Information Related to an

AAC Determination

for

TFL # 33

Submitted by:

Federated Co-operatives Limited,

Forest Products Division

Box 70, Canoe B.C., V0E 1K0

Prepared By

Jeff Lipsett, R.P.F.

January 4, 2011

Purpose

TFL 33 is currently scheduled for a timber supply review. This document describes the process that will be used leading to a new AAC determination for TFL 33.

Process

In 2009 the Ministry of Forests, Mines and Lands underwent a review of the timber supply review process. Through that review, differing levels of TSR were developed that would reflect the amount of change in management assumptions that has occurred since the most recent AAC determination. If assumptions inherent in the analysis used as a basis for the determination have not changed, or if the few changes that have occurred can be evaluated using the information in the analysis, a lower-level TSR may be conducted. For this level of TSR the analysis used for the previous AAC determination will form the basis for the current TSR process.

The following information describes the base case from the last (or 2000) analysis, the changes in assumptions that have occurred since that analysis, and the ramifications for timber supply resulting from those changes.

History

TFL 33 was awarded to Shuswap Timbers in 1959 with the initial Cutting Permit issued on March 1, 1960. Federated Co-operatives Limited (FCL) acquired TFL 33 with the purchase of Shuswap Timbers in 1965. TFL 33, although small in comparison to other TFL's in the province, has played an important role in the past 45 years in providing raw material as part of the licensed quota attributable to FCL.

TFL 33 is situated within the Columbia wet-belt on the western slopes of the Shuswap Mountain Range. TFL 33 lies immediately to the north of Sicamous adjacent to Shuswap Lake and comprises a total land base of 8,366 hectares. Activities on TFL 33 are certified under the Sustainable Forestry Initiative® (SFI®) program and ISO 14001. The documents specified in the next section describe TFL 33 in more detail.

In accordance with the *Forest Act Section 8*, the Chief Forester has the responsibility to determine an allowable annual cut for each tree farm licence under established timelines.

The current AAC for TFL 33 is 21,000 m^3. Of the 21,000 m^3 AAC, 1,450 m^3 are allocated to British Columbia Timber Sales (BCTS). The AAC was determined in 2000.

Documentation

The following documents describe the relevant information for the current AAC for TFL 33:

Timber Supply Analysis Information Package: TFL 33

The Information Package is a source document completed prior to the Timber Supply Analysis for the Tree Farm License (TFL 33) Management Plan #8 (MP #8). It provides a summary of the inputs and assumptions made in preparing for the analysis.

The analysis process is a dynamic one and inputs and assumptions may change. Included are inventory and land base summaries, growth and yield information and management assumptions for timber and non timber resources related to timber supply.

Table 6.1 from the Information Package, indicates the Timber Harvesting Landbase for TFL 33.

Table 6.1 - Timber Harvesting Land Base Determination - Base Case

Land Classification	Total Area[1] (ha)	Net Reduction		Net Remainder	
		Area (ha)	Volume (m3)	Area (ha)	Volume (m3)
Total Area	8,366			8,366	1,651,345
Non-prod forest & Non-forest	533	513	27,803		
Roads & landings		175	15,934		
Productive Forest				7,678	1,607,608
Productive reductions:					
RRZs & RMZ exclusions	62	54	15,888		
ESA - soils	570	126	21,040		
Deciduous	166	152	2,543		
Uneconomic forest	101	101	12,702		
Wildlife Tree Patches		266	50,409		
Total Reductions		699	102,582		
Reduced land base				6,979	1,505,026
Current Net Operable Land base					
NSR				93	
Immature				3,039	191,318
Mature				3,847	1,313,708
Less future reductions					
Roads		89			
Landings		102			
Long-term Net Operable Land base				6,788	1,505,026

[1] Total area within a classification category prior to any reductions.

The TSA Information Package was accepted July 26, 1999.

Timber Supply Analysis Report: TFL 33

Timber supply analysis is the process of assessing and predicting the current and future supply from a management unit. The Chief Forester of British Columbia uses this information in determining a permissible harvest level for a management unit. Timber supply projections made in support of TFL management plans look 250 years into the future. However, due to uncertainty surrounding both the information used in analysis, and future forest management objectives, these projections are not viewed as static or prescriptive. The following is contained within the TSA Report (Page 15):

Table 6.2 lists the harvest results from the LRMP option for the TFL 33 analysis. The Base Case results are included for comparison.

Table 6.2 – LRMP Annual Harvest

Simulation Period	Start & End Years	Annual Harvest (m3/year)	
		Base Case	LRMP
1	1 - 5	8,400	22,500
2	6 - 10	8,400	22,500
3	11 - 15	12,000	20,250
4	16 - 20	12,000	20,250
5 – 16	21 - 80	12,000	18,100
17 - 50	81 - 250	14,350	18,750

The current AAC of 22,500m3/year can be maintained for the first 10 years. 10% declines occur at years 11 and 21 before a minor increase to the long-term level of 18,750m3/year at year 81. Figure 6.1 provides a graphic summary of the harvest and inventory levels for the LRMP option of the TFL 33 analysis.

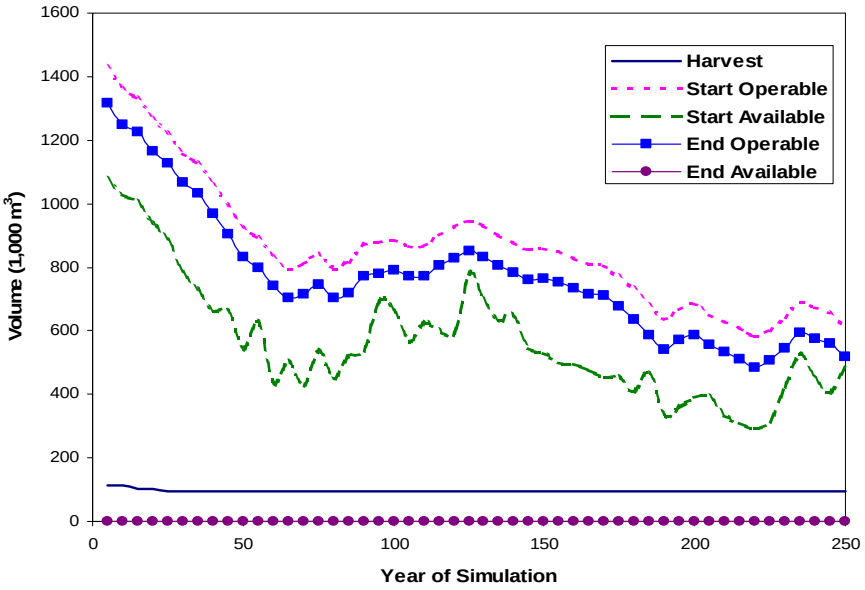

Figure 6.1 – LRMP Inventory & Harvest Levels

The TSA Report was accepted March 7, 2000.

The Rationale for Allowable Annual Cut (AAC) Determination for TFL 33 Effective December 21, 2000

The AAC rationale by the Chief Forester Larry Pederson, states the AAC at 21,000 m3. The Rationale includes all the relevant information and discussion that went into the Chief Foresters decision.

The rationale is available at: http://www.for.gov.bc.ca/hts/tfls.htm

Chief Forester Order Respecting an AAC Determination for Tree Farm Licence 33 (December 16, 2005)

The order, signed by Henry Baskin, Deputy Chief Forester, postponed the AAC determination to December 21, 2010. The order contains the rationale and factors reviewed in the decision making process.

The Order is available at: http://www.for.gov.bc.ca/hts/tfls.htm

Management Plan #9 (MP #9) for TFL 33 (June 30, 2005)

Key similarities and differences between MP # 8 and MP # 9 - The TFL was previously managed under the stringent Okanagan Timber Harvesting Resource Guidelines – which were the precursor to the Forest Practices Code of BC Act. The Timber Supply Review for TFL 33 provided a Land and Resources Management Plan (LRMP) option that capsulated what was agreed to at Okanagan Shuswap LRMP (OSLRMP) table the time of the analysis. MP #9 includes management considerations for the signed OSLRMP as follows:

- Wildlife – Mule Deer Winter Range mapping and management has been revised. Caribou management has been revised. Grizzly bear management has been revised.

- VQO's – the TSR LRMP Option incorporated visual considerations that have since been approved under the OSLRMP. The Chief Forester was unable to accept the LRMP conditions due to the fact that the OSLRMP document had not been signed-off and approved in time for MP #8.

- Shuswap Lake Marine Park - Swall Site of Shuswap Lake Marine Provincial Park was designated under Bill 50 on May 20,2004.The existing park site, which is incorrectly located, was cancelled when the unit was designated (OSLRMP Protected Areas).

MP # 9 was approved July 18, 2006 and is still in effect.

"An FSP is a map based, landscape-level view of potential development activities that are intended to take place on the area described in the plan" (Administrative Guide for Forest Stewardship Plans AGFSP Version 1.04, December 7, 2005).
The purpose of this FSP is to:

- show Forest Development Units (FDUs)
- list applicable Objectives Set by Government (OSBG)
- describe the measurable and/or verifiable results and/or strategies that would meet the OSBG
- prescribe measures specific to forest range
- provide an opportunity for review and an opportunity for input

2.4 Okanagan Shuswap Land and Resources Management Plan

The Okanagan Shuswap Land and Resources Management Plan (September 9. 2000) is a consensus document that was developed under the Forest Practices Code Framework. Essentially the OSLRMP equates to a policy agreement not established as a higher level plan. GAR orders, considerate of the OSLRMP agreement have been approved for Mule Deer Winter Range, Mountain Caribou Habitat, Moose Winter Range, and Mountain Goat Winter Range. With the Land Use Orders listed below, government established legal objectives for the OSLRMP objectives and strategies not covered by FRPA, or FRPA regulations. These orders include:

- Ministry of Agriculture and Lands: Establishing Objectives Set by Government in the Area Covered by the Okanagan-Shuswap Land and Resource Management Plan (OSLRMP) in the Okanagan Shuswap Forest District
- Ministry of Environment: Fisheries Sensitive Watersheds – Thompson Region; Okanagan Region

As a result, FCL has amended this FSP to include new results and strategies that pertain to the legally established objectives.

It should be recognized that many of the OSLRMP recommendations have been explicitly completed as part of the agreement. Old Growth Management Areas, Protected Areas, Enhanced Riparian Reserves are currently established within the FDUs.

Use of Existing Information

The TSR completed in 2000 presented a LRMP option which captured the draft discussions at the OSLRMP at the time. Management for various wildlife species were still under discussion at the time the TSR was completed. The LRMP option included analysis of the options which were more stringent then the final agreement that was signed in 2001. The LRMP option presented an AAC for 10 years of 22,500 m3. The next ten years indicated a slight drop to 20,250 m3. In his decision, the Chief Forester made an effective AAC of 21,000 m3.

FCL believes that there have not been any significant changes that would see a need to carry out a full TSR at this time. The Chief Forester's 2000 AAC decision reduced what was indicated in the LRMP option. The Chief Forester Order in 2005 confirmed the factors of the 2000 decision. Some uncertainties or questions were raised in both decisions. The following sections will provide updates on work that has been carried out or is in progress that will alleviate those concerns.

Uncertainties Identified in the 2000 AAC Determination

In the 2000 decision, the Chief Forester's Reasons for Decision (Page 46 – the Chief Forester's comments shown below in italics – see the 2000 AAC determination for the full list of comments) grouped six issues that could indicate that the Timber Supply is over-estimated or underestimated:

Downward Influence

1. *Economic and physical operability – an area between 0 and 265 ha's in size has been included in the timber harvesting landbase has a greater than 70 percent slope and is considered inoperable.*

2. *Operational Adjustment Factors (OAF's) – as a result of the expected high incidence of root rot on the TFL, the operational adjustment factors applied to managed stand yield curves in the analysis should likely be greater, which results in an unquantified reduction in mid- to long-term timber supply.*

3. *Landscape level biodiversity – an adjustment to remove the assumed contribution from non- TFL lands to old seral retention requirements results in a small reduction in the short- to mid-term timber supply.*

Upward Influence

1. *Site Productivity Estimates – the likelihood that managed stands on TFL 33 will exhibit better growth and productivity than indicated by the data on the inventory file indicates an unqualified upward influence on long-term timber supply.*

2. *Landscape level biodiversity – an adjustment to account for the immediate application of full old seral retention requirements, instead of the requirements over three rotations, indicates a small upward influence on timber supply.*

3. *Visually sensitive areas – an adjustment to account for the disturbance level currently allowed in the visually sensitive portions of the TFL, rather than the values assumed in the base case, results in a significant increase in the timber supply compared to the base case projection.*

In my estimation, the risk posed to mid- and long-term timber supply by the likelihood that larger operational adjustment factors should be applied to account for the effect of root rot on managed adjustment factors should be applied to account for the effect of root rot on managed stand yields is offset by the likelihood that timber supply is more favourable over that same period as a result of the greater site productivity of second growth stands than assumed in the base case.

FCL carried out an FRBC sponsored project to review the OAF's on TFL 33 (2001). The procedure followed the December 1998 BCMOF OAF1 Project Report No. 2. The project summation of the data collected indicated that the managed stands did have a lower OAF 1 than was used in the TSR. It was noted by MOF during further review a more systematic or random survey approach would be required in order achieve a statistical sampling that would allow for changes to the OAF methodology used in the TSR. The Okanagan Innovative Forestry Society (OIFS), of which FCL is a member, carried out sampling of PL leading stands and used the information as part information package submitted with the uplift request. An additional Pl project is being implemented in 2010 (see *Implementation*).

FCL completed a FIA Site Index study for post-harvest stands on TFL 33 (2003). The study revealed that overall, the site indices were 30% higher than indicated in the inventory for existing natural stands. Yield tables were developed (2005) for natural and managed stands that utilized the improved site index estimates, and among other things, considered losses to Armillaria root rot. The predicted mean annual increment (MAI) for natural stands averaged 2.3 m^3 per ha per yr. Existing post-harvest stands had a predicted value of 7.1 m^3 per ha per yr while future post-harvest stands had a MAI of 7.7 m^3 per ha per yr.

In addition, FCL implemented a FIA sponsored Change Monitoring Inventory (CMI) program on TFL 33, as one of several programs designed to improve site productivity and growth and yield estimates for TSR. The objective of the CMI program is to monitor the estimates obtained from the site index adjustment (SIA) project and volumes used in yield curves. Forty (40) CMI sample plots were established in the 2005 and 2006 field seasons in post-harvest regenerating (PHR) stands on the TFL across a 600m grid. Data analysis (2008) from the first measurement of these 40 plots included comparisons between CMI plot data and assumptions for merchantable volume, stand age, site index, and leading species. The analysis results showed no significant differences in yield between assumptions and plot data. The plots are due for re-measurement in 2011.

With respect to the remainder of the factors mentioned above, all – with the exception of visually sensitive areas – suggest that the timber supply projected in the base case is over or underestimated by only a small amount.

The factor with the greatest influence on timber supply in the TFL is the choice of management practices for visual quality. Given the high value of the visual resources on Shuswap Lake, three quarters of the land base on TFL 33 is considered visually sensitive. As discussed earlier in the rationale, the timber supply constraints modeled In the base case, which were based on an interpretation of the current guidelines for the management of visual quality led to a highly constrained timber supply projection where harvest level achievable is only 37 percent of the current AAC. However, as noted earlier in this document, it is my view that the analysis assumptions are not actually reflective of current practice. As a result, the base case harvest projection does not provide an accurate reflection of the actual harvest available from TFL 33 under current management as applied on the ground, as opposed to an interpretation of the guidelines applied under modeling.

District staff indicate, based on the review of visual disturbance impact assessment data conducted at my request, that current allowable disturbance percentages in the partial retention zone are currently in the range of 20 percent. In the absence of any additional information to provide greater clarity around current management, I accept this value – which I note was derived from actual practices on the ground – is more representative of current practice than the constraints applied in the base case. The sensitivity analysis, in which the timber supply implications of similar levels were assessed, indicates an initial harvest level of 20,950 cubic metres per year is obtainable.

In consideration of the above information, I am satisfied that the harvest flow possible under current management, which provides consideration for the resource values influencing operations, is in the range of 21,000 cubic metres per year.

Current management on TFL for Visual Quality follows the OSLRMP guidelines for visual quality. The guidelines were available and used in the TSR - LRMP option in 1999 but were not confirmed until the OSLRMP was signed off in 2000. The guidelines were incorporated into MP # 9 for TFL 33 and are reflected in FCL's FSP.

Implementation

In the period following this decision and leading to the subsequent determination, I encourage BCFS staff to undertake the tasks and studies noted below that I have also mentioned in the appropriate sections of this rationale document. I recognize that the ability of staff to undertake these projects is dependent on available staff resource time and funding. These projects are, however, important to help reduce the risk and uncertainty associated with the key factors that affect the timber supply on TFL 33. I recommend the following:

- *That district staff clarify the appropriate management objectives for TFL 33 with respect to visual quality, prior to the next determination*

- *The district staff monitor operations on TFL 33 to ensure that the visual objectives are being met*

- *That district and regional staff work with the licensee to determine if larger operational adjustment factors are required to account for volume losses arising from root diseases.*

FCL provides the following in reference to the first and third bullets:

1. The OSLRMP is signed-off and the Visual Management for TFL 33 is determined. In addition, FCL carried out a FIA sponsored project (2005) Integrated Visual Design.

Visual landscape management and visual rehabilitation is a forest management challenge in visually sensitive areas. Federated Co-operative Limited (FCL) Tree Farm License (TFL) 33 along Shuswap Lake in British Columbia's southern interior is one of these areas. Bordering the heavily used Shuswap Lake just north of Sicamous, B.C., the majority of the TFL is visible from the lake. The Integrated Visual Design (the standard for the project was the Forest Investment Account Integrated Visual Design Interim Procedures and Standards, Effective May 1, 2002, Ministry of Forests, Province of B.C.) for TFL 33 project was conducted to assist in the location and design of harvesting in the TFL that will rehabilitate the visual effects of previous harvesting, while considering other resource values or objectives associated with wildlife, lakeshore management, operability, timber supply, etc. This report and accompanying maps represent the results of this project.

2. As discussed earlier, FCL completed a report Natural and Managed Stand Yield Tables for Tree Farm License 33 in 2005. An estimation of OAF's was included in the analysis. OAFs were estimated using a Predictive Ecosystem Mapping/Forest Cover overlap analysis. In addition to the volume reduction due to decay, waste and breakage and operational adjustment factors a volume reduction was used to account for acceptable or significant levels of Armillaria root rot disease. The analysis was reviewed and approved in 2005.

   The recent Okanagan TSR Information Package discussed root rot and used the following:

   There continues to be much discussion regarding the potential impacts of root rot in fir-leading stands. In order to account for this, the standard OAF1 of 15 was used for all stands and an OAF2 of 5 was used for all non-fir-leading stands. For fir-leading stands, an OAF2 of 10 was used to represent additional volume losses (note – FCL modeled OAF1 of 15% and OAF2 of 5% in the TFL 33 TSR).

   In addition, FCL implements the following strategy (see FCL FSP):

   All areas not stumped will be managed by the LCP as if there is a moderate or high root disease incidence. If in reality root disease is not present or negligible (as determined by a QRP through prescription walkthrough) then the stumped SSID of the same site series will be used.

As part of FCL's root disease strategy, a mix of at least 3 conifer species must be planted, this means that some conifer species with restrictions are used to increase the mix. Where stumping occurs these species have been dropped as they are not needed for the mix. Further, plant at a density of 600 sph above the target. This is part of a strategy that FCL has adopted in consultation with the Salmon Arm Forest District around 1998.

On areas where *Armillaria ostoyae* or *Phellinus weirii* is present, Douglas-fir is restricted to 30% of the initial planting mix. Where Pw is planted it will be restricted to 10% of the initial planting mix. Only white pine blister rust resistant stock may be used. Pruning is not a requirement.

FCL believes that given current root rot management on TFL 33, adjustments for root rot do not as a minimum, need to be more than modeled on the Okanagan TSA, and in fact should be less then the Okanagan for managed stands.

Chief Forester Order (2005)

The Deputy Chief Forester, Henry Benskin, RPF, provided the following comments in the Chief Forester Order:

- *I am aware that since the last AAC determination the Okanagan Shuswap Land and Resources Management Plan (OSLRMP) was approved in February 2001, but no higher-level-plan order has been enacted for the OSLRMP area.*

  - *According to the Proposed MP No. 9 for TFL 33(which I extended pending completion of the First Nations consultation) the licensee is operating in accordance with the OSLRMP. Okanagan Shuswap Forest District (OSFD) staff confirms this contention.*

Note - MP #9 was approved July 18, 2006

  - *In the analysis prepared for the last determination for the licensee included an "LRMP Alternative Base Option (LRMP Option). For this option the initial harvest level of 22,500 cubic metres per year could be maintained for ten years followed by a reduction to 20,250 cubic metres per year for the next ten years. The forecast then declined to a mid-term harvest level of 18,100 cubic metres per year.*

  - *The assumptions in the LRMP Option are largely consistent with current OSLRMP strategies. One notable exception is the assumption for the management of caribou. In the LRMP option the licensee assumed that the caribou winter range would managed using forest cover requirements to maintain older stands on areas with slopes less than 75 percent. According to new caribou guidelines, caribou will be managed through the strategic location of old growth management areas (OGMAs). Therefore no additional forest cover constraints beyond OGMAs are currently deemed necessary for the maintenance of caribou habitat.*

- *Using the LRMP Option as a baseline option, the licensee provided a sensitivity analysis that tested the effect on timber supply of not applying the forest cover constraints for caribou. In this sensitivity analysis the initial harvest level attained in the LRMP Option could be maintained for three decades before the forecast declined by 15 percent to a mid-term level of 19,100 cubic metres per year.*

FCL - Information from Table 9.3 – REA Disturbance Sensitivity Analysis Annual Harvest (LRMP) – page 32 timber Supply Analysis

Simulation Period	Start & End Years	Annual Harvest Levels (m3/year)	
		LRMP	No Caribou Mature & Old
1	1 - 5	22,500	22,500
2	6 - 10	22,500	22,500
3	11 - 15	20,250	22,500
4	16 - 20	20,250	22,500
5	21 - 25	18,100	22,500
6	26 - 30	18,100	20,250
7 - 16	31 - 80	18,100	19,100
17 – 50	81 - 250	18,750	19,950

As reviewed in the Chief Forester Order, Caribou management is attained through the OGMA budget with no further mature and old requirements. Table 9.3 reflects the management without further mature or old requirements.

- *I am aware that in the last determination visual resource management was one of the overriding concerns and uncertainties for timber supply. In view of this uncertainty and to aid in the last AAC determination, the chief forester requested a supplemental analysis from the licensee.*

  - *For this analysis a level of allowable disturbance in visually sensitive areas was assumed that is five percent higher than the upper end of the range for each Visual Quality Objective provided in the provincial guidelines. This assumption was based on a review of available visual impact assessment data and therefore provided a satisfactory reflection of current performance on TFL 33. It was in line with disturbance levels recommended for the protection of scenic resources expected to arise from the LRMP process once finalized.*

  - *For the first decade of this harvest forecast, a level of 20,950 cubic metres per year was projected. After the first decade, in the year 2008, timber supply was projected to decline by 13.8% to a long-term level of 18,050 cubic metres per year.*

- *In the chief forester's view, this forecast provided a better assessment of available timber supply on TFL 33 under then-current management than did the base case provided in the timber supply analysis originally prepared to support the determination.*

- *In the LRMP Option the licensee modeled a level of allowable disturbance in visually sensitive areas that is slightly higher than assumed in the supplemental analysis described above. Those disturbance levels reflect the higher end of the range of allowable alteration provided in the OSLRMP.*

- *I am aware that the licensee will soon be completing an integrated visual design project for TFL 33. I expect this information will be incorporated into the timber supply analysis for the next AAC determination and that as a result, a more reliable estimate of timber supply on TFL 33 will be available for the decision maker's consideration.*

- *I further note that the local requirements for visual resource management have not impeded the licensee in attaining its AAC. The licensee has harvested its AAC and met its cut control target for the 2000-2004 cut control period.*

As previously noted the report, the IVD for TFL 33 was completed in 2005. The average cutblock size (Net Area to be Reforested – NAR) of the 46 cutblocks with harvesting completed from 2000-2010 is 6.0 ha which indicates that FCL is continuing to practice small block harvesting within the visual constraints.

- *I have investigated whether any significant new information exists concerning each factor specified in Section 8 of the Act. I am aware that:*

    - *The information used in the analysis for the 2000 determination was and still is, for the most part, based on current science. As a consequence, I expect little improvement of timber supply is possible as result of improving science-based analysis components (e.g. inventory, growth and yield).*

    - *The licensee conducted a localized site index study that indicates that the site productivity on TFL 33 is significantly higher than previously estimated. Application of these estimates in a future timber supply analysis will increase the long-term harvest levels relative to the levels projected in the last analysis. It may also improve mid-term timber supply.*

    - *The area identified as deer winter range and grizzly bear habitat have changed slightly since 2000. None of these changes are significant to timber supply for the TFL.*

No other significant changes have occurred since the Chief Forester Order in 2005.

The Deputy Chief Forester drew the following conclusion in the 2005 Order:

> *Having reviewed the factors considered in the last AAC determination and the currently available information, I have determined that the AAC for TFL 33 is not likely to be changed significantly with a new determination made according to the existing schedule. Of particular significance in this decision is the licensee's assertion and the OSFD staff's concurrence that the licensee is managing in accordance with the OSLRMP coupled with the change in management guidelines for Caribou. As I described earlier, the short-term harvest level of 22,500 cubic metres per year in the harvest forecast provided by the licensee that reflects these management regimes could be maintained for three decades. This must be tempered by the uncertainty that still exists around the management of visually sensitive areas on TFL 33. Nevertheless, on balance I am satisfied that the current AAC of 21,000 cubic metres would not change with a new determination.*

FCL agrees with the Deputy Chief's rationale in the 2005 Order. There have not been any significant changes on TFL 33 that would prompt a new AAC determination. The existing AAC of 21,000 m3 per year was 1,500 m3 less than the LRMP Option of 22,500 m3 per year. Conversely, despite the AAC being 750 m3 more than the LRMP Option, FCL believes the existing AAC of 21,000 m3 can be carried forward into the next period without imperiling the long-term AAC of the TFL and without posing an unreasonable risk to the province.

TFL 33 References

Sicamous Tree Farm Licence 33 Management Plan #8 Timber Supply Analysis Information Package	FCL	June 25, 1999
Sicamous Tree Farm Licence 33 Management Plan #8 Timber Supply Analysis	FCL	November 25, 1999
The Rationale for Allowable Annual Cut (AAC) Determination for TFL 33 http://www.for.gov.bc.ca/hts/tfls.htm	MOFML	December 21, 2000
Operational Adjustment Factor 1 (OAF1) Survey	FRBC	2001
Site Productivity Estimation Site Index Adjustment – Improved Site Index for PHR Stands on TFL 33	FIA	2002, 2003
Management Plan # 9 TFL 33	FCL	March 21, 2005
Chief Forester Order Respecting an AAC Determination for Tree Farm Licence 33 http://www.for.gov.bc.ca/hts/tfls.htm	MOFML	December 16, 2005
Natural and Managed Stand Yield Tables for Tree Farm License 33	FIA	2005
Integrated Visual Design Plans TFL 33	FIA	2005
Inventory Monitoring Change Monitoring Inventory - TFL 33 Change Monitoring Inventory Year 1 Establishment Report Change Monitoring Inventory Final Establishment Report Analysis Of First Measurement Data	FIA	2005-2006 2008
Forest Stewardship Plan	FCL	April 4, 2010 (Amendment Date)