministry of Forests Act* (consolidated 1988) reads as follows:

Purposes and functions of ministry

4. The purposes and functions of the ministry are, under the direction of the minister, to

(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 co-ordinated and integrated, in consultation and co-operation with other ministries and agencies of the government and with the private sector;

(d) encourage a vigorous, efficient and world competitive timber processing industry in British Columbia; and

(e) assert the financial interest of the government in its forest and range resources in a systematic and equitable manner.

Documents attached:

Appendix 3: Minister of Forests' letter of July 28, 1994

Appendix 4: Minister of Forests' memo of February 26, 1996

File: 10100-01

JUL 28 1994

John Cuthbert
Chief Forester
Ministry of Forests
595 Pandora Avenue
Victoria, British Columbia
V8W 3E7

Dear John Cuthbert:

Re: Economic and Social Objectives of the Crown

The *Forest Act* gives you the clear responsibility for determining Allowable Annual Cuts, decisions with far-reaching implications for the province's economy. The *Forest Act* provides that you consider the social and economic objectives of the Crown, as expressed by me, in making these determinations. The purpose of this letter is to provide this information to you.

The social and economic objectives expressed below should be considered in conjunction with environmental considerations as reflected in the Forest Practices Code, which requires recognition and better protection of non-timber values such as biodiversity, wildlife and water quality.

The government's general social and economic objectives for the forest sector are made clear in the goals of the Forest Renewal Program. In relation to the Allowable Annual Cut determinations you must make, I would emphasize the particular importance the government attaches to the continued availability of good forest jobs and to the long-term stability of communities that rely on forests.

Through the Forest Renewal Plan, the government is taking the steps necessary to facilitate the transition to more value-based management in the forest and the forest sector. We feel that adjustment costs should be minimized wherever possible, and to this end, any decreases in allowable cut at this time should be no larger than are necessary to avoid compromising long-run sustainability.

.../2

Province of
British Columbia

Minister of
Forests

Parliament Buildings
Victoria, British Columbia
V8V 1X4

In addition to the provincial perspective, you should also consider important local social and economic objectives that may be derived from the public input on the Timber Supply Review discussion papers where these are consistent with the government's broader objectives.

Finally, I would note that improving economic conditions may make it possible to harvest timber which has typically not been used in the past. For example, use of wood from commercial thinnings and previously uneconomic areas may assist in maintaining harvests without violating forest practices constraints. I urge you to consider all available vehicles, such as partitioned cuts, which could provide the forest industry with the opportunity and incentive to demonstrate their ability to utilize such timber resources.

Yours truly,

Andrew Petter
Minister

Province of British Columbia
OFFICE OF THE MINISTER

Ministry of Forests

MEMORANDUM

File: 16290-01

February 26, 1996

To: Larry Pedersen
Chief Forester

From: The Honourable Andrew Petter
Minister of Forests

Re: The Crown's Economic And Social Objectives Regarding Visual Resources

Further to my letter of July 29, 1994, to your predecessor, wherein I expressed the economic and social objectives of the Crown in accordance with Section 7 of the *Forest Act*, I would like to elaborate upon these objectives as they relate to visual resources.

British Columbia's scenic landscapes are a part of its heritage and a resource base underlying much of its tourism industry. They also provide timber supplies that are of significant economic and social importance to forest industry dependent communities.

Accordingly, one of the Crown's objectives is to ensure an appropriate balance within timber supply areas and tree farm licence areas between protecting visual resources and minimizing the impact of such protection measures on timber supplies.

As you know, I have directed that the policy on management of scenic landscapes should be modified in light of the beneficial effects of the Forest Practices Code. In general, the new policy should ensure that establishment and administration of visual quality objectives is less restrictive on timber harvesting. This change is possible because alternative harvesting approaches as well as overall improvement in forest practices will result in reduced detrimental impacts on visually sensitive areas. Also, I anticipate that the Forest Practices Code will lead to a greater public awareness that forest harvesting is being conducted in a responsible, environmentally sound manner, and therefore to a decreased public reaction to its visible effects on the landscape. In relation to the Allowable Annual Cuts determinations that you make, please consider the effects that the new policy will have in each Timber Supply Area and Tree Farm Licence.

.../2

In keeping with my earlier letter, I would re-emphasize the Crown's objectives to ensure community stability and minimize adjustment costs as the forest sector moves to more value-based management. I believe that the appropriate balance between timber and visual resources will be achieved if decisions are made consistent with the ministry's February 1996 report *The Forest Practices Code: Timber Supply Analysis.*

Finally, in my previous letter I had asked that local economic and social objectives be considered. Please ensure that local views on the balance between timber and visual resources are taken into account within the context of government's broader objectives.

Andrew Petter
Minister of Forests