

Defined Forest Area Management (DFAM)



Timber Supply Review Technical Information Sheet

*This Technical Information Sheet is intended as a supplement to the
DFAM Backgrounder.*

April 8th, 2003



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Introduction

Timber supply analysis is the projection of timber supply that is forecast to be available for harvesting over time for a specific area, under a particular management regime.

There are 37 timber supply areas (TSAs) and 34 tree farm licences (TFLs), which cover about 90 million hectares of crown-owned land in British Columbia. Currently, TFL licensees are required under the *Forest Act* to undertake management plans, studies, inventories and timber supply analyses that are necessary for allowable annual cut (AAC) determinations at least once every 5 years, with the exception of units that are postponed.

Under the proposed DFAM legislation, within TSA's the responsibility to conduct timber supply analysis on a periodic basis (at least once every 5 years, except for units that are postponed) will become the collective responsibility of the DFAM group. The DFAM group will include BC Timber Sales (BCTS), the holders of replaceable forest licences, and other holders of agreements that meet the prescribed requirements. The DFAM group will complete the steps leading up to, and including the delivery of, timber supply analyses as follows:

- collecting data and preparation of a data package which summarizes the data assumptions—land base, growth and yield, forest management practices, statement of management strategies, and analysis methods—that will be used, and the critical issues that will be examined in the timber supply analysis;
- completing the timber supply analysis and report, and
- providing for public and First Nations reviews.

Following completion of these steps, the chief forester or designate will review the final timber supply analysis report for assessing its acceptability for supporting the AAC determination, and if necessary the chief forester may request additional information. After acceptance of the analysis, the chief forester then determines an AAC, considering all the factors as required in the *Forest Act*, section 8 (8).

Key Principles

The following principles form the basis for the timber supply review within the DFAM framework:

- Completing timber supply analyses must be consistent with the chief forester's legislative mandate as required in the *Forest Act*, section 8 for AAC determination.
- Timber supply analysis (i.e. the base case forecast—the timber supply forecast which illustrates the effect of current forest management practices on the timber supply using the best available information, and which forms the reference point for sensitivity analysis) must be undertaken according to standards provided by the chief forester.
- As long as the standards are achieved, a diversity of approaches will be acceptable.
- In partnership, the MOF and the DFAM group should attempt to minimize costs, workload and time requirements (provide for efficiency while ensuring completeness) as much as possible.

Timelines, workflows and workloads for timber supply review obligations

The *Forest Act* requires that AACs be determined at least once every five years, with the exception of provisions for an extension in the case where the chief forester considers that the AAC is not likely to be changed significantly with a new determination.

The DFAM group will be required to carry out a timber supply analysis for TSAs at the frequency currently specified by the *Forest Act* - i.e. at least every 5 years, except in areas where a postponement has been approved.

Before the start-up of a timber supply review, MOF staff will send a letter to the DFAM group to outline expectations regarding timelines. The exact times and in the manner will be developed in consultation with agency and licensee staff. In general, the timber supply review process is expected to be approximately 18 to 20 months long, the key steps of which are shown in the workflow chart in **Appendix A**.

Appendix B shows the TSAs that will require timber supply analysis activities during 2003/2004.

Following implementation of the DFAM legislation, failure to meet the timelines could result in penalties.

Standards

Standards, similar to the existing standards required for TFLs and Innovative Forest Practices Agreements (IFPAs), have been developed for the:

- data package; and
- timber supply analysis and report.

As part of the data package, provisions will be made to require statements regarding the group's management strategies for the TSA. The strategies could include statements about current practices with supporting evidentiary information, linkages to other plans (Sustainable Resource Management Plans and Sustainable Forest Management Plans) and future management direction. The chief forester may require that the DFAM group provide any additional information necessary for the AAC determinations, including data inputs and additional analyses.

Following implementation of the DFAM legislation, failure to meet the standards could result in penalties.

Data Package

The DFAM group will be responsible for submitting the data and information package in electronic format to the Timber Supply Branch to enable review and public availability. The format of the data package standards will be similar to the existing Information Package Guide for TFL's and have been developed based on the following principles:

<i>Principles for Data Package</i>
• Given uncertain information, the reference timber supply forecast or base case should reflect neither an overly optimistic nor a conservative view of information, unless either approach is justified, in which case an explanation and rationale should be provided.
• The best available information should be used as inputs to the analysis.
• Information must be consistent with the chief forester's guiding principles for AAC determination contained in the AAC rationales.
• The evidentiary basis for information used in analyses must be provided.
• Where data collection and analysis standards exist, they must be followed, unless justification is provided for diverging from standards. Such justification would demonstrate that although standards were not followed, the information is the best available that could be obtained for the timber supply review

Timber Supply Analysis & Report

The following table outlines the principles that have been used in developing standards for conducting the timber supply analysis:

<i>Principles for Timber Supply Analysis</i>
• Differences or changes to the land base, growth and yield, and forest management practices since the previous analysis and AAC determination must be documented and explained.
• If practicable, changes in timber supply forecasts since the previous analysis resulting from any changes in land base, growth and yield and management should be documented.
• Consistent with chief forester's guiding principles for AAC determinations, uncertainty in information should be acknowledged, and sensitivity analysis should be performed to examine the potential impacts of critical uncertainties.
• Use of a particular timber supply model will not be required. However, it must be recognized that a model simply provides a way of documenting our understanding and assumptions, and of "navigating" a way through large amounts of information to derive information useful for improving understanding of decisions that need to be made. Treating model results as accurate without understanding why they have occurred would not meet the chief forester's responsibility as a steward of the province's forests. In this light, benchmarking of models unknown to the chief forester may be required.

Format and content of the final analysis report would contain the factors that the chief forester must consider under section 8 of the *Forest Act*. The analysis report could be structured in a manner similar to Section 8 of the *Forest Act* — subsections (8)(a) to (8)(e)— to assist licensees in providing all relevant information.

The following table outlines the components of the General Analysis Report:

General Analysis Report components
• Description and assessment of strategic/local issues.
• Timber harvesting land base definition (netdown).
• Area by management requirement (including overlaps).
• Current age class distribution on timber harvesting land base (THLB) and forested area outside the THLB
• Model used/functionality applied (e.g., simulation, optimization, different spatial functions – adjacency, patch size distribution) and benchmarking.
• Explanation of modeling assumptions
• Model outputs (volume/area/growing stock)/ projection lengths (250 vs. 400 year minimum)
• Base case and alternative harvest flows with base case data (the objective is to describe why the base case harvest forecast was chosen)
• Sensitivity analyses that provide information on key uncertainties and strategic or local issues that affect land base, growth and yield, and management regimes.
• Socio-economic information (standards are being developed by the Economics and Trade Branch of the MOF).
• Habitat Supply information—information related to management objectives for habitat and related forest conditions over time. This information is readily available as it forms part of the inputs and outputs of the timber supply analysis.

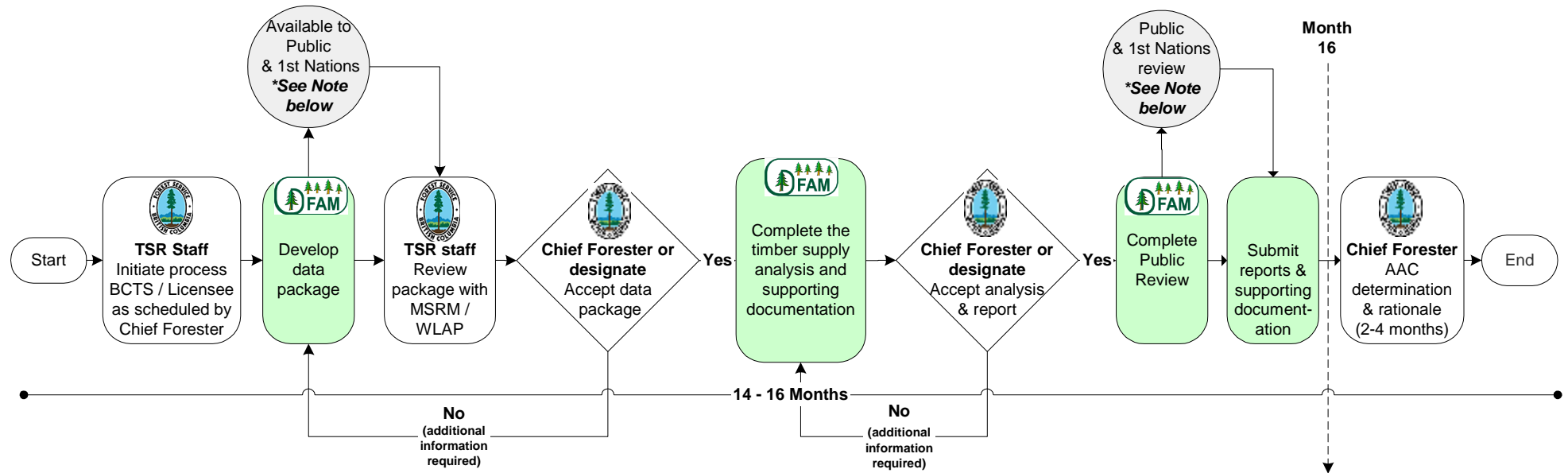
Roles and Responsibilities

The roles and responsibilities for the specific timber supply review steps are outlined in the table below:

DFAM Group	Ministry of Forests	
	Timber Supply Branch	District & Regional field staff
<ul style="list-style-type: none"> • Compiling data needed for the timber supply analysis, including forest cover and other data related to forest and land characteristics, administration and management regimes. 		
<ul style="list-style-type: none"> • Providing information to the public and First Nations (government retains consultation responsibilities with respect to First Nations). 		
<ul style="list-style-type: none"> • Compiling a data package that documents the data, information (management strategies), and methods that will be applied in the timber supply analysis, according to standards provided by the Ministry of Forests (existing TFL Information Package Guide and IFPA Timber Supply Method). 	<ul style="list-style-type: none"> • Reviewing and accepting the data package (focus on how data is to be applied in timber supply analysis). 	<ul style="list-style-type: none"> • Reviewing the data package (confirming current practice).
<ul style="list-style-type: none"> • Performing and documenting a timber supply analysis according to standards provided by the Ministry of Forests. 		
<ul style="list-style-type: none"> • Submitting a file containing the complete dataset used in the timber supply analysis. This requirement is primarily to assist government in compiling and maintaining a complete coverage of the province for tracking of land base, management, and other strategic issues, as well as to enable audit analysis. 	<ul style="list-style-type: none"> • Reviewing and accepting (together with the chief forester) the analysis report 	<ul style="list-style-type: none"> • Reviewing the analysis report to ensure local issues and current practices are adequately reflected.
<ul style="list-style-type: none"> • Providing additional information as required by the chief forester. 	<ul style="list-style-type: none"> • Compiling and preparing information, primarily from the analysis report, for presentation to the chief forester for the AAC determinations. 	<ul style="list-style-type: none"> • Assisting in compiling and preparing information, primarily from the analysis report, for presentation to the chief forester for the AAC determinations.

As well, Ministry of Forests' staff in Research Branch will be responsible for reviewing and verifying site productivity and growth and yield information, particularly when information is highly uncertain.

Appendix A— Proposed Workflows and timelines for Timber Supply Review



***Note: Public and First Nations Review**

- The public review process will be required, however it could be developed to meet the needs of individual TSAs, as communities and First Nations vary throughout the province. For example, the length of the public review period may vary as well as the method and format for distribution of the information.
- The opportunity for First Nations and the public to review the data package will occur before MOF acceptance. The review period for the analysis report will occur after MOF acceptance.
- The DFAM group in partnership with MOF must consult with First Nations in a manner consistent with MOF policy.
- The public will be advised of the opportunity to review the data package and the analysis report, either through ads in local news papers or thorough other types of communications such letters or phone calls.
- In addition, the group may inform the public and First Nations throughout the data gathering and analysis stages.

Appendix B — Timber Supply Analysis Requirements by TSA

Appendix B—Matrix showing timber supply analysis requirements by TSA

TSA’s requiring timber supply analysis activity within this fiscal year are listed below. Those that are scheduled to start this year but may be postponed are shaded.

Forest Region	TSA	Timber Supply Analysis
Coastal	Mid Coast	<ul style="list-style-type: none"> MOF will be reviewing TSR requirements
	North Coast	<ul style="list-style-type: none"> data package, timber supply analysis, public and First Nation reviews
	Soo	<ul style="list-style-type: none"> data package, timber supply analysis, public and First Nation reviews, however subject to a <i>potential postponement</i>
	Sunshine Coast	<ul style="list-style-type: none"> data package, public and First Nation reviews
Northern Interior	Fort Nelson	<ul style="list-style-type: none"> data package, timber supply analysis, public and First Nation reviews
	Kalum	<ul style="list-style-type: none"> data package, timber supply analysis, public and First Nation reviews, however subject to a <i>potential postponement</i>
	Mackenzie	<ul style="list-style-type: none"> data package, public and First Nation reviews, however subject to a <i>potential postponement</i>
Southern Interior	Arrow	<ul style="list-style-type: none"> data package, timber supply analysis, and public and First Nation reviews
	Robson Valley	<ul style="list-style-type: none"> data package, timber supply analysis, and public and First Nation reviews
	Cranbrook	<ul style="list-style-type: none"> data package, timber supply analysis, and public and First Nation reviews, however subject to a <i>potential postponement</i>
	Merritt	<ul style="list-style-type: none"> data package, timber supply analysis, public and First Nation reviews, however subject to a <i>potential postponement</i>
	Lillooet	<ul style="list-style-type: none"> data package, public and First Nation reviews
	Quesnel	<ul style="list-style-type: none"> may be completed by MoF
	Okanagan	<ul style="list-style-type: none"> data package, public and First Nation reviews, however subject to a <i>potential postponement</i>
	Invermere	<ul style="list-style-type: none"> data package, public and First Nation reviews