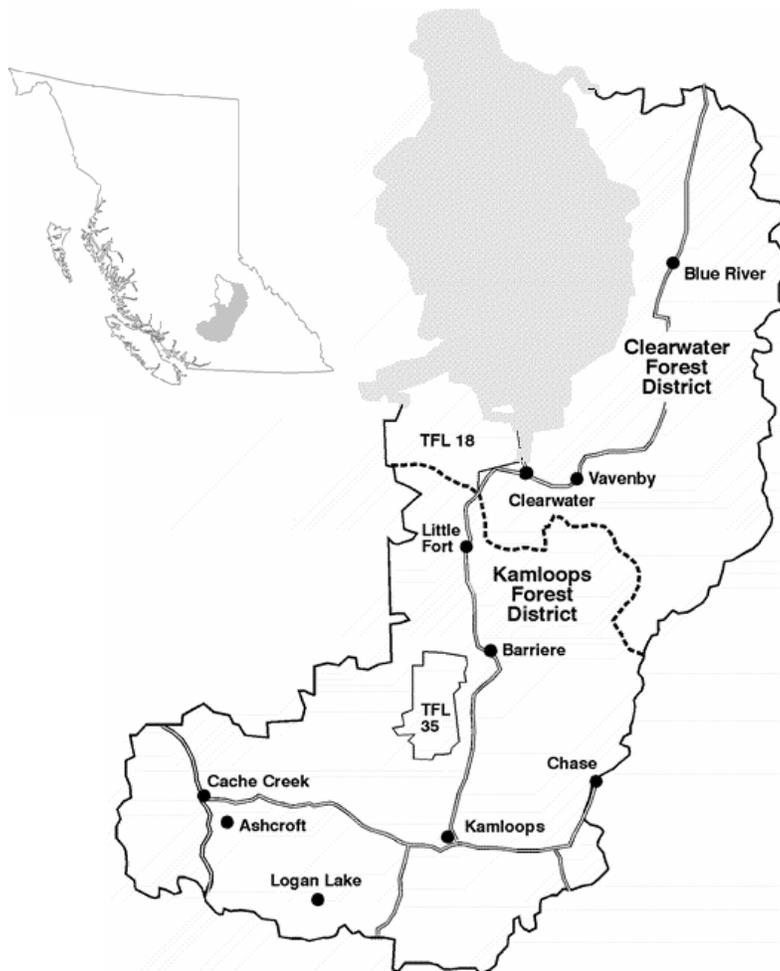


# Sustainable Forest Management Plan for the Kamloops Timber Supply Area



February, 2004



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## **Vision Statement:**

*The Sustainable Forest Management Plan will foster forest management practices - based on a balance of science, professional judgment and local and First Nations input - that sustain the long-term health and productivity of forest ecosystems while contributing to a strong economy and thriving communities throughout the Kamloops Timber Supply Area.*

## Executive Summary

Between February and June 2000 the forest tenure holders ("licensees") operating in the Kamloops Timber Supply Area worked with a group of public and First Nation representatives (the SFM Advisory Group) to develop a Sustainable Forest Management (SFM) Plan.

Members of the SFM Advisory Group represented a cross-section of local interests including recreation, tourism, ranching, forestry, conservation, water, community, and First Nations.

The SFM Plan includes a set of values, objectives, indicators and targets that address environmental, economic and social aspects of forest management in the Kamloops TSA. The Plan is based on the Canadian Standards Association (CSA) Sustainable Forest Management; Requirements and Guidance, which is one of the primary certification systems currently being used in British Columbia. The CSA system sets performance objectives and targets over a defined forest area to reflect local and regional interests. Consistent with most certifications, the CSA standards expect compliance with existing forest policies, laws and regulations.

Following completion of the SFM Plan and the development of an environmental management system, a licensee may apply for registration of its operating area under the CSA standard. Participants being registered to the CSA standard will be audited by an eligible independent third party auditor.

The SFM Plan is an evolving document that will be reviewed and revised on an annual basis with the SFM Advisory Group to address changes in forest condition and local community values. All forest tenure holders are committed to the achievement of the SFM Plan and each year the SFM Advisory Group will review an annual report prepared by licensees to assess achievement of performance measures. This monitoring process will provide the licensees, public and First Nations with an opportunity to bring forward new information and to provide input concerning new or changing public values that can be incorporated into future updates of the SFM Plan.

The Kamloops TSA SFM certification website contains the latest information on the process – including SFM Plan – and can be viewed at:

<http://www.for.gov.bc.ca/dka/TSA/SustainableForestry.htm>



# 1.0 Introduction and Overview

In recent years there has been an increasing demand worldwide for certified wood products. This has led to the development of a number of certification systems to provide assurance to consumers that timber has been produced using environmentally and socially responsible forest practices.

The Canadian Standards Association (CSA) Sustainable Forest Management; Requirements and Guidance is one of a number of certification systems currently being used in British Columbia. The CSA system sets performance objectives and targets over a defined forest area to reflect local and regional interests. The process of CSA certification includes advisory committees composed of a range of public, First Nations, and stakeholder interests.

Forest tenure holders in the Kamloops Timber Supply Area (TSA) have developed the Kamloops Sustainable Forest Management (SFM) Plan based on the CSA certification system. The Plan provides management direction to all licensed forest lands in the TSA, Tree Farm Licenses (TFLs) 35 and 18 and subscribing Woodlot Licensees. Once agreed upon by the forest tenure holders, the SFM Plan will allow forestry operations throughout the TSA to meet the public participation requirements of this national certification standard.

Forest licensees in the Kamloops TSA have been working with the public to develop responsible forest management plans for over 20 years. These planning processes include development of strategic and operational plans, analyses, setting of standards, monitoring and public review. Licensees prepare Forest Development Plans that incorporate the direction provided through these various planning processes. Standards and operating plans are continuously updated as new information comes forward. The SFM Plan is an example of the commitment of licensees to adapt their management practices in response to changes in society's values.

The SFM Plan will serve as a "roadmap" to current and long-term management in the TSA, setting performance targets and management strategies that are reflective of the ecological and social values across the TSA. It will be consistent with the Kamloops Land and Resource Management Plan, which was developed from 1992 - 1995 by a cross-section of local stakeholders, interests groups and members of the public.

The SFM Plan includes eight sections:

- Section 1.0 Introduction and Overview
- Section 2.0 Guiding Principles
- Section 3.0 The Plan Area
- Section 4.0 The Planning Process
- Section 5.0 Strategy Guiding the SFM Plan
- Section 6.0 Values and Objectives
- Section 7.0 Indicators and Indicator Matrices
- Section 8.0 Links to Other Planning Processes

Additionally, the plan includes a Glossary of Terms and four appendices:

- Appendix 1 Research and Information Needs
- Appendix 2 Identified Wildlife Management Species
- Appendix 3 SFM Plan Reporting Format
- Appendix 4 Summary of Publicly Developed Values, Objectives, and Indicators
- Appendix 5 Parking Lot

The values, objectives, indicators, targets, and guiding principles described in this document will be adhered to by all forest licensees in the TSA to achieve sustainable forest management for the TSA. This is an evolving document that will be reviewed and revised on an annual basis with the SFM Advisory Group to reflect changes in forest condition and local community values.

More information about the Kamloops TSA certification process, Sustainable Forest Management Planning, meeting summaries, annual reporting and maps can be obtained at the Kamloops TSA Certification Website (<http://www.lrmp.gov.bc.ca/kamloops/TSAcertification.htm>).

## 2.0 Guiding Principles

During the development of the SFM Plan the SFM Advisory Group identified a number of principles to guide the implementation of the Plan. These guiding principles form some of the core principles of management and will be adhered to by all licensees.

- Recognizing that First Nations are not just another stakeholder, best efforts will be made to respect and accommodate the unique needs and values of Aboriginal Peoples in forest management decisions, plans and practices. This includes recognition and respect for Aboriginal title, rights and cultural values and the wider incorporation of Traditional Knowledge.
- All suggestions and concerns from the public related to non-timber resources will be included in the Forest Development Plan document and used to guide licensees in the development of their plans.
- Licensees will strive to create a situation of mutual respect with other Crown license holders (i.e., grazing, trappers, mining) with a commitment to communicate in order to maintain the viability of resources for all parties.
- Research and information needs and priorities related to the achievement of sustainable forestry (e.g., research and inventory) will be re-evaluated yearly and licensees will forward these priorities to appropriate funding agencies.



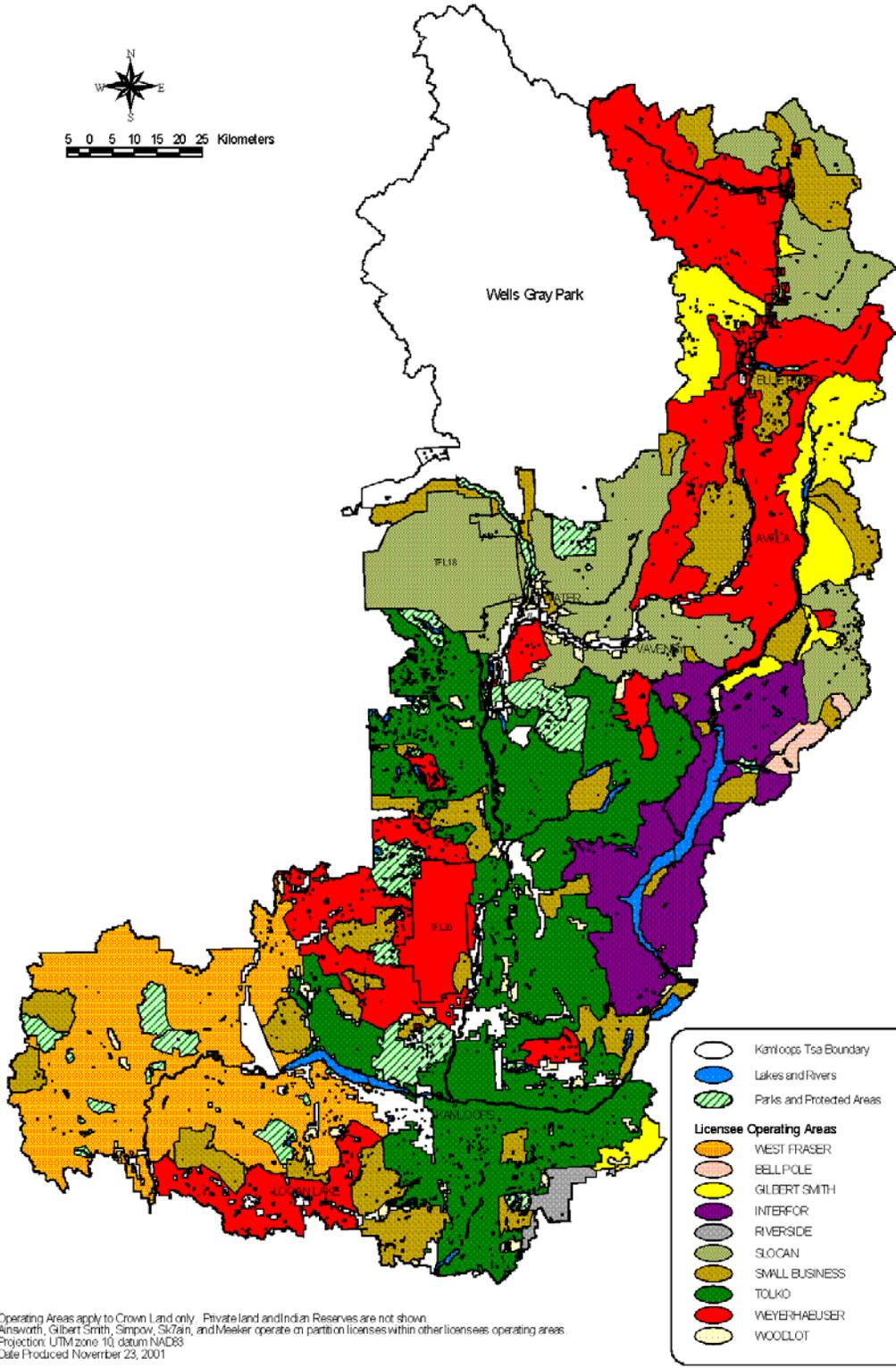
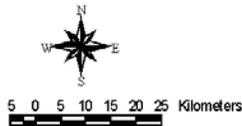
### 3.0 The Plan Area

The SFM Plan area is approximately 2.7 million hectares. It follows the boundary of the Kamloops and Clearwater Forest Districts in the southern interior of British Columbia and includes Wells Gray Park. The area is ecologically diverse, from grassland areas with hot, dry climate in the south to rugged mountains with high precipitation in the north. The plan area includes much of the Thompson River watershed, which flows south and then west toward its confluence with the Fraser River.

In the northern portion of the TSA, the North Thompson River is bounded by the high peaks of the Monashee and Cariboo Mountains. These mountains – part of the Interior Wet Belt – experience wet to very wet conditions, with high snowfalls. The valley bottoms are covered in dense cedar-hemlock forest, changing to spruce-balsam at higher elevations. Further south, the mountains give way to high plateaus dissected by steep valleys. The climate in these plateau areas is moist with mixed forest types. Still further south, the landscape becomes drier and more gentle, with rolling hills and numerous lakes. The hills to the south of the TSA are composed of open pine-fir forests with grasslands in the driest areas. The TSA includes nine biogeoclimatic zones (Bunchgrass, Ponderosa Pine, Interior Douglas-fir, Interior Cedar-Hemlock, Montane Spruce, Sub-Boreal Spruce, Sub-Boreal Pine Spruce, Engelmann Spruce-Subalpine Fir, and Alpine Tundra).

Operating areas have been allocated to the forest licensees operating within the TSA. An overview map of the TSA, depicting licensee operating areas, is attached.

# Kamloops TSA Licensee Operating (Defined Forest) Areas



## 4.0 The Planning Process

### 4.1 The CSA Certification Process

The Sustainable Forest Management standards were developed by the Canadian Standards Association (CSA) as a voluntary tool to assist responsible forest organizations in moving towards the goal of sustainable forest management. Consistent with most certifications, the CSA standards expect compliance with existing forest policies, laws and regulations.<sup>1</sup>

Participants under the CSA certification system must address the following two components:

- Participants must develop and achieve performance measures for on-the-ground forest management, monitored through an annual public review with the input of the public and First Nations; and,
- Participants who choose to be registered to the CSA standard must internally incorporate CSA-defined systems components that emphasize an appropriate management system.

For a licensee seeking certification to the CSA Z809-02 standard, a licensee specific plan would be developed that would be complimentary to TSA SFM Plan. The licensee specific plan would contain additional info such as their defined forest area and internal means to monitor and measure the TSA SFM Plan components.

Applicants seeking registration to the CSA standard require an accredited and independent third-party auditor to verify that these components have been adequately addressed. Following registration, annual surveillance audits will be conducted to confirm that the standard is being maintained. A detailed description of these two components and a summary of the CSA registration process is as follows.

#### **4.1.1 Public/First Nations involvement: performance requirements and measures**

The CSA standards include performance requirements for assessing sustainable forest management practices that influence on-the-ground forestry operations. The performance requirements are founded upon six sustainable forest management criteria:

- Conservation of biological diversity;
- Maintenance and enhancement of forest ecosystem condition and productivity;
- Conservation of soil and water resources;
- Forest ecosystem contributions to global ecological cycles;

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<sup>1</sup> In the case of the SFM Plan for the Kamloops TSA, this includes compliance with the strategic direction provided in the Kamloops Land and Resource Management Plan.

## 4.0 The Planning Process

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- Multiple benefits to society; and
- Accepting society's responsibility for sustainable development.

Each of these criteria has a number of “elements” that further define the criteria. The criteria and associated elements are all defined under the CSA standards and must be addressed during development of the SFM Plan. These criteria and elements are endorsed by the Canadian Council of Forest Ministers and are aligned with international criteria.

For each set of criteria and elements, forest managers, First Nations, and the public identify local values and objectives. Indicators and targets are assigned to the values and objectives to measure performance.

**Values** identify the key aspects of the elements. For example, one of the values associated with “species diversity” might be “sustainable populations of native flora and fauna”.

**Objectives** describe the desired future condition, given an identified value. For example, the objective to meet the value of sustainable populations of native flora and fauna might be “to maintain a variety of habitats for naturally occurring species.”

**Indicators** are measures to assess progress toward an objective. Indicators are intended to provide a practical, cost-effective, scientifically sound basis for monitoring and assessing implementation of the SFM Plan. There must be at least one indicator for each element and associated value.

**Targets** are specific short-term (one or two year) commitments to achieve identified objectives. Targets provide a clear, specific statement of expected results, usually stated as some level of achievement of the associated indicator. For example, if the indicator is “Minimize loss to the timber harvesting landbase”, one target might be “To have less than x percent of harvested areas in roads and landings.”

Values, objectives, indicators, and targets apply to socioeconomic and ecological criteria and may address process as well as on-the-ground forest management activities. In the SFM Plan for the Kamloops TSA, these performance measures were developed to be applied to the entire plan area as well as individual licensee operating areas.

As part of the process of developing values, objectives, indicators and targets, the SFM Advisory Group also assisted in the development of forecasts of predicted results for indicators and targets.

**Forecasts** are the long-term projection of expected future indicator levels. These have been incorporated into the SFM Plan targets as predicted results or outcomes for each target.

### **Public Review of Annual Reports and Third Party Audits**

Each year, forest licensees will compile a report that summarizes results for each of the performance measures (see Appendix 2: SFM Plan reporting format). This annual report will then be provided to the SFM Advisory Group for review and comment. Annual monitoring of

the achievement of the Plan and comparing the actual results to forecast enables the effectiveness of the SFM Plan to be continually improved, in keeping with CSA standards. Licensees seeking CSA certification will produce a separate annual report specific to their DFA.

For a licensee registered to the CSA standard, the achievement of performance measures (indicators and targets) is assessed annually through surveillance audits carried out by a registered third party auditor. The audits confirm that the registrant has successfully implemented the SFM Plan and continues to meet the CSA Standard. Audit summaries are available to the public.

### **4.1.2 Internal Infrastructure: Systems Components**

The CSA SFM system includes a number of process or systems-related requirements called “systems components”. These are as follows:

- **Commitment:** A demonstrated commitment to developing and implementing the SFM Plan.
- **Public and First Nations participation:** The CSA standards require informed, inclusive, and fair consultation with First Nations and members of the public during the development and implementation of the SFM Plan. The Kamloops SFM Advisory Group was established to provide advice and recommendations to the Kamloops TSA Licensees regarding the development of values, objectives, indicators and targets.
- **CSA-aligned management system:** The management system is an integral part of implementation of the SFM Plan and is designed to meet CSA standards. The management system has four basic elements: Planning, Implementing, Checking and Monitoring, and Review and Improvement. Each licensee has their own management system, the base components include:
  1. Identify environmental risks.
  2. Identify standard operating procedures or develop performance measures to address significant risks.
  3. Develop emergency procedures in the event of an incident causing environmental impacts.
  4. Review all laws and regulations
  5. Establish procedures for training. (Providing updated information and training ensures that forestry staff and contractors stay current with evolving forest management information and are trained to address environmental issues during forestry activities.)
  6. If an incident does occur, conduct an investigation or incident review and develop an action plan to take corrective action, based on the preparation undertaken in steps 1 – 5.
- **Continual improvement:** Within the context of the management system, the effectiveness of the SFM Plan is continually improved by monitoring and reviewing the system and its

components. This includes a review of ongoing planning, public process and First Nations liaison to ensure that the management system is being implemented as effectively as possible.

### **4.1.3 CSA Registration**

Following completion of a sustainable forest management plan and the development of an environmental management system in accordance with the CSA standard, a licensee may apply for registration of its Defined Forest Area (DFA). The registration of a licensee's DFA will follow a successful registration audit by an eligible independent third party auditor who will assess that:

- an SFM System including quantified targets for meeting sustainable forest management criteria have been established through a public participation process
- the SFM System is being implemented in a forest according to the plan for achieving the forest based sustainable forest management targets
- progress toward achieving the targets is being monitored and learning is being used for continual improvement of the SFM System.

The determination of whether all the components of an SFM system applied to a DFA are in place and functional involves an on-the-ground audit of the DFA including field inspections of forest sites. The intent of the registration audit is to provide assurance that the objectives of sustainable forest management on the DFA are being achieved. A typical registration audit may include:

- meeting with the advisory group facilitator to review the public advisory process
- interviews with public advisory group members
- a review of monitoring and reporting responsibilities related to CSA performance measures
- meetings with government officials to discuss licensee performance and government involvement in development of the SFM Plan
- field reviews visiting harvest operations, road construction operations
- interviews with staff and/or contractors to review their understanding of the environmental management system requirements
- meetings with management to assess the level of commitment to environmental performance and sustainability.

In addition to the registration audit, regular surveillance audits will be conducted to examine performance against all aspects of the SFM System, including the requirement that regulatory standards and policy requirements are met or exceeded.

## **4.2 The Kamloops TSA SFM Planning Process**

The SFM Plan was developed by the Kamloops TSA Licensees based on advice and recommendations provided by the SFM Advisory Group. The Plan was developed to be in compliance with all existing legislation and policy and consistent with the strategic direction and intent of the Kamloops LRMP.

### **4.2.1 Licensee Participation**

All forest tenure holders (referred to as 'licensees' throughout this report) operating within the Kamloops TSA worked with the SFM Advisory Group to develop performance measures (values, objectives, indicators, and targets) for the SFM Plan. Having all licensees represented during the development of a single SFM Plan (as opposed to many individual plans) helped to address the complexities of overlapping licenses and volume-based harvesting tenures within the TSA. The involvement of all licensees also strengthened the content of the plan and should help to ensure consistency of implementation across the entire plan area. More importantly, all licensees are committed to the achievement of the Plan and will annually report on their performance.

The following licensees were involved in the development of the Kamloops TSA Sustainable Forest Management Plan:

- Ainsworth Lumber Co. Ltd.
- Bell Pole Co.
- Chasm Sawmills - A Division of West Fraser Mills Ltd.
- Clearwater and Kamloops District Small Business Forest Enterprise Program
- Clearwater and Kamloops District Woodlot Associations
- Gilbert Smith Forest Products Ltd.
- Interfor Adams Lake Lumber
- Meeker Log and Timber Kamloops Ltd.
- Riverside Forest Products Ltd.
- Sk7ain Ventures Ltd.
- Simpcw Development Corporation Ltd.
- Tolko Industries Ltd.
- Slocan Forest Products Ltd.
- Weyerhaeuser Co. Ltd.

The Ministry of Forests participated in the SFM planning process in a number of roles including:

- as a forest tenure holder for the Small Business Forest Enterprise Program (see section 4.2.1)
- to ensure reforestation in areas with non-replaceable licenses
- to provide technical support to the planning process (see section 4.2.3).

### **4.2.3 SFM Advisory Group**

The SFM Advisory Group was formed to assist the TSA Licensees in developing the SFM Plan by identifying local values, objectives, indicators and targets and evaluating the effectiveness of the Plan.

Members of the SFM Advisory Group represented a cross-section of local interests including environmental organizations, First Nations, resource-based interests and research specialists. An

#### *4.0 The Planning Process*

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open and inclusive process was used to formulate the public advisory group. Local First Nations and LRMP table members were formally invited to participate. The Ministry of Forests, Ministry of Sustainable Resource Management and Ministry of Water, Land and Air Protection provided technical support to the SFM planning process, providing information and advice to the planning process on resources and policy issues. The group developed and was guided by the Terms of Reference and Procedures, which were consistent with the CSA standard and which also specified that the process for developing the SFM Plan would be open and transparent.

The SFM Advisory Group will review the annual report prepared by licensees to assess achievement of performance measures. This monitoring process will provide the licensees, public and First Nations with an opportunity to bring forward new information and to provide input concerning new or changing public values that can be incorporated into future updates of the SFM Plan.

## 5.0 Strategy Guiding the SFM Plan

### 5.1 Kamloops Land & Resource Management Plan [\(LRMP\)](#) <sup>2</sup>

The Kamloops Land and Resource Management Plan (LRMP) was developed in the early 1990s to provide strategic direction to the management of land and resources on all Crown lands in the Kamloops TSA. The LRMP was developed with extensive public input and public participation. Public input into forest operations continues to be a key feature of forest management planning in the Kamloops TSA.

During the planning process, the Kamloops LRMP Planning Table agreed to the objectives, strategies & indicators for the following values and resources by consensus. <sup>3</sup>

#### 1) General Resource Management Zone

- Soil conservation
- Water Conservation
- Riparian/Streamside

#### 2) Designated Resource Zones

- Community Watersheds
- Grasslands
- Critical Deer Winter Range
- Critical Moose Winter Range

At this stage 4 scenarios and a multiple accounts analysis were developed.<sup>4</sup> The four scenarios are a parallel to Z809 – 02 alternative strategies. For each of the four scenarios (strategies), the responses of some key indicators in five major areas were forecast.

#### 1) Economic Development:

Forestry, Agriculture, Mining, Recreation & Tourism, Commercial Fisheries

#### 2) Environmental resources: Provision for environmental values given varying use levels

Biodiversity, Wildlife habitat, Resident and Anadromous Fisheries, Water

Protected Areas Strategy

#### 3) Communities

Local Government Revenue, Population, Employment, Local Economy, Quality of Life, Recreation

#### 4) Aboriginal concerns

#### 5) Government revenues

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<sup>2</sup> Refer to Sec 8.1 for information on how the Kamloops LRMP guides this SFMP

<sup>3</sup> "Land Use Planning, Kamloops LRMP, Open House Report" – July 94

<sup>4</sup> "Land Use Planning, Kamloops LRMP, Multiple Account Analysis Discussion Paper" Sept 94

## 5.1 Kamloops Land & Resource Management Plan Con't

Forecasts of indicator response were compared to the base case (current status and practices). These scenarios and predicted outcomes were taken to the broader public for input and direction through a series of open houses.

“Kamloops LRMP, Recommendation Summary” – Feb/95 provided information on the planning process and the resulting LRMP Table recommendations to Government. Base case and forecast of key indicators for the recommended LRMP management strategy can be found in “Assessment of the Kamloops LRMP Recommendation” – Feb/95.

The recommended LRMP strategy was approved by Government in July/95. The strategy identifies six resource management zones:

- General Resource Management
- Settlement
- Protection
- Special Resource Management – Community Watersheds
- Special Resource Management – Habitat/Wildlife Management Areas
- Special Resource Management –Recreation and Tourism

The Kamloops Land & Resource Management Plan web site is <http://srmwww.gov.bc.ca/sir/lrmp/kam/>.

## 5.2 Sustainable Forest Management Plan (SFMP) Strategy for the Kamloops TSA

The Kamloops SFMP has adopted and incorporated the LRMP strategic direction. The LRMP guides and forecasts sustainability. SFMP strategy recognizes the LRMP Goals, Objectives and Strategies will support achievement of sustainable forest management in the Kamloops TSA. The SFMP strategy is to choose appropriate indicators to confirm forest management practices are aligned with the LRMP Goals and Objectives, and that there is appropriate communication with and consideration for First Nations, Public and Integrated Resource Management interests. The SFMP, guided by the LRMP, utilizes indicators and targets:

- which reflect key goals, objectives and direction of the LRMP
- that are guided by the Canadian Council of Forests Ministers Criteria and Elements
- that are within the purview of the forest industry to influence and manage

A set of strategies has been developed to achieve the SFMP objectives and targets. These strategies document the relevance of the Indicator to the SFMP and sustainability, and summarize actions required to meet the target. Applicable strategies are documented by indicator in Section 7 of the SFMP.

### **5.3 Additional Guidance**

Forest licensees are also guided by the regulations, laws and policies established by the federal, provincial, and municipal governments—

The direction set forth in legislation as well as additional policies provided by the district managers guides strategies to manage forest operations and to provide high quality fiber for licensee operations over the long term. At the same time, licensees will make efforts to manage and balance the landscape for biological diversity, global cycles, soil, water and social responsibility.



## 6.0 Values and Objectives

The following local values and objectives were identified by the SFM Advisory Group to address each of the CSA criteria and associated elements prescribed by the CSA standards.

A number of indicators and associated targets have been developed to meet these local values and objectives. SFM Plan indicators and targets are described in Section 7. A summary table showing all criteria and elements and associated local values, objectives, and indicators is provided in Appendix 4.

### **Criterion 1: Conservation of Biological Diversity**

Conserve biological diversity by maintaining integrity, function, and diversity of living organisms and the complexes of which they are part.

#### **Element 1.1: Ecosystem Diversity**

Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA.

Description of Local values	Description of Objectives	Indicators	Targets
Well-balanced ecosystems that support natural processes. <ul style="list-style-type: none"> <li>▪ Natural</li> <li>▪ Functioning</li> <li>▪ Healthy</li> <li>▪ Cultural</li> <li>▪ Spiritual</li> <li>▪ Integrity</li> </ul>	Healthy, connected forest ecosystems with a representation of natural attributes.  Retain representation of natural forests.  Conserve Aboriginal cultural and spiritual resources	(1), (2), (4), (12), (18), (22)	1, 2, 4, 12, 18, 22

#### **Element 1.2: Species Diversity**

Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time.

Description of Local values	Description of Objectives	Indicators	Targets
Sustainable populations of native flora and fauna. <ul style="list-style-type: none"> <li>▪ Abundance</li> <li>▪ Distribution</li> <li>▪ Subspecies</li> </ul>	Maintain a variety of habitats for naturally occurring species.  Control noxious weeds.  Conserve Aboriginal cultural and spiritual resources	(1), (2), (3), (8), (9), (12), (22)	1, 2, 3, 8, 9, 12, 22

**Element 1.3: Genetic Diversity**

Conserve genetic diversity by maintaining the variation of genes within species.

Description of Local values	Description of Objectives	Indicators	Targets
Sustainable populations of native flora and fauna. <ul style="list-style-type: none"> <li>▪ Abundance</li> <li>▪ Distribution</li> <li>▪ Subspecies</li> </ul>	Maintain or enhance genetic diversity. <ul style="list-style-type: none"> <li>▪ Species population</li> <li>▪ Endemic</li> </ul>	(1), (3), (7), (8), (9)	1, 3, 7, 8, 9

**Element 1.4 Protected Areas and Sites of Special Biological Significance**

Respect protected areas identified through government processes. Identify sites of special biological significance within the DFA and implement management strategies appropriate to their long-term maintenance.

Description of Local values	Description of Objectives	Indicators	Targets
Continuing viability of natural functioning ecosystems in Protected Areas and sites of special biological significance. Recreation opportunities Access Aboriginal rights	Protect viable, ecologically important examples of British Columbia's natural diversity. Endeavor to identify and maintain new areas of biological significance. Boundary integrity.	(1), (3), (7), (8), (12), (18)	1, 3, 7, 8, 12, 18

**Criterion 2: Maintenance and Enhancement of Forest Ecosystem Condition and Productivity**

Conserve forest ecosystem condition and productivity by maintaining the health, vitality, and rates of biological production.

**Element 2.1 Forest Ecosystem Resilience**

Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.

Description of Local values	Description of Objectives	Indicators	Targets
Sustainable forest ecosystems. Conserve, use and sustainably manage	Resilient forest ecosystems with a range of natural attributes. <ul style="list-style-type: none"> <li>▪ Age class distribution</li> <li>▪ Scale (landscape unit)</li> <li>▪ Natural systems (way in which attributes interact)</li> </ul>	(1), (2), (4), (7), (9)	1, 2, 4, 7, 9

**Element 2.2 Forest Ecosystem Productivity**

Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.

Description of Local values	Description of Objectives	Indicators	Targets
Well-functioning forest ecosystems <ul style="list-style-type: none"> <li>▪ Forest</li> <li>▪ Fragmentation</li> <li>▪ Connectivity</li> <li>▪ Non-timber forest values</li> </ul>	To conserve the forest ecosystem condition and productivity. <ul style="list-style-type: none"> <li>▪ Vitality</li> </ul>	(4), (9), (21), (22)	4, 9, 21, 22

**Criterion 3: Conservation of Soil and Water Resources**

Conserve soil and water resources by maintaining their quantity and quality in forest ecosystems.

**Element 3.1 Soil Quality and Quantity**

Conserve soil resources by maintaining soil quality and quantity.

Description of Local values	Description of Objectives	Indicators	Targets
Conservation of soil resources	Maintain productive capacity of forest soils. <ul style="list-style-type: none"> <li>▪ Minimize compaction and detrimental disturbance</li> </ul>	(5), (10), (13)	5, 10, 13

**Element 3.2 Water Quality and Quantity**

Conserve water resources by maintaining water quality and quantity.

Description of Local values	Description of Objectives	Indicators	Targets
Healthy watersheds. <ul style="list-style-type: none"> <li>▪ Functioning</li> <li>▪ Well-balanced</li> <li>▪ Natural</li> </ul>	Acceptable levels of water quality and quantity <ul style="list-style-type: none"> <li>▪ Water quality (clean water).</li> <li>▪ Water quantity (maintain stream-flow regimes within natural variation)</li> <li>▪ Water temperature</li> </ul>	(2), (6), (10), (14), (15)	2, 6, 10, 14, 15

**Criterion 4: Forest Ecosystem Contributions to Global Ecological Cycles**

Maintain forest conditions and management activities that contribute to the health of global ecological cycles.

### Element 4.1 Carbon Uptake and Storage

Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems.

Description of Local values	Description of Objectives	Indicators	Targets
Respect natural watershed processes and the intrinsic value of nature. <ul style="list-style-type: none"> <li>▪ Actively growing, healthy forests</li> <li>▪ Maintain all natural sources of nutrient cycling</li> </ul>	Resilient forest ecosystems with a representation of natural attributes. <ul style="list-style-type: none"> <li>▪ Age class distribution</li> <li>▪ Scale (landscape unit)</li> <li>▪ Natural systems (way in which attributes interact)</li> </ul>	(1), (5), (6), (21), (22)	1, 5, 6, 21, 22

### Element 4.2 Forest Land Conversion

Protect forestlands from deforestation or conversion to non-forests.

Description of Local values	Description of Objectives	Indicators	Targets
Protection and security of the land and resources for future generations. <ul style="list-style-type: none"> <li>▪ Future generations and plant and animal species</li> </ul>	A prosperous forest industry with a sustainable supply of timber. <ul style="list-style-type: none"> <li>▪ Maintain or increase the forest landbase.</li> <li>▪ Non timber resource values</li> </ul> Retain representation of natural forests. All forest types including broad leaf species	(6), (10), (11)	6, 10, 11

### Criterion 5: Multiple Benefits to Society

Sustain flows of forest benefits for current and future generations by providing multiple goods and services.

#### Element 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

Description of Local values	Description of Objectives	Indicators	Targets
Diverse use of the forest. <ul style="list-style-type: none"> <li>▪ Cultural and heritage</li> <li>▪ Wildlife</li> <li>▪ Environmental</li> <li>▪ Recreational</li> <li>▪ Tourism</li> </ul> Traditional public use trail systems	Conserve or enhance non-timber values while-managing forests for timber values. <ul style="list-style-type: none"> <li>▪ Prosperous forest-based industries</li> </ul>	(12), (19), (20), (25), (28)	12, 19, 20, 25, 28

#### Element 5.2 Communities and Sustainability

## 6.0 Values and Objectives

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.

Description of Local values	Description of Objectives	Indicators	Targets
Social and economic stability and vitality of local communities including First Nations Local perspective valued in managing forest resources.	Employment opportunities Economic diversity Local decision making Local education opportunities	(12), (19), (23), (27), (28)	12, 19, 23, 27, 28

### Element 5.3 Fair Distribution of Benefits and Costs

Promote the fair distribution of timber and non-timber benefits and costs.

Description of Local values	Description of Objectives	Indicators	Targets
Stable and profitable local forest industry.	A proud and prosperous forest industry with access to desired markets.	(11), (16), (17), (23)	11, 16, 17, 23

### ***Criterion 6: Accepting society's responsibility for sustainable development***

Society's responsibility for sustainable forest management requires that fair, equitable, and effective forest management decisions are made.

#### Element 6.1 Aboriginal and Treaty Rights

Recognize and respect Aboriginal and treaty rights.

Description of Local values	Description of Objectives	Indicators	Targets
Aboriginal rights and title	Recognition of aboriginal rights and title as related to forest management	(12), (23)	12, 23

#### Element 6.2 Respect for Aboriginal Forest Values, Knowledge, and Uses

Respect traditional Aboriginal forest values and uses identified through the Aboriginal input process.

Description of Local values	Description of Objectives	Indicators	Targets
Aboriginal rights, title and traditional knowledge are respected.	Protection of important archaeological sites (as interpreted by First Nations) <ul style="list-style-type: none"> <li>▪ Cultural and heritage sites and values, including spiritual.</li> </ul> Use of traditional knowledge Meaningful and informed participation of First Nations.	(12), (25)	12, 25

**Element 6.3 Public Participation**

Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants.

Description of Local values	Description of Objectives	Indicators	Targets
Public and First Nations values are recognized.	Public and First Nations values are incorporated in forest management planning through informed, inclusive and fair processes. All people are invited to participate.	(26), (27)	26, 27

**Element 6.4 Information for Decision-Making**

Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.

Description of Local values	Description of Objectives	Indicators	Targets
Adaptive forest ecosystem management. <ul style="list-style-type: none"> <li>▪ Experience and research</li> <li>▪ Understanding of policies and procedures</li> </ul>	Continual increase in knowledge of ecosystem needs and impacts of management techniques. <ul style="list-style-type: none"> <li>▪ Extension</li> </ul> Encourage the development of capacity for First Nations and public to provide informed and meaningful input into the decision making process.	(12), (16), (24), (26), (27), (28), (29)	12, 16, 24, 26, 27, 28, 29

## 7.0 Indicators and Indicator Matrices

In an SFM Plan it is the indicators and targets that provide the performance measures that are to be met through on-the-ground forest management activities. This section provides a detailed description of each of the indicators and targets in the SFM Plan for the Kamloops TSA. Full compliance is required for many targets i.e., there is no variance. Where full compliance may not be achievable, an acceptable level of variance is indicated for the target.

Licensees will monitor the achievement of targets annually. Monitoring procedures for each target in the SFM Plan are described below. Management strategies provide further direction to the performance measures (indicators and targets) and will serve as a guide for licensees in their annual monitoring activities. The format individual licensees use to complete annual reporting is shown in Appendix 3.

### **Objectives, Indicators and Targets**

The Kamloops TSA SFM plan process has served to further refine the information and concerns of the local public. Incorporating these concerns and ideas into individual licensee operations through the established performance measures and ongoing monitoring will ensure long term sustainability of the forest resource. Any indicators established in this Sustainable Forest Management Plan that are conducive to long term projections are as noted below.

Some of the targets in the SFM that refer to full compliance with existing regulations also make reference to exceeding regulations (e.g. indicator 2). In these cases, compliance is the performance baseline and exceeding the requirement is a goal for licensees to strive for as conditions permit.

Section 8.3 describes the plans, policies and management strategies that support the achievement of the targets in the SFM Plan.

### ***Base Line for Indicators***

The primary source of base line information for indicators is the first monitoring report subsequent to adoption of the indicator. In some instances reporting on a full year is required to generate a meaningful result.

### ***Current Status of Indicators***

Current status of indicators is a summarized version of the 2002 monitoring report. This section of the Indicator Matrix will not be updated on an annual bases. To obtain current information please refer to the most recent monitoring report at web site <http://www.for.gov.bc.ca/dka/TSASustainableForestry.htm>.

### **Forecasting**

Forecasts are the long term projection of expected future indicator levels. These have been incorporated into the SFM Plan targets as predicted results or outcomes for each target. LRMP forecasting completed to support preparation of the multiple accounts analysis, LRMP

## 7.0 Indicators and Indicator Matrices

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monitoring, and Timber Supply Review reporting, together, support data collection, review and forecasting that provides information regarding targets and indicators, and substantiation of sustainability.

Forecasting of many of the SFM Plan Indicators and Targets have occurred either indirectly or directly at the provincial or regional level. Plan development has built in this information often within the indicator and target itself. A strong example of this is the connection between desired outcomes of the LRMP and SFM Plan forecasts of indicators.

Often, the target for the indicator is in itself the predicted result or outcome. The target is the predicted outcome or forecast for most of the SFMP indicators. Generally, the target is being achieved for SFMP indicators. The forecast is that these targets will continue to be met. Indicator forecasts also provide predictions of future state relative to Elements, Values or Objectives.

### ***Provincial Forecasting Related to the SFM Plan***

Provincial Level Timber Supply Analysis of regulatory requirements of the Forest Practices Code occurred in February, 1996. The analysis reviewed timber supply impacts of Code requirements related to: riparian management areas, biodiversity at the stand and landscape level, watershed assessment sensitivity, identified wildlife species at risk, soil conservation and visual quality management.

The harvest level impact related to biodiversity and riparian management was based on analysis using the BC Forest Service Simulation Model (FSSIM), impact assessments related to remaining Code requirements were based on professional estimates. Analysis was then completed at both the provincial and regional levels to determine the short term effects of the FPC requirements.

### ***Regional Forecasting Related to the SFM Plan***

The Kamloops LRMP received approval in principle in May, 1995 and was declared as a higher level plan in January, 1996. Prior to approval in principle of the plan, a multiple accounts analysis was completed which assessed the social, economic and environmental impacts of four different Scenarios depicting differing combinations of management alternatives. The analysis assisted LRMP table members in negotiating the approval in principle.

Where the predictions made in the LRMP multiple accounts analysis are related directly or indirectly to the indicators of the SFM Plan, they will be noted in the forecast section of the related indicator matrix.

The Kamloops Timber Supply Area Rationale for AAC Determination, July 1<sup>st</sup>, 1996, included sensitivity analysis around IRM objectives including those of the LRMP. The analysis was conducted using FSSIM, using information about the timber harvesting landbase, timber volumes, and management strategies to indicate future state projected out for a period of 400 years. Prior to the Chief Forester making his determination, the public is invited to review and comment on the Timber Supply Review (TSR). Further information on the opportunities for public input can be found in the TSR discussion paper (May 1995). Further information pertaining to assumptions

and analysis can be found within the determination or the TSR for the Kamloops TSA (May 1995).

### **Legal Requirements**

Awareness of legal requirements is essential when considering suitable Objectives for an Element, and determining appropriate Indicators and Targets. In the following Indicator tables applicable Acts and Regulations are noted in the “Legal Requirements” section. Specific Sections/Subsections of these Acts and Regulations have not been identified to avoid having to manage the ongoing changes to forest legislation. Forest licensees ensure that specific legislation related to Objectives, Indicators and Targets is known and complied with by staying current with legal requirements. Subscribing to commercial services such as “Forest Views” or “Quickscribe” are examples of how licensees remain current.

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(1) Achievement of the TSA's old forest strategy.</b>
<b>Element(s)</b>	1.1 Ecosystem Diversity, 1.2 Species Diversity, 1.3 Genetic Diversity, 1.4 Protected Areas and Sites of Special Biological Significance, 2.1 Forest Ecosystem Resilience, 4.1 Carbon Uptake and Storage
<b>Strategy(s)</b> Description	<p>Indicator (1) forms part of the overall strategy to manage for biodiversity at the landscape and stand level. Based on direction in the Kamloops LRMP, high, intermediate and low biodiversity emphasis options and corresponding targets for Old Growth Management Areas (OGMAs) have been assigned to each of the 33 landscape units in the LRMP area. These OGMAs are specified according to natural disturbance type and biogeoclimatic ecosystem classification. A draft strategy is in place to ensure that these targets are implemented. It is important to understand that operations are not precluded within these OGMA's and their boundaries can be adjusted.</p> <p>Also contributing to Indicator (1) is the LRMP Protected Areas Strategy (Indicator 18). This strategy is designed to protect viable, representative examples of British Columbia's natural diversity and recreational opportunities and to protect special natural, cultural heritage and recreational features.</p> <p>Wildlife tree patch and wildlife tree retention is determined preharvest at the stand level. Indicator 4 reports on the success of achieving this strategy.</p> <p>Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS</p>
Means of achieving objective and target	<p>A draft strategy is in place to ensure that these targets are implemented.</p> <p>Protected areas are identified on Licensee maps</p> <p>Draft OGMAs are identified on Licensee maps based on LRMP biodiversity emphasis options</p>
<b>Forecast; Predicted Results or Outcome</b>	<p>Base line for priority indicator (2000)</p> <p>All licensees have met the intent of the Kamloops LRMP for old forest retention.</p>
Current status of indicator	All licensees met the intent of the Kamloops LRMP for old forest retention.
Forecast	<p>Healthy ecosystems with a diversity and abundance of native species and habitats</p> <ul style="list-style-type: none"> <li>• Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.</li> <li>• Age class distribution of old forests are forecast as part of periodic Timber Supply Review to monitor impacts on the landscape</li> </ul> <p>Biodiversity will be improved. Critical ecosystems including grasslands, old growth Douglas Fir and Ponderosa pine forest fall within proposed protected areas. Protection for biodiversity will increase over base case due to management strategies for water, soil and ecosystem protection.<sup>5</sup></p>
<b>Target</b>	Operations will respect the LRMP's objectives for retaining old forest as a component of seral stage distribution by landscape unit.
Basis for the Target	<p>Legal and sustainability requirements. Follows Kamloops LRMP direction.</p> <p>Agreed to by PAG</p> <ul style="list-style-type: none"> <li>• Meets legal requirements</li> <li>• Expectations for indicator met 100%</li> <li>• Measurable</li> </ul>
Legal Requirements	Forest Practices Code of British Columbia Act , Operational and Site Planning Regulation, Timber Harvesting and Silviculture Practices Regulation, Strategic Planning Regulation

<sup>5</sup> LRMP document "Assessment of the Kamloops LRMP Recommendation"; Feb 1995

## 7.0 Indicators and Indicator Matrices

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<b>Monitoring &amp; Measurement</b>	Part of periodic Timber Supply Review:
Periodic	<ul style="list-style-type: none"><li>▪ Protected Areas and Old Growth Management Areas area calculations</li><li>▪ Age class distribution of old forests are forecast to monitor impacts on the landscape</li></ul>
Annual	Licensees will report a yes/no answer if they have respected and are living up to the intent of the direction set forth in the LRMP relating to old forest retention.
Variance	None.

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(2) Level of conformance to riparian management area and lakeshore commitments contained within plans<sup>6</sup>.</b>
<b>Element(s)</b>	1.1 Ecosystem Diversity, 1.2 Species Diversity, 2.1 Forest Ecosystem Resilience, 3.2 Water Quality and Quantity
<b>Strategy(s)</b> Description	Indicator (2) forms part of the overall strategy to manage for biodiversity at the landscape and stand levels. Riparian management areas, as prescribed in the Forest Practices Code, provide connectivity of forested cover along waterways, which are generally areas with high value for wildlife habitat and movement. Kamloops and Headwaters Districts have policies for riparian management that build on the Forest Practices Code and that are required to be adhered to within those Forest Districts. District lakeshore guidelines provide additional management direction, as required, to meet social and ecological objectives for specified lakes and waterways.
Means of achieving objective and target	Licensees will attempt to identify small and unclassified wetlands and will take measures to minimize impacts to these features.  All commitments are included and highlighted in Licensee plans
<b>Forecast;</b> Predicted Results or Outcome	Base line for priority indicator (2000)  No riparian infractions occurred during the harvest of 3905 hectares of cutblocks and right of way areas.
Current status of indicator	Of a total of 11,902 hectares of cutblock and right-of-ways harvested, there was 1 riparian infraction.
Forecast	Healthy ecosystems with a diversity and abundance of native species and habitats. Properly functioning riparian systems. <ul style="list-style-type: none"> <li>• Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.</li> <li>• Age class distribution of old forests are forecast as part of periodic Timber Supply Review to monitor impacts on the landscape.</li> </ul> Water Quality will be maintained  Wilderness lakes will generally receive higher degree of protection. In most cases the Forest Practice Code will protect fish habitat. <sup>7</sup>
<b>Target</b>	100 percent conformance to riparian and lakeshore commitments made within plans.
Basis for the Target	Kamloops and Headwaters Districts have policies for riparian management  Recognition that riparian areas are “focus areas” for successfully meeting biodiversity and ecosystem objectives. Commitments may, and often do, exceed legal requirements.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Timber Harvesting and Silviculture Practices Regulation, Forest Road Regulation, Water Act
<b>Monitoring &amp; Measurement</b> Periodic	Age class distribution of old forests are forecast as part of periodic Timber Supply Review to monitor impacts on the landscape.
Annual	Licensees will report the number of riparian and lakeshore related non conformances to plans occurring during the reporting year as compared to the gross area harvested of cutblocks having riparian management areas within or adjacent to them.
Variance	Minus 5 percent. Variance to accommodate nonconformance to plans that have little or no impact to the environment and/or to the social and ecological objectives of lakeshore areas. <sup>7</sup>

<sup>6</sup> Plans prepared by licensees are in accordance with legal and LRMP requirements

<sup>7</sup> LRMP document “Assessment of the Kamloops LRMP Recommendation”; Feb 1995

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(3) Level of FPC compliance with caribou strategies.</b>
<b>Element(s)</b>	1.2 Species Diversity, 1.3 Genetic Diversity, 1.4 Protected Areas and Sites of Special Biological Significance
<b>Strategy(s)</b> Description	Indicator (3) forms part of the overall strategy to manage for biodiversity at the landscape and stand levels. Caribou is a blue listed species; special concern but not rare, threatened or endangered. Strategic direction for management of caribou habitat is provided in the Kamloops LRMP. The retention and management of the caribou corridors identified in the LRMP provides for connectivity of unique features within the LRMP North Thompson Habitat Resource Management Zones. It is important to understand that operations are not precluded within designated caribou corridors and their boundaries can be adjusted.  Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.
Means of achieving objective and target	LRMP strategy is incorporated into Licensee plans
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000)  All 5 licensees who operated within the LRMP caribou strategy area adhered to the management strategies. A total of 415 hectares were harvested within the caribou strategy area.
Current status of indicator	All licensees (4) who operated within the LRMP caribou strategy area adhered to the management strategies. A total of 753 hectares were harvested within the caribou strategy area.
Forecast	Healthy ecosystems with a diversity and abundance of native species and habitats. <ul style="list-style-type: none"> <li>• Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.</li> <li>• Age class distribution of old forests are forecast as part of periodic Timber Supply Review to monitor impacts on the landscape.</li> </ul> <p>Through proposed protected areas and management guidelines for low intensity zones rare habitats will receive a higher level of preservation. Caribou, moose and deer will benefit.<sup>8</sup></p>
<b>Target</b>	Full compliance with FPC & LRMP caribou strategy.
Basis for the Target	Legal and LRMP requirements. Reflects current performance level and is public expectation.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Wildlife Act
<b>Monitoring &amp; Measurement</b> Periodic	Age class distribution of old forests are forecast as part of periodic Timber Supply Review to monitor impacts on the landscape.
Annual	Licensees will report the area (ha) harvested meeting LRMP caribou strategies against the area harvested within the LRMP caribou strategy area during the reporting year.
Variance	As provided for within the legal framework. The statutory decision maker may approve variances from standard requirements provided adequate rationale is provided and long-term objectives continue to be met.

<sup>8</sup> LRMP document "Assessment of the Kamloops LRMP Recommendation"; Feb 1995

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(4) Percent of cutblocks greater than 5 hectares that have individual wildlife trees/stubs and/or associated wildlife tree patches upon completion of harvest.</b>
<b>Element(s)</b>	1.1 Ecosystem Diversity, 2.1 Forest Ecosystem Resilience, 2.2 Forest Ecosystem Productivity
<b>Strategy(s)</b> Description	<p>Indicator (4) focuses on management for biodiversity at the stand level. Retention of wildlife trees/stubs, either individually or in wildlife tree patches, is further described in the Landscape Unit Planning Guide and the Provincial Wildlife Tree Policy and Management Recommendations (February 2000). The actual retention of wildlife trees/stubs in cutblocks is subject to worker safety considerations as specified in the Worker's Compensation Board requirements for wildlife and danger trees. Note that wildlife tree patches may be located outside of cutblocks, along their edge, and still be consistent with provincial policy on wildlife tree retention. Where wildlife tree stubs are left, they should form only one part of the stand level tree retention found on a cutblock.</p> <p>Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS.</p> <p>Provincial wildlife tree management recommendations from February 2000 ensure alignment between Landscape Unit planning guide and Timber supply impacts</p>
Means of achieving objective and target	<p>During forest development planning, licensees incorporate strategies for maintaining diversity of structure and function within cutblocks including wildlife/leave tree retention.</p> <p>Retention of wildlife trees/stubs in cutblocks is subject to worker safety considerations.</p> <p>Value should be optimized both through the variety of tree types (e.g., species, size, live and dead, etc.) retained, and the amount of trees retained.</p>
<b>Forecast; Predicted Results or Outcome</b>	<p>Base line for priority indicator (2000)</p> <p>91% of harvested cutblocks greater than 5 ha in size have Wildlife Tree Patches (WTPs) and/or individual wildlife/leave trees identified in Licensee plans</p>
Current status of indicator	Seventy-nine percent of harvested cutblocks greater than 5 hectares in size have Wildlife Tree Patches (WTPs) and/or individual wildlife/leave trees identified in Licensee plans.
Forecast	<p>Healthy ecosystems with a diversity and abundance of native species and habitats.</p> <ul style="list-style-type: none"> <li>• Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS.</li> <li>• Provincial wildlife tree management recommendations from February 2000 ensure alignment between Landscape Unit planning guide and Timber supply impacts. Distribution of age classes as a result of wildlife tree retention are forecast as part of the Timber Supply Review.</li> </ul>
<b>Target</b>	Provision for the location and distribution of patches or individual wildlife/leave trees by ensuring 80 percent of cutblocks greater than 5 hectares will have individual wildlife trees/stubs and/or associated wildlife tree patches.
Basis for the Target	Landscape Unit Planning Guide and the Provincial Wildlife Tree Policy and Management Recommendations. Recommended best practice. Target designed to offer diversity in approach (varying size, location, presence of Wildlife Tree Patches or Wildlife Trees)
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Timber Harvesting and Silviculture Practices Regulation, Strategic Planning Regulation, Workers Compensation Act
<b>Monitoring &amp; Measurement</b> Periodic	Distribution of age classes as a result of wildlife tree retention are forecast as part of the Timber Supply Review.
Annual	Licensees will report, for cutblocks greater than 5 hectares, the number of cutblocks with wildlife tree patches within or parented to the cutblock and/or individual trees/stubs within the cutblock versus the total number of cutblocks greater than 5 ha in size upon completion of harvest, during the reporting year.
Variance	Acceptable range is between 70 percent and 100 percent. Variances are provided for within the <i>Provincial Wildlife Tree Policy and Management Recommendations</i> (February 2000).

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(5) Percent of cutblocks consistent with coarse woody debris requirements in plans.</b>
<b>Element(s)</b>	3.1 Soil Quality and Quantity, 4.1 Carbon Uptake and Storage
<b>Strategy(s)</b> Description	<p>Indicator (5) addresses the need to maintain structural features of forest ecosystems at the stand level. The retention of coarse woody debris must fit within the framework of provincial utilization standards. The Kamloops Forest Region and Forest District are currently developing a strategy to guide retention of coarse woody debris on harvested sites.</p> <p>Strategies include direction for basic levels of CWD, creation of stubs, and guidelines for enhanced levels of CWD in landscape units with high biodiversity emphasis options.</p> <p>Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.</p>
Means of achieving objective and target	<p>Companies will refer to provincial utilization standards and broad regional guidelines in preparing Forest Development Plans, which will subsequently be approved by the Ministry of Forests District Manager.</p> <p>Licenseses achieve the target by the setting of related objectives within their plans<sup>9</sup>.</p>
<b>Forecast;</b> Predicted Results or Outcome	<p>Base line for priority indicator (2000)</p> <p>214 of 214 harvested cutblocks followed coarse woody debris policies.</p>
Current status of indicator	A total of 806 cutblocks were harvested during the reporting period. All cutblocks followed coarse woody debris strategies.
Forecast	<p>Healthy ecosystems with a diversity and abundance of native species and habitats.</p> <ul style="list-style-type: none"> <li>• Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.</li> <li>• Coarse woody debris management is in its infancy within the province. Additional research and information gathering will help improve the ability to predict desired levels and impact. Policy provides consistency with Timber Supply review to ensure no timber supply impact.</li> </ul>
<b>Target</b>	100 percent of cutblocks will be consistent with coarse woody debris requirements contained in plans.
Basis for the Target	Kamloops Forest Region and Forest District are currently developing a strategy. Coarse woody debris management is in its infancy within the province. Additional research and information gathering will help improve the ability to predict desired levels and impact.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation
<b>Monitoring &amp; Measurement</b>	Timber Supply review to ensure no timber supply impact.
Periodic	
Annual	Licenseses will report on the number of cutblocks where the Coarse Woody Debris (CWD) requirements contained in plans were followed in the reporting year. This number will be compared to the number of cutblocks harvested during the reporting year.
Variance	None

<sup>9</sup> Plans prepared by licenseses are in accordance with legal and LRMP requirements

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(6) Average regeneration period from time of harvest.</b>
<b>Element(s)</b>	3.2 Water Quality and Quantity, 4.1 Carbon Uptake and Storage, 4.2 Forest Land Conversion
<b>Strategy(s)</b> Description	Indicator (6) focuses on long-term species composition across the landbase and prompt reforestation. Prompt reforestation ensures that the productive capacity of forest landbase to grow trees is maintained. Forests in British Columbia are classified according to the Biogeoclimatic Ecosystem Classification System, which identifies the tree species that are most suited ecologically for regeneration in any particular site. This not only helps to maintain the natural forest composition in an area, but it also lends itself to forest health and productivity in the long-term
Means of achieving objective and target	Licenseses will follow guidelines specifying tree species that are most suited ecologically to maintain natural forest composition in an area.  Silviculture regime and forward plans schedule activities consistent with established key dates contained within plans.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000)  During September to December, a limited amount of regeneration activity occurred. Average regeneration delay was 22.1 months (1.85 years).
Current status of indicator	Average regeneration delay was 22 months (1.8 years).
Forecast	Prompt reforestation ensures that the productive capacity of forest landbase to grow trees is maintained. Promptness also aids in providing young trees a head start against competing vegetation, helping to reduce the need for manual or chemical brushing treatments. <ul style="list-style-type: none"> <li>• Regeneration delay information (eventually effects age class distribution) is utilized in Provincial Timber Supply Review. Ministry of Forests is responsible for forecasting of key dates such as regeneration delay and free growing based on specific biogeoclimatic information for each site.</li> <li>• Silviculture regime and forward plans schedule activities consistent with established key dates contained within plans.</li> </ul>
<b>Target</b>	Regeneration established within three years or less on average from time of harvest.
Basis for the Target	Exceeds legal requirements. Sustainability (vigor, site productivity) enhanced. Reflects current performance level.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Timber Harvesting and Silviculture Practices Regulation
<b>Monitoring &amp; Measurement</b> Periodic	Regeneration delay information (eventually effects age class distribution) is utilized in Provincial Timber Supply Review. Ministry of Forests is responsible for forecasting of key dates such as regeneration delay and free growing based on specific biogeoclimatic information for each site.
Annual	Licenseses will report the average time (weighted by area) for regeneration establishment on areas where regeneration delay was declared during the reporting period.
Variance	12 months beyond the 3-year target

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(7) Level of compliance with management strategies for all known rare ecosystems.</b>
<b>Element(s)</b>	1.3 Genetic Diversity, 1.4 Protected Areas and Sites of Special Biological Significance, 2.1 Forest Ecosystem Resilience
<b>Strategy(s)</b> Description	Where known rare ecosystems have been identified, government agencies will define a management strategy. Licensees must follow the intent and direction set forth in the strategy. A definition of “rare ecosystems” is shown in the Glossary of Terms. Rare ecosystems are also those defined through government processes and identified as “known information” under the Forest Practices Code.  Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.
Means of achieving objective and target	If a licensee identifies a unique feature (e.g. nesting site, rare habitat, unique landform, etc.) at anytime, best efforts will be made to incorporate the feature into planned operations.  Protected areas are identified on Licensee maps
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000)  Rare Ecosystems have not been made known for the Forest Development Plan process.
Current status of indicator	Rare Ecosystems have not been made known for the Forest Development Plan process.
Forecast	A diversity of healthy ecosystems while maintaining “rare” attributes as well as a diversity and abundance of naturally occurring wildlife and their habitats.  <ul style="list-style-type: none"> <li>• Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.</li> </ul> Full Compliance with management strategies for all known rare ecosystems.  Through proposed protected areas and management guidelines for low intensity zones rare habitats will receive a higher level of preservation. <sup>10</sup>
<b>Target</b>	Full Compliance with management strategies for all known rare ecosystems.
Basis for the Target	Legal requirements. Reflects current performance level and is public expectation.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Timber Harvesting and Silviculture Practices Regulation, Forest Road Regulation, Wildlife Act, Species at Risk Act
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	If licensees have any known rare ecosystems identified within their operating areas, they will report the number of known rare ecosystems in the operating area versus the number of known rare ecosystems where management strategies were followed. Where no activity or planned activity occurred in/around a known rare ecosystem, strategies are considered to be “followed”.
Variance	None

<sup>10</sup> LRMP document “Assessment of the Kamloops LRMP Recommendation”; Feb 1995

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(8) Level of conformance with management strategies for all identified wildlife (under IWMS).</b>
<b>Element(s)</b>	1.2 Species Diversity, 1.3 Genetic Diversity, 1.4 Protected Areas and Sites of Special Biological Significance
<b>Strategy(s)</b> Description	The Forest Practices Code provides direction for the Identified Wildlife Management Strategy (IWMS). The IWMS <sup>11</sup> provides guidelines for managing specific plant and animal species that are currently considered threatened or endangered. This includes a number of species found within the Kamloops TSA. The IWMS species that are managed for within the Kamloops Timber Supply Area are listed in Appendix 2.  Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.
Means of achieving objective and target	The Kamloops LRMP directs resource managers to prepare appropriate local level plans for threatened and endangered species and habitats.  Direction provided by a local level plan is incorporated in licensee plans.
<b>Forecast;</b> Predicted Results or Outcome	Base line for priority indicator (2000)  All licensees have IWMS Species in their operating area and all have followed appropriate management strategies.
Current status of indicator	All licensees (3) with IWMS species in their operating areas followed appropriate management strategies. There were a total of 18 cutblocks where IWMS management strategies applied.
Forecast	A diversity of healthy ecosystems while maintaining “rare” attributes as well as a diversity and abundance of naturally occurring wildlife and their habitats.  Provincial Timber supply impacts related to biodiversity are capped at 4.1 percent and 1 percent for IWMS. Kamloops LRMP direction is consistent with provincial forecasting.  Through proposed protected areas and management guidelines for low intensity zones rare habitats will receive a higher level of preservation. Caribou, moose and deer will benefit. <sup>12</sup>
<b>Target</b>	100 % conformance with management strategies for those species identified in the Identified Wildlife Management Strategy.
Basis for the Target	Legal requirements. Reflects current performance level and is public expectation.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Wildlife Act
<b>Monitoring &amp; Measurement</b>	
Periodic	
Annual	If licensees have any Identified Wildlife Management Strategy (IWMS) species identified within their operating areas, they will report the area harvested within IWMS areas, whether the harvest areas had strategies to manage for the identified wildlife in plans, and whether the plans were followed. Where no activity or planned activity occurred in/around an IWMS cutblock, strategies are considered to be “followed”.
Variance	None

<sup>11</sup> Volume 2 of the IWMS (not yet released) will provide management guidelines for additional species at risk.

<sup>12</sup> LRMP document “Assessment of the Kamloops LRMP Recommendation”; Feb 1995

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(9) Age class distribution for coniferous species and percent of land base for broad leaf species.</b>
<b>Element(s)</b>	1.2 Species Diversity, 1.3 Genetic Diversity, 2.1 Forest Ecosystem Resilience, 2.2 Forest Ecosystem Productivity
<b>Strategy(s)</b> Description	Forest trees, while only one component of a forest environment that includes a variety of life processes, are very important in providing structure and habitat for other organisms. Tree species composition, stand age, and stand structure are important variables that affect the biological diversity of a forest ecosystem.
Means of achieving objective and target	Maintain broad leaf species through individual tree and patch retention and through natural regeneration in harvested areas. Maintain natural diversity of coniferous species through stocking and natural regeneration.
<b>Forecast;</b> Predicted Results or Outcome	Base line for priority indicator Timber Supply Review (TSR II) reports 37,878 hectares of broad leaf species (Table 2) on the land base managed by the Ministry of Forests
Current status of indicator	NA
Forecast	Ecosystem diversity maintained through a diversity of broad leaf and coniferous tree species
<b>Target</b>	No net loss for broad leaf species.
Basis for the Target	Need to maintain the biological diversity of these ecosystems in managed second-growth and third-growth forests
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	Information on age class distribution for coniferous species and percent of the land base for broad leaf species will be derived from the Timber Supply Review for the entire TSA. This data is assembled periodically in conjunction with the TSR, however results will be reported annually and trends will emerge as the number of years of reporting data accumulates.
Variance	5% reduction in broad leaf species (uncontrolled events associated with licensee operations: forest pests etc)

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(10) Annual percent of harvested areas in permanent access structures (e.g. roads and landings).</b>
<b>Element(s)</b>	3.1 Soil Quality and Quantity, 3.2 Water Quality and Quantity, 4.2 Forest Land Conversion
<b>Strategy(s)</b> Description	A significant amount of land can be permanently lost within cutblocks to access structures such as roads and landings. These access structures compact soil, making regeneration difficult, and disrupt the natural connectivity within forest stands.
Means of achieving objective and target	Loss of the landbase to access structures can be minimized with <ul style="list-style-type: none"> <li>• careful access planning to minimize the length of road required for harvesting and the number of landings</li> <li>• and use of proper road construction and maintenance procedures</li> </ul>
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000) The percentage area of harvested roads and landings within the total harvested area averaged 4.2%.
Current status of indicator	The percentage of roads and landings within the total harvested area averaged 3.7 percent.
Forecast	Productive forest soils with minimized losses to forest development. <ul style="list-style-type: none"> <li>• Permanent access structures percent (NPUNN) are utilized in Provincial Timber Supply Review forecasts.</li> </ul>
<b>Target</b>	Less than 6 percent, on average, of harvested areas will be in permanent roads and landings.
Basis for the Target	Exceeds legal limits. Reflects current performance level. Original target at maximum legal limit. Continued success with results at less than target maximum resulted in a reduced maximum target at 6%  The percent target refers specifically to loss to the timber harvesting landbase due to access structures within harvested areas. It does not include land area lost to roads connecting harvested areas.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Timber Harvesting and Silviculture Practices Regulation, Forest Road Regulation
<b>Monitoring &amp; Measurement</b> Periodic	Permanent access structures percent (NPUNN) are utilized in Provincial Timber Supply Review forecasts.
Annual	Licensees will report the area (ha) of permanent roads and landings identified in plans <sup>13</sup> over gross block area (ha) for cutblocks harvested during the reporting year, using information contained within Licensee plans.
Variance	None

<sup>13</sup>If Ministry of Forests inspection reports the plan number has been exceeded, the actual number will be used in the report.

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(11) Annual harvest level relative to annual allocation.</b>
<b>Element(s)</b>	4.2 Forest Land Conversion, 5.3 Fair Distribution of Benefits and Costs
<b>Strategy(s)</b> Description	The sustainable harvest level for the TSA is determined by the Chief Forester after considering social, economic and biological criteria.
Means of achieving objective and target	Licenseses contribute to the sustainable harvest level by adhering to their apportioned harvest volume within the TSA. Cut control regulations dictate the short-term harvest flexibility.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000) Existing harvest level for the TSA (2,393,180 m3) can be maintained for 20 years All licenseses are within the cut control variance set out by regulation. The volume harvested in 2000 was 2,996,147 cubic meters.
Current status of indicator	The volume harvested in 2002 was 2,858,079 cubic meters, which is 101 percent of the allocated volume of 2,835,051 cubic meters, well within the 50 percent variance allowed by cut control regulation.
Forecast	Short and long term harvest flows that reflect forest conditions, forest practices, and the socio-economic objectives of the Crown.  A timber supply review for the TSA was completed in 1996. The review indicated the existing harvest level for the TSA (2,393,180 m3) can be maintained for 20 years followed by a decline at a rate of 9 percent per decade for the following four decades reaching the long term harvest level of 1,958,000 m3. A subsequent timber supply analysis and Chief Forester review was completed in 2001. The analysis forecasted that existing harvest commitments could be maintained for the next 70 years. The determination by the Chief Forester was made in 2003. His rationale for maintaining the current level of harvest can be found at <a href="http://www.for.gov.bc.ca/hts/tsa/tsa11/docs.htm">http://www.for.gov.bc.ca/hts/tsa/tsa11/docs.htm</a>  <ul style="list-style-type: none"> <li>▪ Timber Supply Review has detailed forecasts which then rely on the Chief Forester to provide a determination. Public input is provided throughout the process.</li> </ul>
<b>Target</b>	Harvest the annual cut allocation for the year consistent with the Cut Control Regulation and Policy.
Basis for the Target	Legal requirements.
Legal Requirements	Forest Act, Cut Control Regulation
<b>Monitoring &amp; Measurement</b>	The next determination by the Chief Forester is anticipated in 2008.
Periodic	Periodic Timber Supply Review (TSR)
Annual	Licenseses will report the harvest level allocated for each license and harvest level cut (cut control volume) for the past reporting year.
Variance	According to the Cut Control Regulation and Policy

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</b>
<b>Element(s)</b>	1.1 Ecosystem Diversity, 1.2 Species Diversity, 1.4 Protected Areas and Sites of Special Biological Significance, 5.1 Timber and Non-Timber Benefits, 5.2 Communities and Sustainability, 6.1 Aboriginal and Treaty Rights, 6.2 Respect for Aboriginal Forest Values, Knowledge, and Uses, 6.4 Information for Decision-Making
<b>Strategy(s)</b> Description	Indicator (12) recognizes the importance of managing and protecting non-timber resources, including cultural/heritage resources and values, during forestry operations. First Nations may provide useful information concerning non-timber resources, including cultural and heritage resources, traditional use sites and knowledge of local wildlife and fisheries. Non-timber resources may also include, but not be limited to, water, wildlife, fisheries, recreation, tourism, botanical forest products, and forage
Means of achieving objective and target	Open communications with local First Nations during Plan reviews.  Written requests for communication are responded to.  Traditional knowledge, non-timber resources, and cultural and heritage values are appropriately managed for and protected in licensee plans.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000)  Licensees responded to all First Nation's requests for communication.  Other two reportables new for 2003, base line will be set in 2003 Monitoring Report
Current status of indicator	Licensees responded to all First Nation's requests for communication.  Other two reportables new for 2003, base line will be set in 2003 Monitoring Report
Forecast	Forest operations that reflect the timber and non-timber interests of local First Nations.
<b>Target</b>	12a: Open communications with local First Nations during Operational Plan reviews will include consideration of and will manage for, where appropriate traditional knowledge, non-timber resources, and cultural and spiritual values.  12b: TSA Licensees respond to all written requests for communication from First Nations  12c: Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.
Basis for the Target	Developed by Licensees with First Nations
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Heritage Conservation Act
<b>Monitoring &amp; Measurement</b>	
Periodic	
Annual	Licensees will report: <ul style="list-style-type: none"> <li>• Number of meetings and meaningful communications with First Nations that included management and protection of traditional knowledge, non-timber resources, and cultural and spiritual values; and,</li> <li>• Number of cutblocks where specific actions were requested and were taken, using traditional knowledge where available, to manage for and/or protect non-timber resources, and cultural and spiritual values.</li> <li>• Licensees will report on the number of written requests for communication from First Nations versus the number of responses made to First Nations. Reporting is on a one to one ratio (one response for each request)</li> </ul>
Variance	None

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(13) Level of conformance to soil conservation commitments contained within plans.</b>
<b>Element(s)</b>	3.1 Soil Quality and Quantity
<b>Strategy(s)</b> Description	Indicator (13) addresses the impacts of forestry operations on soil productivity. Soil compaction, displacement and erosion are components of soil disturbance.
Means of achieving objective and target	Maximum planned levels of soil disturbance are assigned to all cutblocks based on related field data.  Site preparation is generally beneficial to soil productivity, creating suitable growing conditions and beneficial microsites for crop establishment, mixing and aerating the soil, and minimizing opportunities for growth of competing vegetation. Expeditious re-establishment of new stands can assist in preventing erosion and other forms of soil displacement.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000)  Timber supply impacts of this FPC requirement were analyzed in the FPC Analysis Report – 1996.  Licensees met soil disturbance objectives on all 3499 hectares of cutblock area harvested.
Current status of indicator	Soil disturbance objectives were met on all 11,183 hectares of harvested cutblocks.
Forecast	Productive forest soils with minimized losses to forest development.  <ul style="list-style-type: none"> <li>• This target reflects the Forest Practices Code – Soil Conservation Guidebook standards. Timber supply impacts of this FPC requirement were analyzed in the FPC Analysis Report – 1996.</li> </ul>
<b>Target</b>	100 percent conformance to soil conservation measures contained within plans.
Basis for the Target	Legal requirements. Maintenance of site productivity is a core prerequisite for achieving sustainability.  Reason for change (2003):  <ul style="list-style-type: none"> <li>• move from reliance on government to identify soil conservation issues to internal monitoring of operations for soil conservation</li> </ul>
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Timber Harvesting and Silviculture Practices Regulation
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	Licensees will report the area (hectares) where soil disturbance commitments were not achieved as compared to the total gross area harvested during the reporting year.
Variance	None

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(14) Number of months for road cut and fill slope seeding application.</b>
<b>Element(s)</b>	3.2 Water Quality and Quantity
<b>Strategy(s)</b> Description	Prompt revegetation of road cuts and fill slopes will minimize potential for soil movement and sedimentation. This will contribute to maintenance of water quality and long-term productivity of the land. Prompt revegetation of harvested areas will also contribute to noxious weed control.
Means of achieving objective and target	Timely revegetation of exposed soils on newly constructed road cut and fill slopes is completed per licensee plans.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000) Road cuts and fill slopes were seeded or planted on average within 3.4 months of disturbance, compared to a target of 12 months.
Current status of indicator	Road cuts and fill slopes were seeded or planted on average within 3.6 months of disturbance, compared to a target of 12 months.
Forecast	Timely revegetation of exposed soils on newly constructed road cut and fill slopes will reduce the potential for soil movement and sedimentation thereby contributing to the maintenance of water quality.  <ul style="list-style-type: none"> <li>• This target reflects the Forest Practices Code – Road Regulations and Road Engineering Guidebook.</li> </ul>
<b>Target</b>	All planned road cut and fill slope seeding application carried out within 12 months of completed road construction on suitable sites
Basis for the Target	Legal Requirements. Reduce soil erosion and sedimentation of streams, and reduce noxious weed establishment.
Legal Requirements	Forest Practices Code of British Columbia Act, Forest Road Regulation
<b>Monitoring &amp; Measurement</b>	
Periodic	
Annual	Licensees will report the average time for road cut and fill slope seeding application on areas of new road construction during the reporting year.
Variance	3 months

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(15) Percent of status roads inspected in accordance with schedule.</b>
<b>Element(s)</b>	3.2 Water Quality and Quantity
<b>Strategy(s)</b> Description	Indicator (15) recognizes the potential impact of roaded access on forests and waterways. Licensees have an obligation to maintain forestry roads developed as part of their operations.
Means of achieving objective and target	Proactive development of maintenance or deactivation plans for forestry roads will prevent or mitigate short- and long-term impacts of roads as they are developed. Maintenance and deactivation plans include an assessment of risk and subsequent road inspections are undertaken commensurate with the risk.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000) Original Target: All status roads have and will conform to their maintenance or deactivation plan as described in the Forest Development Plan. 2000 Results: All 6,797 kilometers of status roads conformed to their maintenance or deactivation plans. MR 00
Current status of indicator	2000 Results: All 8,840 kilometers of status roads conformed to their maintenance or deactivation plans- There continues to be a high level of conformance to this indicator.
Forecast	Active road maintenance and deactivation programs , particularly during the spring snow melt, will assist in the prevention soil movement and sedimentation thereby contributing to the maintenance of water quality and soil productivity.
<b>Target</b>	Manage water quality and erosion control by ensuring that 100 percent of status roads (temporary and permanent) are assessed for level of risk and that the frequency of inspections occurs at planned levels commensurate with level of risk.
Basis for the Target	Legal requirements. Recognition that roads have the largest potential environmental aspect of all forestry operations. Also recognizes risk management. Reason for change (2003): move from reliance on government to identify compliance with maintenance and deactivation plans
Legal Requirements	Forest Practices Code of British Columbia Act, Forest Road Regulation
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	Licensees will report on the number of kilometers of status roads and the number of those that have been assigned a risk rating for the purpose of inspections. Licensees will also report on the number of road inspections made against the plan for high, moderate and low risk.
Variance	Minus 2 percent for high risk rated roads, minus 10 percent for moderate risk and minus 20 percent for low risk.

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(16) Level of participation in the annual reporting of results and the number of advisory group meetings held annually.</b>
<b>Element(s)</b>	5.3 Fair Distribution of Benefits and Costs, 6.4 Information for Decision-Making
<b>Strategy(s)</b> Description	Indicator (16) indicates a commitment of Licensees to develop a Sustainable Forest Management Plan, and report on results, irrespective of whether or not they intend to pursue formal certification. This will ensure consistency of sustainable forest management across the TSA.
Means of achieving objective and target	All Licensees: Schedule meeting and attend
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator New in 2001: All licensees participated in the development of the 2000 Monitoring Report. Advisory group met three times during 2001.
Current status of indicator	All licensees participated in the development of the 2001 Monitoring Report. Advisory group met 2 times and held a field trip during 2002.
Forecast	Demonstration by TSA licensee's of their commitment to sustainable forestry. <ul style="list-style-type: none"> <li>• Annual meetings of the SFM Advisory Group</li> </ul>
<b>Target</b>	100 percent participation in the SFM Plan monitoring process and hold at least one meeting per year with the SFM Public Advisory Group to review results.
Basis for the Target	This monitoring process will provide the licensees, public and First Nations with an opportunity to bring forward new information and to provide input concerning new or changing public values that can be incorporated into future updates of the SFM Plan. Reason for change (2003): Make wording clearer and focus more on licensee performance
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	Licensees will report a yes/no answer they contributed to the annual report and a yes/no answer if they participated in a meeting with the SFM Public Advisory Group.
Variance	None

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(17) Number of registrations to a recognized third party certification.</b>
<b>Element(s)</b>	5.3 Fair Distribution of Benefits and Costs
<b>Strategy(s)</b> Description	Indicator (17) recognizes the importance of certification to provide assurance to consumers that forest products originate from sustainably managed forests. Third party certification includes, among others, registration to the CSA, ISO 14001 and the Forest Stewardship Council. Additional registrations mutually recognized by any of these organizations would also apply.
Means of achieving objective and target	Licensees maintain a TSA SFMP that facilitates individual licensees interested in registering to their own Plan. Licensees support those seeking registration.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000) 2 licensees are registered to a recognized third party certification.
Current status of indicator	Seven licensees are registered to a recognized third party certification. Three of the seven licensees are registered to more than one certification system. This compares to five registered licensees in 2001.
Forecast	Public and customer confidence that sustainable forestry takes place within the TSA by having third party endorsement of practices. <ul style="list-style-type: none"> <li>• Maintain registration and provide customers/shareholders commitment to sustainable forestry.</li> </ul>
<b>Target</b>	Maintain and/or increase the number of registrations to a recognized third party certification.
Basis for the Target	Promote movement to TSA wide registration.
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b>	
Periodic	
Annual	Licensees will report the number of registrations to a recognized third party certification that apply over the TSA area for the reporting period.
Variance	None

## 7.0 Indicators and Indicator Matrices

Indicator	<b>(18) Protected Ecosystems</b>
<b>Element(s)</b>	1.1 Ecosystem Diversity, 1.4 Protected Areas and Sites of Special Biological Significance
<b>Strategy(s)</b> Description	Indicator (18) forms part of the overall strategy to manage for biodiversity at the landscape level. The Kamloops LRMP Protected Areas strategy is designed to protect viable, representative examples of British Columbia's natural diversity and recreational opportunities and to protect special natural, cultural heritage and recreational features.  Other processes have identified other areas requiring special management (mule deer winter range, etc).
Means of achieving objective and target	The forest licensees participated in the Kamloops LRMP which delineated a series of protected areas and special natural, cultural heritage and recreational features and special management zones within the TSA. This achieved the geographic and ecological goals of the provincial Protected Areas Strategy. Protected areas, including Wells Gray Park, are shown on the overview map.  Cultural and spiritual areas of importance will be protected or managed for in the future through implementation of the Archaeological Overview Assessment (AOA) process (refer to Indicator 25).  Identification of rare ecosystems (Indicator 7) will lead to protection or management.
<b>Forecast;</b> Predicted Results or Outcome	Base line for priority indicator (2003)  22.8%
Current status of indicator	NA
Forecast	Protected area within the Kamloops TSA will meet or exceed the 12% Provincial target, and will contribute to Provincial representation by biogeoclimatic zones.  Increase of 7 ecosystems are protected; 6 more are represented but do not fully meet the provincial goals. Two are not represented. If Taweel area is protected 1 more ecosystem would be represented and meet the Provincial goals. <sup>14</sup>
<b>Target</b>	12% protected areas
Basis for the Target	Protected Areas Strategy was established by the provincial government in 1992
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Ecological Reserve Act, Park Act, Protected Areas of BC Act
<b>Monitoring &amp; Measurement</b>	Current status is provided as part of periodic Timber Supply Review.
Periodic	Reported on a TSA basis.
Annual	Licensee report the current Protected Area status as last reported by a Timber Supply Review
Variance	None

<sup>14</sup> LRMP document "Assessment of the Kamloops LRMP Recommendation"; Feb 1995

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(19) Percent of affected ranchers with whom meetings are held.</b>
<b>Element(s)</b>	5.1 Timber and Non-Timber Benefits, 5.2 Communities and Sustainability
<b>Strategy(s)</b> Description	Ranchers are one of the key stakeholder groups in the Kamloops TSA. Forestry operations often overlap range tenures and the outcome of operational activities can potentially have a significant effect on range use.
Means of achieving objective and target	Where a rancher may be affected by a planned forestry operation, forest licensees commit to meeting range tenure holders every year to discuss any issues and concerns that the ranchers may have and considering those concerns in forest development planning.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2001) Ninety-two percent of ranchers affected by planned operations were communicated with during the reporting period compared to a target of 90 percent.
Current status of indicator	One hundred percent of ranchers affected by planned operations were communicated with during the reporting period compared to a target of 90 percent.
Forecast	Minimize the tree/grass/cattle conflicts through integrated and co-operative management practices. <ul style="list-style-type: none"> <li>• Mutual respect with other Crown license holders with a commitment to communicate in order to maintain the viability of resources for all parties.</li> </ul>
<b>Target</b>	Where forest operations are planned within range units, the forest licensee will meet annually with the rancher to help ensure forest operations will not adversely affect existing animal unit months (AUMs).
Basis for the Target	Essential that holders of varying land use tenures on the same land base communicate regularly.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	Licensees will report percent of ranchers affected by planned operations that were communicated with during the reporting period.
Variance	Minus 10 percent of 90 percent target

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(20) Level of conformance to strategies in plans designed to achieve preservation, retention and partial retention of visual quality objectives.</b>
<b>Element(s)</b>	5.1 Timber and Non-Timber Benefits
<b>Strategy(s)</b> Description	<p>Visual quality objectives define the amount of visual alteration acceptable from a given viewpoint. Visual landscape inventories are technical processes that assign visual quality objectives based on a standard methodology; the amount of prescribed preservation, retention or partial retention will vary depending on the landscape. The choice of scenic areas and significant viewpoints is based on social preferences. Management for visual quality can contribute to the achievement of other objectives for sustainable forest management such as biodiversity, retention of wildlife habitat, and retention of old growth forest.</p> <p>Visually sensitive areas were identified in the Kamloops LRMP and corresponding visual quality objectives were assigned.</p>
Means of achieving objective and target	<p>Visual impact assessments are completed by licensees for operations proposed in scenic areas with established VQOs at the planning stage. They are used to estimate the potential visual impact of proposed operations on scenic resources and to assess whether the VQOs would be achieved.</p> <p>If visual quality objectives are not met, remedial action can often be undertaken to minimize visual impact.</p>
<b>Forecast; Predicted Results or Outcome</b>	<p>Base line for priority indicator (2000)</p> <p>Harvesting in 182 of 183 cutblocks met visual quality objectives.</p>
Current status of indicator	<p>423 of 437 cutblocks harvested met visual quality objectives.</p> <p>VQOs were not met on 14 blocks, as they were harvested as a result of forest health strategy. No visual impact assessment was conducted on these blocks and they were visually assessed as not meeting VQO.</p>
Forecast	<p>Management for visual quality within scenic areas is based on social preferences. Visually sensitive areas were identified in the Kamloops LRMP and corresponding visual quality objectives were assigned. These preferences generally constrain timber supply, and as such have been provided for in the TSA Timber Supply Review. Management for visual quality can often additionally contribute to other non-timber objectives.</p>
<b>Target</b>	100 percent conformance to strategies contained in plans.
Basis for the Target	LRMP. Visual Impact Assessment Guidebook. Legal requirements. Change in visual appearance is often the primary harvesting or road building impact noticed by the general public.
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation, Timber Harvesting and Silviculture Practices Regulation
<b>Monitoring &amp; Measurement</b> Periodic	<p>One or more of the following processes can be followed to determine if a harvested area meets visual quality objectives:</p> <ol style="list-style-type: none"> <li>a. internal evaluation of compliance with visual quality objectives by licensees;</li> <li>b. inspections by the Ministry of Forests</li> </ol>
Annual	Licensees will report on the number of harvested blocks that achieve the visual intent as described in plans versus the number of blocks harvested within the past year that had preservation, retention or partial retention visual quality objectives.
Variance	Minus 5 percent.

## 7.0 Indicators and Indicator Matrices

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<b>Indicator</b>	<b>(21) Mean Annual Increment (MAI)</b>
<b>Element(s)</b>	2.2 Forest Ecosystem Productivity, 4.1 Carbon Uptake and Storage
<b>Strategy(s)</b> Description	Mean Annual Increment is an indicator of the sustainability of management practices and the productivity of ecosystems. Conserve ecosystem productivity and resilience by maintaining a diversity of habitats.
Means of achieving objective and target	<p>Mean Annual Increment can be influenced by:</p> <ul style="list-style-type: none"> <li>▪ Climate, elevation soil conditions, forest age and forest practices.</li> <li>▪ Using effective silviculture practices to increase growth rates (prompt regeneration, superior seed, effective site preparation etc.)</li> </ul>
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2003) Current Lodgepole pine mai is 1.86 cubic meters per hectare per year.
Current status of indicator	
Forecast	Maintained or increasing Mean Annual Increment. Maintained or increased carbon storage and flow of forest values over time.
<b>Target</b>	Maintain the long term productivity of the forest as measured by the mean annual increment (m <sup>3</sup> /ha/yr) for Lodgepole pine.
Basis for the Target	Introduction of improved seed, effective forest management practices and a balanced age class distribution support increasing Mean Annual Increment over time.
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b> Periodic	Information required for reporting is provided as part of Timber Supply Review completed periodically. Beginning and end of simulation data is to be plotted over successive periods to confirm achievement of target.
Annual	Licensee report the current mai as last reported by a Timber Supply Review
Variance	None

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(22) Forest age class distribution</b>
<b>Element(s)</b>	1.1 Ecosystem Diversity, 1.2 Species Diversity, 2.2 Forest Ecosystem Productivity, 4.1 Carbon Uptake and Storage
<b>Strategy(s)</b> Description	<p>A balanced age class distribution allows for an even flow of timber values and benefits. A reduction of the current imbalance of mature to over mature stands also reduces forest health risks.</p> <p>Forecasted forest age class distribution over time provides an indication of sustainability.</p> <p>Balanced age classes will result in a larger proportion of hectares in younger faster growing stands with a net carbon intake.</p>
Means of achieving objective and target	<p>Maintain current harvest priority:</p> <p>Forest health management – harvesting attacked and susceptible stands (generally older stands)</p> <p>“Available” stands with the most years beyond culmination (maximum mean annual increment)</p> <p>Immediate implementation.</p>
<b>Forecast; Predicted Results or Outcome</b>	<p>Base line for priority indicator (2003)</p> <p>All age classes except age class 1 have less than 8.5% area representation.</p> <p>Age classes 1 to 5 average only 6.3% reflecting the disproportionate area in over mature age classes.</p>
Current status of indicator	
Forecast	<p>Continuation of current harvest priorities will lead to balanced age classes on the available productive forest land. Protected Area, Old Growth Management Area (OGMA), and Wildlife Tree Patch Strategies , together with inaccessible areas, ensure retention of sufficient old growth to sustain biodiversity and ecosystem objectives.</p> <p>Progress to target will be steady:</p> <ul style="list-style-type: none"> <li>▪ In 50 years age classes 1 to 5 average 7.4% and three age classes meet target.</li> <li>▪ Target will be achieved within 100 years</li> </ul>
<b>Target</b>	Maintain a stable forest age class distribution on the timber harvesting land base. Each age class to 100 years old [1 (0 to 20), 2 (21-40), 3 (41-60), 4 (61 to 80) and 5 (81 to 100)] occupies at least 8.5% of the timber harvesting land base.
Basis for the Target	Relatively even flow of value to industry and the community
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b> Periodic	Current status and future forecast of age class distribution is provided as part of Timber Supply Review completed periodically.
Annual	Licensee report the current age class distribution as last reported by a Timber Supply Review
Variance	Attaining age class balance earlier a benefit. Later – 20 years.

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(23) The number of working relationships with applicable First Nations.</b>
<b>Element(s)</b>	5.2 Communities and Sustainability, 5.3 Fair Distribution of Benefits and Costs, 6.1 Aboriginal and Treaty Rights
<b>Strategy(s)</b> Description	Indicator (23) recognizes the licensee's efforts to build capacity within First Nations on matters related to the forest industry.
Means of achieving objective and target	Licensees engage in building mutually beneficial relationships with Aboriginal peoples.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator Indicator measurement new in 2003 There were 42 working relationships with First Nations in the TSA area using previous measurement standard. New baseline will be set based on 2003 Monitoring Report.
Current status of indicator	Indicator measurement new in 2003 There were 59 working relationships with First Nations in the TSA area, which equals the performance for the previous reporting period using previous measurement standard.. New current status will be set based on 2003 Monitoring Report.
Forecast	Operational activities and plans that recognize and manage for known aboriginal rights and duly established title. Licensees support First Nations in building organizational capacity.  <ul style="list-style-type: none"> <li>• As responsible stewards of public forest land, licensees engage in building mutually beneficial relationships with Aboriginal peoples.</li> </ul>
<b>Target</b>	Maintain and/or increase the number of working relationships (partnerships, joint ventures, cooperative agreements, memorandum of understanding, or business contracts) with First Nations.
Basis for the Target	Developed by Licensees with First Nations Licensees engage in building mutually beneficial relationships with Aboriginal peoples.
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	Licensees will report on the number of working relationships with applicable First Nations (partnerships, joint ventures, co-operative agreements, memorandums of understanding, or business contracts over \$5,000 or over 500 cubic meters in volume) during the reporting year. Examples of a business contract include a work agreement or a direct timber sale with a First Nation Band or First Nation Contractor <sup>15</sup> . For consistency in reporting, count multiple work agreements with one band or contractor or direct sales with one band or contractor as a single business contract. For example, multiple work agreements or multiple direct sales would count as a single business contract if they occurred with the same band or contractor. Licensees will report this figure as a rolling three year average. For annual reporting, the information for the current year will be combined with the previous two years reporting, then averaged for the three years. Examples of working relationships will be provided to indicate possible trends in the types of these relationships.
Variance	None

<sup>15</sup> First Nation Contractor is a company where one or more of the principles are of First Nations decent.

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(24) Number of classroom or field visits by licensees to elementary, secondary, and post-secondary school levels.</b>
<b>Element(s)</b>	6.4 Information for Decision-Making
<b>Strategy(s)</b> Description	Indicator (24) recognizes the importance of informed, educated public with respect to forest management. Licensees will be involved with educational support to ensure the importance of resource management is conveyed.
Means of achieving objective and target	Licensees will be involved with educational support to ensure the importance of resource management is conveyed.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000) There were 35 classroom visits from the licensees in the reporting period (previous Indicator 30).
Current status of indicator	There were 37 classroom visits by licensees in the reporting period, as compared to 50 in the previous reporting period. MR 02
Forecast	An educated and informed public with a broad understanding of forestry that can provide local input into forest planning and operations.
<b>Target</b>	The TSA Licensees will maintain educational support to forestry programs at the elementary level, secondary and post-secondary levels that lead to a balanced and broad-based understanding of forestry. Target 40 actions per year (visits, field trips, information provision, etc).
Basis for the Target	Recognizes the importance of informed, educated public with respect to forest management.
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	Licensees will report on the number of classroom or field visits during the reporting year.
Variance	None

## 7.0 Indicators and Indicator Matrices

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<b>Indicator</b>	<b>(25) Participation with First Nations to implement and improve upon the revised Archaeological Overview Assessment model and process.</b>
<b>Element(s)</b>	5.1 Timber and Non-Timber Benefits, 6.2 Respect for Aboriginal Forest Values, Knowledge, and Uses
<b>Strategy(s)</b> Description	Indicator (25) Archeological Overview Assessments (AOAs) and inventories assess the potential for occurrence of cultural heritage resources and direct more detailed assessments in areas of moderate or high potential where forestry operations are planned. A revised model is incorporating improved information provided by First Nations and detailed assessments completed based on the previous model.
Means of achieving objective and target	Licensees participation with First Nations to develop and improve upon the revised Archaeological Overview Assessment model and process.
<b>Forecast;</b> Predicted Results or Outcome	Base line for priority indicator (2000) Reportables new for 2003, base line will be set in 2003 Monitoring Report
Current status of indicator	See baseline
Forecast	Operational activities and plans that recognize and manage for known aboriginal rights and duly established title. <ul style="list-style-type: none"> <li>• As responsible stewards of public forest land, licensees will work proactively to build mutually beneficial relationships with Aboriginal peoples.</li> </ul>
<b>Target</b>	TSA Licensees will participate with First Nations to implement and improve upon the revised Archaeological Overview Assessment model and process.
Basis for the Target	Developed by Licensees with First Nations. An effective model will facilitate planning while effectively conserving and protecting First Nations values.
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	Licensees will report on the number of cutblocks where an AOA was conducted. Licensees will report on the number of cutblocks where the AOA included a field visit.
Variance	None

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(26) Participant satisfaction survey</b>
<b>Element(s)</b>	6.3 Public Participation, 6.4 Information for Decision Making
<b>Strategy(s)</b> Description	<p>The SFM Advisory Group was formed to assist the TSA Licensees in developing the SFM Plan by identifying local values, objectives, indicators and targets and evaluating the effectiveness of the Plan. The SFM Plan is an evolving document that will be reviewed and revised on an annual basis with the SFM Advisory Group to address changes in forest condition and local community values.</p> <p>Ensuring the continuing interest and participation of this important Group is a Licensee priority. Interest and participation will be enhanced by provision of relevant information including ecosystem processes and human interaction with forest ecosystems.</p>
Means of achieving objective and target	<p>Licensees provide all Advisory Group members, and interested public who have shown notable interest (written comments or SFMP meeting attendance) during the year, a feedback form at the first meeting called to review the previous years monitoring report.</p> <p>At least one question in the survey will address the effectiveness of information delivery (Indicator (27)).</p>
<b>Forecast; Predicted Results or Outcome</b>	<p>Base line for priority indicator</p> <p>2004 feedback results</p>
Current status of indicator	
Forecast	Continuing dedicated, motivated Advisory Group
<b>Target</b>	<p>26a. 80% of responses "3" or better</p> <p>26b. All written comments, and all line responses averaging less than 3 become action items</p>
Basis for the Target	Ensure issues are resolved, and Advisory Group process continuously improved.
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b>	
Periodic	
Annual	<p>Survey responses coded 1 (poor), 2, 3 (satisfactory), 4, 5 (well done)</p> <p>Results of feedback form compiled and reported as part of annual monitoring program.</p>
Variance	None

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(27) Public awareness of the SFMP</b>
<b>Element(s)</b>	5.2 Communities and Sustainability, 6.3 Public Participation, 6.4 Information for Decision Making
<b>Strategy(s)</b> Description	Indicator (27) recognizes the importance of keeping members of the public informed of forestry strategies being developed and planning occurring in their area. Open lines of communication facilitate public awareness and understanding of the SFMP and other current forestry topics, and provide an open opportunity for the public to respond. Members of the public can provide local knowledge that contributes to socially and environmentally responsible forest management.
Means of achieving objective and target	Licenses cooperatively manage a web site dedicated to providing the latest SFMP information. The site also provides topical forestry information either by maintaining the information on the web site or providing links to applicable sites.  Licenses develop and distribute SFMP and other information to the public at least annually
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator: 2004 Monitoring Report
Current status of indicator	NA
Forecast	Public awareness and understanding of the SFMP. An SFMP that has openly informed, included and responded to the public.
<b>Target</b>	27a: Licenses will keep members of the public informed of TSA strategies being developed, and planning occurring by: <ul style="list-style-type: none"> <li>• Maintaining a website</li> <li>• Circulating SFMP and other information to the public at least annually (news release/leaflet/open house/LRUP etc.)</li> </ul> 27b: TSA Licenses respond to all written requests from the public for communication within 30 days of their receipt.
Basis for the Target	Developed by Licenses in consultation with the Advisory Group
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b> Periodic	
Annual	27a: Licenses will report a yes/no answer as to whether the web site is being maintained, and whether SFMP and other information was made publicly available in the last year. Similar to Indicator 28  27b: Licenses will report on the number of responses sent out by licenses compared to the number of written requests for communication. Report the average timeline for response. Indicator 28
Variance	27a: None 27b: None

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(28) Number of opportunities/ avenues for public participation in decision-making processes.</b>
<b>Element(s)</b>	5.1 Timber and Non-Timber Benefits, 5.2 Communities and Sustainability, 6.4 Information for Decision-Making
<b>Strategy(s)</b> Description	Indicator (28) recognizes the importance of providing opportunities for members of the public, as well as First Nations, to provide input into forestry planning. Open lines of communication allow forest licensees to maintain an awareness of social values and concerns and to respond accordingly. Members of the public and First Nations can also provide local knowledge that contributes to socially and environmentally responsible forest management.
Means of achieving objective and target	Licensees are committed to work with members of the public on forest management issues and to improve the effectiveness of public processes.  Licensees will provide opportunities/avenues for public participation in decision-making processes through participation in committees, meetings, and plan discussions.  Licensees respond to all written requests from the public for communication.
<b>Forecast; Predicted Results or Outcome</b>	Base line for priority indicator (2000)  28a: <ul style="list-style-type: none"> <li>• Licensee's interests were represented at LRMP meetings.</li> <li>• 66% of LRUP meetings were attended (this is below the target of 70% but within the variance of 60% of meetings attended);</li> <li>• A total of 12 FDP review meetings were attended; and,</li> <li>• A total of 12 community meetings were attended.</li> </ul> 28b: All written requests (3) for communication were responded to.
Current status of indicator	28a: <ul style="list-style-type: none"> <li>• Licensees' interests were represented at LRMP meetings.</li> <li>• One hundred percent of LRUP meetings were attended by licensees. This is up from 84 percent in the previous reporting period.</li> <li>• A total of 64 FDP review meetings were attended.</li> <li>• A total of 21 community meetings were attended.</li> </ul> 28b: All written requests (29) for communication were responded to.
Forecast	Public participation in forest planning and operations that is open, inclusive and responsive to public concerns.
<b>Target</b>	28a: TSA Licensees will provide opportunities/avenues for public participation in decision-making processes through participation in: <ul style="list-style-type: none"> <li>• LRMP committees (strategic level);</li> <li>• 70 percent of Local Resource Use Plan meetings (local level);</li> <li>• Forest Development Plans (FDPs) (operational level) (number of meetings); and,</li> <li>• Community meetings (number of meetings).</li> </ul> 28b: TSA Licensees respond to all written requests from the public for communication within 30 days of their receipt.
Basis for the Target	Legal requirements. Developed by Licensees with Advisory Group
Legal Requirements	Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation. Forest and Range Practices Act

## 7.0 Indicators and Indicator Matrices

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<b>Monitoring &amp; Measurement</b>	
Periodic	
Annual	<p>Licensees will report a yes/no answer as to whether their interests were represented at LRMP meetings, the number of LRUP meeting attended against the number held within their operating area, the number of FDP review meetings attended and the number of community meetings held or attended for the reporting period.</p> <p>Licensees will report on the number of responses sent out by licensees compared to the number of written requests for communication. Report the average timeline for response.</p>
Variance	<p>28a: No variance in meeting targets for LRMP involvement;</p> <ul style="list-style-type: none"> <li>• Minus 10 percent or plus 30 percent variance of the 70 percent target for attending LRUP meetings;</li> <li>• No variance for Forest Development Plans<sup>16</sup>; and</li> <li>• No variance for community meetings<sup>17</sup>.</li> </ul> <p>28b::None</p>

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<sup>16</sup> Forest Development Plans (FDP) meetings are held by licensees to present information to the public or may be held at the request of the public to address a specific resource management issue related to the FDP.

<sup>17</sup> All integrated resource management (IRM) meetings proposed by licensees or where licensees are requested to attend IRM meetings by local community interests.

## 7.0 Indicators and Indicator Matrices

<b>Indicator</b>	<b>(29) Report on number of research and extension initiatives licensees have participated in.</b>
<b>Element(s)</b>	6.4 Information for Decision-Making
<b>Strategy(s)</b> Description	<p>Target 29(a): Meeting the standard of continual improvement requires ongoing monitoring and research related to the SFM Plan to assess and adaptively manage forestry operations. Monitoring the achievement of indicators and targets assesses the long-term effectiveness of the Plan. Related research projects provide updated information on best management practices. A flexible management system that is adaptive to new information and feedback from monitoring processes is an important aspect of effective sustainable forest management over the long term. New information should be shared through extension programs to allow all parties, including First Nations to benefit from the progress that is being made.</p> <p>Target 29(b) demonstrates a commitment by forest licensees to reinvest in the forest landbase and proved a stable and profitable forest industry in the long term. This includes funding on-the-ground activities to improve productivity on the landbase and other activities to improve understanding of forest ecosystems and the long-term effects of forest management activities such as inventory gathering, research and extensions projects.</p>
Means of achieving objective and target	<p>Research and extension initiatives summarized, compiled and distributed as part of annual SFMP performance reporting.</p> <p>Licensees will meet annually to review and prioritize proposed research and extension initiatives.</p>
<b>Forecast; Predicted Results or Outcome</b>	<p>Base line for priority indicator</p> <p>29a: New target effective 2003</p> <p>29b: Licensees were directly or indirectly represented in TSA Committee's annual approval of research investment programs and strategies. (2002)</p>
Current status of indicator	<p>29a: 2003 MR</p> <p>29b: Licensees were directly or indirectly represented on the Southern Interior Forest Extension and Research Partnership Committee.</p>
Forecast	<p>Adaptive forest management, based on facts and data, that is supported by ongoing monitoring and research.</p> <ul style="list-style-type: none"> <li>• Responsive research programs are contributing to better quality decisions for Sustainable Forest Management.</li> </ul>
<b>Target</b>	<p>29a: TSA licensees will participate in research and extension activities.</p> <p>29b: Identify priorities for reinvestment in the forest sector through the TSA committee annual review and support of research programs and strategies.</p>
Basis for the Target	<p>Reinforces that a flexible management system that is adaptive to new information and feedback from monitoring processes is an important aspect of effective sustainable forest management over the long term.</p> <p>Demonstrates a commitment by forest licensees to reinvest in the forest landbase and proved a stable and profitable forest industry in the long term</p>
Legal Requirements	NA
<b>Monitoring &amp; Measurement</b>	
Periodic	
Annual	Licensees will report a yes/no answer with respect to their direct or indirect representation on the Forest Research Extension Partnership. Licensees will report a yes/no answer as to whether their TSA wide research results were shared with members of the public advisory group. Licensees will provide an indication of the type of research that is being undertaken and the value and applicability of this research to sustainable forest management.
Variance	None

## 8.0 Links to Other Planning Processes

### 8.1 Kamloops Land and Resource Management Plan

The Kamloops Land and Resource Management Plan (LRMP) was developed in the early 1990s to provide strategic direction to the management of land and resources on all Crown lands in the Kamloops TSA. The plan was developed by a wide cross-section of stakeholders, interest groups and members of the general public in the Kamloops and Clearwater areas. The LRMP was approved by Cabinet in 1995 and all objectives and strategies providing direction to forestry activities were established as higher level plans under the *Forest Practices Code of British Columbia Act*. Higher level plans have a legal basis and give direction to resource tenure holders in the planning of future operations. Objectives and strategies for non-forestry related activities (e.g., mining, recreation, tourism, agriculture) are government policy and provide strong direction to management decision-making in the plan area.

The LRMP outlines a number of basic objectives and strategies for a range of resource values in the General Resource Management Zone that apply to all areas of Crown land outside of Protected Areas. In addition, there are a number of other Resource Management Zones (e.g., Community Watershed, Habitat, Recreation and Tourism, Settlement) where the basic set of objectives and strategies are complemented by additional objectives and strategies specific to the resource value in question.

In the hierarchy of planning for forest management, LRMPs provide direction to landscape unit plans, which provide direction to Licensee plans. Local plans and other public input processes, including the SFM Advisory Group, feed into this process (see Figure 1). The LRMP is monitored annually to assess implementation progress and the effectiveness of the plan in meeting its stated goals and objectives. A full review of the plan will begin in 2003.

A number of LRMP objectives and strategies have been directly or indirectly used as indicators and targets in the SFM Plan to address the criteria and elements in the CSA standards. These include:

- **Biodiversity:** The LRMP addresses biodiversity on a number of scales. The overall LRMP package was developed to emphasize long-term conservation of the geographic distribution of naturally-occurring flora and fauna.
  - ⇒ Protected areas are located across the landbase to provide representation of the cross-section of ecosystems. Logging, mining and hydroelectric development are not permitted within Protected Areas and other resource development activities such as grazing and commercial tourism development, are permitted only in specified areas and under strict guidelines. Proposed development activities adjacent to park boundaries are generally referred to B.C. Parks to maintain the viability of forest resources and values within the park.
  - ⇒ Strategies for biodiversity within the General Resource Management Zone include direction to landscape unit planning, identifying areas where conservation is a priority

## 8.0 Links to Other Planning Processes

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through assignment of biodiversity emphasis options and supporting the establishment of old growth management areas and wildlife/leave tree retention as per current policy under the Forest Practices Code. In addition to wildlife/leave tree retention, strategies to maintain biodiversity at the stand level include retention of coarse woody debris, riparian protection, and mixed species planting to address habitat needs.

The General Resource Management Zone contains other direction that will contribute to the maintenance of biodiversity, such as objectives and strategies for flora and fauna described as follows:

- **Protected Areas:** The forest licensees participated in the Kamloops LRMP which delineated a series of protected areas with the TSA. This achieved the geographic and ecological goals of the provincial Protected Areas Strategy. Protected areas, including Wells Gray Park, are shown on the overview map.
- **Retention of old growth forest:** The LRMP has assigned preliminary biodiversity emphasis options to each landscape unit in the TSA. Old growth management areas must be established for each landscape unit, based on the relevant biodiversity emphasis option and according to the targets outlined in the *Biodiversity Guide Book* and the *Landscape Unit Planning Guide*. The LRMP also has targets for old growth retention within Caribou Habitat Resource Management Zones.
- **Management of aquatic and riparian ecosystems:** The LRMP contains a range of objectives and strategies to maintain water quality and quantity. These include a section on water management in the General Resource Management Zone that identifies priorities for watershed assessment and contains strategies to maintain water quality and quantity. The General Resource Management Zone also contains objectives and strategies for riparian management areas and inland and anadromous fisheries, where the maintenance of productive fish habitat is emphasized.

In addition to objectives and strategies for the General Resource Management Zone, the LRMP contains specific objectives and strategies to manage values within Community Watershed Resource Management Zones. This includes maintaining acceptable levels of water quality, quantity and stream flow as well as conducting the appropriate levels of watershed assessment for each community watershed on a priority basis. Presently there are 17 designated community watersheds in the Kamloops TSA, of which eight are included in a long-term water quality monitoring program funded through Forest Renewal BC.<sup>18</sup>

Strategies for aquatic and riparian ecosystems in the Kamloops LRMP are complemented by regulations and guidelines in the Forest Practices Code. For example, management within riparian areas is outlined in the Code and in the *Riparian Management Area Guidebook*.

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<sup>18</sup> Community watersheds in the FRBC water quality monitoring program are Tranquille River, Peterson Creek, Paul Creek, Russell Creek, Hascheak Creek, McDougall Creek, Jimmies Creek, and Cornwall Creek.

## 8.0 Links to Other Planning Processes

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The Kamloops and Clearwater Forest Districts also have district policies for riparian and lakeshore management. This works well for most sites, however in some of the drier zones in the TSA, there are numerous wetlands that are too small to classify or that are only wet during certain seasons. These small wetlands provide unique microsites contributing to wildlife habitat and biodiversity values. Licensees will attempt to identify small and unclassified wetlands during planning and will take measures to minimize impacts to these features.

Best management practices which may be considered by licensees while managing operations around unclassified wetlands include:

- ⇒ identify unclassified wetlands on Licensee plan maps
  - ⇒ retain a five meter “no machine zone” on unclassified wetlands for skidding and disc trenching equipment
  - ⇒ retain non-merchantable conifers, broad leaf, shrubs and herbaceous cover within five meters of the “no machine zone”
  - ⇒ consider unclassified wetlands as areas for creating wildlife tree stubs
  - ⇒ practice “fall away” and “yard away” harvesting methods.
- **Flora and fauna:** The LRMP contains a number of objectives and strategies for coarse filter management to maintain wildlife habitat features across the landbase for the range of wildlife and ecosystems. The plan also provides direction for fine filter management of habitat requirements for specific wildlife species, such as deer, moose and caribou. This includes objectives and strategies to:
    - ⇒ restore species endangered or threatened by human activities
    - ⇒ provide adequate forage and forest cover requirements in critical ungulate winter range
    - ⇒ manage forests for a diversity of age classes and forest stand structures
    - ⇒ maintain other critical habitat requirements and the connectivity of habitat features across the landscape.
  - **Caribou habitat:** Late winter and transitional habitat: Guidelines for forestry activities in the LRMP Caribou Habitat Resource Management Zones are stratified by elevation into late winter and transitional habitat. For each habitat type, the LRMP provides targets for retention of old growth attributes as well as direction for use of silviculture systems (e.g., preferred silviculture systems and maximum cutblock size).

**Movement corridors:** A number of key movement corridors have been identified within the Caribou Habitat Resource Management Zones to the north of the plan area. The LRMP prescribes forest management objectives within these corridors, including retention of important structural and functional features, and the amount of area in non-greened up condition at any one time.

Management within identified caribou habitat is complemented by other forestry activities at the stand and landscape scales to maintain biodiversity, such as old growth retention, and activities to maintain stand level attributes within cutblocks (e.g., retention of wildlife/leave trees and coarse woody debris).

### 8.2 Landscape Unit Plans

The Landscape Unit Planning Guide – released March 1999 – provides a foundation for achieving landscape level biodiversity through the achievement of priority objectives for the retention of old growth and wildlife trees. The guide provides clear rules on the development of appropriate objectives for biodiversity conservation based on requirements and direction provided in the Forest Practices Code. Landscape units are areas of land and water for long term planning of resource management activities with an initial priority for biodiversity conservation. They are important in creating objectives and strategies for landscape-level biodiversity and for managing other forest resources.

The establishment of old growth management areas (OGMAs) is a key requirement of the Forest Practices Code for managing the conservation of biodiversity. The guide provides direction for determining the area of old growth for each of the three types of biodiversity emphasis areas (high, medium, low) and size and spatial location of OGMAs.

Wildlife trees provide habitat for a variety of species at the stand level. Although wildlife tree retention is managed at the stand level it contributes to landscape level forest structure.

Landscape unit planning falls into two categories:

- biodiversity planning
- forest resources planning.

Biodiversity planning involves setting objectives for six elements including

- retention of old growth forest
- stand structure through wildlife tree retention
- seral stage distribution
- landscape productivity
- species composition
- temporal and spatial distribution of cutblocks (patch size).

Forest resources planning may include objectives for any of the following resources:

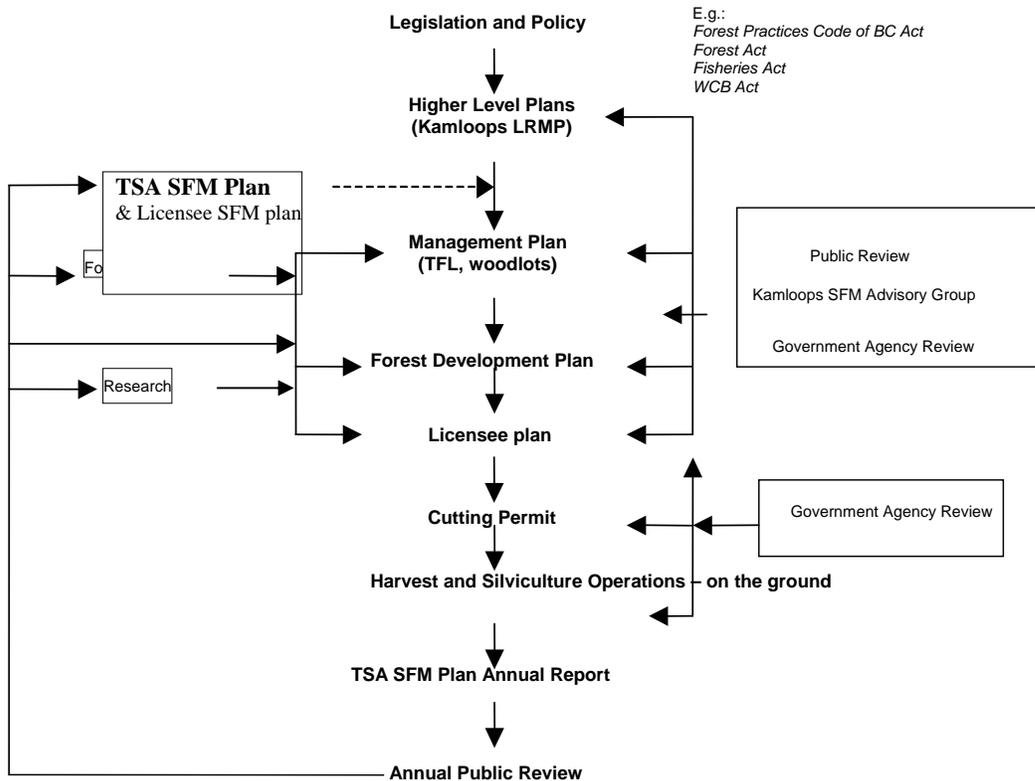
- timber
- recreation
- tourism
- water
- botanical forest products
- wildlife
- forage
- fisheries.

The first phase of landscape unit planning will focus on the achievement of priority biodiversity objectives for the retention of old growth and wildlife trees. Objectives for non-priority elements may be developed if they do not delay the establishment of objectives for priority biodiversity elements or create an impact on timber supply that exceeds government policy. In some cases, non-priority biodiversity elements may be included as objectives in approved strategic land use plans and will therefore be included in the first phase of landscape unit plans.

### 8.3 Plans, Policies and Strategies That Relate to the SFM Plan

The SFM Plan is a complementary plan that demonstrates field level performance of commitments made within this plan, higher level plans such as the Kamloops LRMP, and Licensee plans. Figure 1 shows the flow of input and direction to Licensee plans. It also shows the feedback loops of research, monitoring and adaptive management that occur from operations to the SFM plan, higher level plans and Licensee plans.

**Figure 1: Links between Plans**



## 8.0 Links to Other Planning Processes

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There are already several prescriptions contributing to sustainable forest management in existing legislation and policy. The Forest Practices Code, for example, requires management along riparian corridors. Current policy requires the identification of old growth management areas and wildlife/leave tree retention areas. There are also numerous policies and guidelines in place at the regional and district levels that contribute to the principles of sustainable forest management. These include the following:

- **Forest Development Plans:** A forest development plan is a document that describes how harvesting and road development for a specific area will be managed. These plans provide the public and government agencies with information on the location and scheduling of proposed roads and cutblocks for harvesting timber. The plans also demonstrate how forest management will address biodiversity, soil conservation, water, fish, wildlife and other forest resources. Resource stakeholders and the general public must be given an opportunity to provide comments on new harvesting proposals.

Forest Development Plans must comply with the objectives in higher level plans (e.g., LRMPS) and must demonstrate or describe how the objectives and strategies of these plans will be carried through in subsequent Licensee plans.

- **Risk Management, Compliance, Enforcement and Audit Procedures:** Licensee planning is a process for making on-the-ground forest management decisions in a manner that minimizes risk to environmental, social and economic values.

**Risk** is the potential for loss or damage to environmental, social and economic values resulting from an action or decision in a Licensee plan. The underlying goal in the Forest Practices Code is to assess and manage risk. Risk assessment is the process of determining the likelihood of loss or damage occurring and the magnitude of the consequences if a loss or damage were to occur. Risk management involves weighing the assessed risks against the benefits to make the “best” forest management decision. Licensees and their foresters have the responsibility for developing their plans based on acceptable practices and the limits of acceptable risk defined in legislation. Forest Development plans and silviculture prescriptions must be approved by a statutory decision-maker (usually the district manager for the Forest Service). Other plans are subject to review by request, and or field auditing. Plans are reviewed in terms of meeting legal and policy requirements and in terms of managing for risks.

**Compliance** activities under the Forest Practices Code are aimed at averting non-compliance before it occurs and detecting and addressing non-compliance when it does occur. To ensure compliance, the Forest Service undertakes a risk assessment that looks at several factors including the licensee’s performance capabilities, timing constraints, site specific issues, unusual climatic events and market conditions. Based on the risk assessment, the Forest Service will establish priorities for site inspections. Site inspections are a tool to assess whether legal requirements and prescriptions in Licensee plans are being met. Licensees are also encouraged to undertake inspections based on the above risk factors. A licensee’s own inspections will provide a feedback loop enabling the licensee to continuously reassess risk

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while operations are underway. If the compliance process is working as it should, enforcement should not be needed.

**Enforcement** provides a means to remedy any failure to meet a Forest Practices Code requirement. Enforcement includes both administrative remedies and legal remedies. Administrative remedies are available to Forest Service and other government officials to address contraventions through stop work orders, remediation orders, administrative penalties, suspension and cancellation of licenses, denial of cutting permits, etc. Legal remedies involve prosecutions for offences where the Courts have the power to impose fines or even prison terms when a licensee is at fault.

Periodic independent **audits** may be carried out by the Forest Practices Board to assess compliance with the Forest Practices Code. Compliance audits examine current forest planning and practices to determine whether or not they meet Code requirements. Compliance audits may be either “limited scope” or “full scope”. Limited scope audits examine individual forest practices such as timber harvesting, road construction or silviculture and the related Licensee planning activities. Full scope audits examine all forest planning and practices including Licensee planning, road construction, maintenance and deactivation, timber harvesting, silviculture and fire protection. Auditees are randomly selected by the Board. Upon completion of an audit, the Board prepares a public report documenting significant non-compliance with the Code as well as any other information that is worthy of reporting to the public.

- **Public Involvement:** Public involvement is important in planning because the forest management on publicly owned lands must maintain a mix of opportunities and reflect changing resources and social values over time. Public involvement in Forest Development Plan reviews is intended to facilitate the exchange of information between developers and people interested in, or affected by, forest operations.

To ensure that public input can be considered in plan development, comments must be submitted to the development proponent in writing. The licensee’s response should document actions taken to accommodate public concern. This formal process ensures public concerns pertaining to items such as recreation features, visual quality, identified trails or other features of significance are identified as early as possible in the planning process to enable the forest licensee to adapt to the request.

The Forest Practices Code requires that licensees consider “known information” on resources during planning. “Known information” is formally made available to licensees through a higher level plan, such as the LRMP, or by the district manager or designated environment official from BC Environment. Input provided by the public and First Nations can contribute to the “known information” considered by licensees during planning.

Licensees in the Kamloops TSA have a long-standing commitment to work with members of the public on forest management issues, and there is a well-established history of licensee participation in community meetings, including local planning processes and strategic plans such as the LRMP. In addition, licensees are committed to providing topical education

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updates on forest management issues during public meetings and to ensure that local First Nations tribal councils and bands have up-to-date information. Members of the public continue to support strategic and local planning processes and actively participate in meetings on forest management issues. Licensees are committed to making ongoing efforts to improve the effectiveness of public processes in the TSA.

- **Access Management:** Access Plans are developed by government with input from public and other stakeholders. Presently access management is coordinated through Forest Development Plans and discussed at Local Resource Use Plan meetings. Forest licensees and proponents from other resource industries must coordinate and follow the advice and direction set by the government agencies through these planning processes. Access plans consider the condition of access, maintenance, deactivation and access restrictions related to long term objectives for an area. This includes identifying potential impacts on resources such as wildlife, tourism, recreation, or other values due to open public access and introducing public access controls, where required.
- **Risk Rating Roads:** Forest road inspection and maintenance should include a process for assigning road inspection priorities/frequencies based on risk analysis, carrying out road inspections and performing maintenance as conditions dictate.

While licensees may vary in how risk is assessed, the basis for all risk analysis would give consideration to both hazard (likelihood of a particular condition) as well as the consequence (risk to public safety, environment). Hazard events may include accelerated or uncontrolled soil erosion or sediment transport, slumping or sliding or deterioration of structural elements within the road prism.

Road inspections would focus on the structural integrity of the road prism, drainage systems, road surface, and sediment control.

- **Vertical Structure:** During forest development planning, licensees incorporate a number of strategies for maintaining diversity of structure and function within cutblocks. These include wildlife/leave tree retention, either in single trees or patches, as described in the *Biodiversity Guidebook*. During operational activities, tree species of merchantable size that are not required for utilization or necessary for the achievement of the Licensee plan will be retained, where this is in keeping with safety standards of the Worker's Compensation Board. This includes retention of green trees that will act as future wildlife trees (including broad leaf trees and conifers that have characteristics that make them suitable as future wildlife/leave trees, such as large diameter and height, structural features such as cavities, loose bark, or dead tops, and signs of damage or rot). It also includes retaining trees of suitable quality and productivity that can act as seed trees to aid in the natural regeneration of harvested areas. Locating wildlife/leave trees in unique microsites, in known habitat areas, and along riparian areas can contribute to long-term forest function and biodiversity.

Natural processes will be allowed to take their course within wildlife tree patches, where this does not threaten merchantable trees in adjacent areas. Trees that burn, are attacked by

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insects, or are blown down will still contribute to biodiversity objectives. However, the intent is to provide wildlife tree patches that are windfirm and that will provide standing live and dead trees for habitat within or on the edge of harvested areas for the course of the rotation.

Other aspects of maintaining structural diversity within cutblocks include providing a diversity of tree species, maintaining understory vegetation, and retaining coarse woody debris on sites after logging. Any activities to maintain structural diversity within cutblocks must be carried out in keeping with the safety standards outlined by the Worker's Compensation Board.

- **Landscape Connectivity:** Connectivity is provided when late successional ecosystems are linked to one another to form an interconnected network. The degree of interconnectedness and the characteristics of the linkages vary in the natural landscape based on the topography and type of natural disturbance regime. Maintaining connectivity will help to ensure the continued dispersal and movement of forest and range dwelling organisms across the landscape.

Ideally, forests should be managed to mimic fragmentation resulting from natural disturbance. In the Kamloops TSA, there are a number of forest practices that will help maintain connectivity including old growth management areas (see section 8.2 Landscape Unit Plans) and riparian management areas. As well, partial cutting, combined with occasional smaller dispersed cutblocks will approximate the pattern of the natural landscape. At the stand level, structural attributes (i.e., live and dead trees) consistent with the natural disturbance type should be retained in cutblocks and associated areas.

- **Coarse Woody Debris:** Coarse woody debris (e.g., downed wood) plays an important role in forest ecosystems including provision of food and shelter for invertebrates and smaller wildlife, growing sites for trees, nutrients for soils, and structure in streams to maintain channel stability.

Excessive removal of coarse woody debris (CWD) may affect habitat needs for some wildlife species (e.g., pine marten, fisher, grizzly bear, many small mammals and snakes, some amphibians and numerous invertebrates).

The Kamloops Forest Region has a number of specific strategies relating to CWD. These strategies include direction for basic levels of CWD, creation of stubs, and guidelines for enhanced levels of CWD in landscape units with high biodiversity emphasis options. These strategies are implemented by the setting of related objectives within Licensee plans. Once included in approved plans, these objectives must be adhered to.

- **Forest Health:** Forest health is managed at two levels. The Ministry of Forests prepares a forest health plan for the district. In addition, each licensee is required as part of the Crown license obligation to address forest health at both the strategic and operational levels. Hazard and risk assessments for stands are used to define objectives and strategies that guide forest managers in controlling and managing forest health concerns. Managing for health must take into account the natural variability and cyclical variations that occur on the landscape.

- **Seed and Vegetative Material Transfer Guidelines:** Seed and vegetative material transfer guidelines are intended to minimize the risks of maladaptation or growth loss associated with regenerating trees (planted from seed or vegetative material) in a different location from their source. Transferring seeds or vegetative materials beyond the limits specified in the guidelines may decrease productivity or increase susceptibility to frost, insects or disease. With respect to genetic diversity, these guidelines geographically limit the amount of natural change and spread of seed or vegetative material over the landscape. The transfer guidelines must be adhered to when prescribing reforestation measures in Licensee plans.
- **Noxious and Invasive Weeds:** Noxious weeds are non-native plant species that can be difficult to control. They can have a significant impact on agriculture and timber production, reducing forage production for livestock and wildlife and threatening forest regeneration. They may also alter the structure of natural plant communities, threatening biodiversity.

The most effective strategy for controlling noxious weeds is to prevent their establishment. Once established, the cost and difficulty of controlling noxious weeds increases significantly. TSA Licensees are represented on the Thompson-Nicola Noxious Weed Management Committee to help limit the spread of noxious weeds and to support other government agencies in their efforts. The commitment of licensees to promptly re-vegetate road cuts and fills will assist in reducing the spread of noxious weeds.

- **Species Diversity:** Species diversity refers to the native species within a forest area and can be explored at various levels (e.g. within a patch of forest or across an entire landscape). Species composition also changes over time as an ecosystem progress through the various seral stages of its recovery from a disturbance.<sup>19</sup>

*The Landscape Unit Planning Guide* (1999) states that the intent in managing for species composition is to maintain a diversity of tree species, both commercial and non-commercial. According to the Forest Practices Code Biodiversity Guidebook (Appendix 5, Stand Attributes), an ecologically appropriate variety of tree species, including broad leaf, should be retained in a stand . Tree species composition can be managed by choice of silvicultural system, harvesting, site preparation, planting, regeneration, and stand tending activities.

*The Establishment to Free Growing Guidebook: Kamloops Forest Region* indicates that British Columbia's forests contain a wide variety of ecosystems and species and that land managers should be aware of the need to maintain the biological diversity of these ecosystems in managed second-growth and third-growth forests. Forest trees, while only one component of a forest environment that includes a variety of life processes, are very important in providing structure and habitat for other organisms. Tree species composition and stand structure are important variables that affect the biological diversity of a forest ecosystem.

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<sup>19</sup> Kimmins, H. *Balancing Act: Environmental Issues in Forestry*, 1999, p. 156.

Species diversity is achieved by planting two or more species and/or through natural 'seeding-in' on-site. Work by the Ministry of Forests in 1992 demonstrated that the amount of mixed forest versus monoculture forest is approximately the same on a regenerated forest 5 to 10 years after harvesting as it is in a forest before harvesting. A twenty year average was used in this study.

Maximizing diversity on every site may result in stands that are difficult to manage. Therefore, planning for biological diversity is often best done at the landscape level. The desired tree species and stand structure for a specific site should reflect these landscape level objectives.

- **Genetic diversity:** The Ministry of Forests Tree Improvement Branch (TIB) oversees the development and implementation of regulations, guidelines, policies and standards to ensure that tree seed used for Crown land reforestation is locally adapted and contains sufficient genetic diversity.

To conserve the genetic diversity of the province's forests, tree breeders collect hundreds of samples of tree species. Collections range from places where the species are found in large quantities to isolated populations at the edge where they grow naturally. Breeders ensure that enough trees are selected to provide a level of diversity that will buffer future forests from environmental extremes and insect and disease attacks. In addition to breeding protocols, the genetic diversity of British Columbia's trees is protected in parks and protected areas or in special reserves which are established by making "duplicates" of parent trees.

All trees planted on Crown lands must have originated from seed registered by the BC Tree Seed Centre. The Centre has strict requirements for tree seed acceptability, selection and storage.

- **Forest Industry-Caused Wildfires:** The forest industry has numerous legal requirements to minimize the potential for wildfires being started by forest operations. Each year, licensees are required to prepare and submit a fire pre-organization plan to ensure the licensee has employees and contractors trained and knowledgeable in preventing and actioning wildfires. As well, licensees monitor fire weather indices, which help determine the level of risk in terms of forest operations. Wildfires are a natural part of ecosystem rejuvenation; however, human safety and potential loss of resources plays a role in strategies to control loss.
- **Allowable Annual Cut (AAC) determination:** The AAC is the allowable rate of timber harvesting in a management unit such as timber supply area (TSA) or a tree farm licensee (TFL). The AAC is set for each of the province's 37 timber supply TSAs and TFLs by the Chief Forester.

The timber supply is the rate at which timber is made available for harvesting. It is a measure of the potential flow of logs out of the forest. It is not the same as the inventory or amount of wood in the forest. The size and productivity of a given area of land available for timber harvesting (timber harvesting land base) are the factors that are used to determine the

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amount of timber that can be produced over time. Economic, environmental and social factors also affect the rate of timber harvesting and the methods used. Economic factors may include prices for wood products, location and quality of timber, costs of production, et cetera. Environmental factors may include wildlife habitat, riparian buffers, environmentally sensitive areas, et cetera. Social factors may include visual appearance of the landscape, drinking water quality and supply, et cetera.

Timber supply analysis is a process that explores the effects on timber supply of existing or possible future forest management strategies and alternative timber harvesting levels. The analysis makes it possible to compare how alternative management strategies affect forest structure and timber production over time. The steps in timber supply analysis to support AAC determination include:

- i. *Categorize the land base* – define the timber harvesting land base by separating lands suitable for timber production from lands unavailable or inappropriate for timber production (e.g., protected areas or inaccessible terrain). Lands outside of the timber harvesting land base are still part of the provincial forest and contribute to and are managed for other values (e.g., wildlife habitat, old growth).
- ii. *Project growth and yield* – growth and timber yield are projected for each stand based on current management. These projections show the characteristics of a stand (e.g., timber volume per hectare, average stem diameter) at different ages.
- iii. *Identify management activities and requirements* – current management practices – including those that enhance timber production (e.g., planting) and those that maintain or enhance other values (e.g., wildlife habitat, visual quality) – are identified and the amount and timing of each activity is specified. It is often necessary to restrict some activities in some areas to achieve multiple objectives.
- iv. *Model timber supply based on current management* – a computer model is used to simulate the way a stand grows and is harvested over time.
- v. *Run sensitivity analyses* – sources of uncertainty in the data and management assumptions are analyzed to determine which factors most affect analysis results (e.g., where small changes in a management objective can cause large changes in timber supply). This knowledge helps to establish priorities for collecting new information and indicates where caution is required in interpreting results.

In setting an AAC, the Chief Forester considers information such as biodiversity, wildlife, and the social impacts of changes to timber supply including:

- ⇒ the rate of timber production that may be sustained from the area;
- ⇒ the short- and long-term implications to the province of alternative rates of timber harvesting from the area;
- ⇒ constraints on the amount of timber produced from the area due to use of the forest for purposes other than timber production;

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- ⇒ the nature, production capabilities and timber requirements of established and proposed processing facilities;
- ⇒ the economic and social objectives of the Crown, for the area, the region and the province, as expressed by the Minister of Forests; and,
- ⇒ abnormal insect or disease infestations and major salvage programs planned for the area.

Ultimately the Chief Forester's AAC determination is based on independent professional judgment.

### 8.4 The *Forest and Range Practices Act*

The *Forest and Range Practices Act* was given third reading on November 21, 2002. The *Act* provides legislative direction for a "results-based" approach to forest management, specifically with respect to the administration of Forest Stewardship Plans, Site Plans and Woodlot Licence Plans. The regulations to the *Forest and Range Practices Act* – which are due to be released in the fall of 2003 – will provide specific direction, including standards and guidelines for fulfilling the legislative requirements under the *Act*.

The *Forest Practices Code Act* represents a departure from the *Forest Practices Code Act* in terms of shifting forest management from a prescriptive approach to a results based approach. This change in approach is reflected in part by requirement to for forest licensees to prepare a **Forest Stewardship Plan** in place of the current Forest Development Plan. Forest stewardship plans describe the approaches that the licensee will use to achieve the results specified in resource management objectives, but do specify the planning and forest management prescriptions that will be applied to achieve the target results for the objectives. Licensees will no longer be required to prepare silviculture plans to indicate where cutblocks will be located and how harvesting and reforestation will be carried out. Instead, licensees will be required to prepare a **site plan** for any cutblocks or roads prior to harvesting on the cutblock or harvesting in relation to the road construction. A site plan must identify the approximate location of cutblocks and roads, be consistent with the forest Stewardship Plan and identify how the intended results or strategies described in the forest stewardship plan apply to the site.

Licensees will not be required to prepare forest stewardship plans until April 2005. Prior to this, approved forest development plans will continue to guide forest practices, however, licensees may elect to prepare forest stewardship plans to replace forest development plans prior to this date.

Before the holder of a woodlot licence harvests timber or builds a road on land to which the licence applies, the holder must prepare and obtain a woodlot licence plan. A **woodlot licence plan** must specify intended results and strategies and be consistent with objectives set by government for a defined set of resource values.

The *Forest Statutes Amendment Act (No2) 2002* was passed on November 26, 2002 to assist with the transition from the requirements under the *Forest Practices Code Act* to the *Forest and Range Practices Act*. For example, a new section 162.1 (1) specifies that an agreement holder

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(licensee) is deemed to have met obligations under this Act, the regulations or standards, or under a Licensee plan, a permit or another authorization, if the holder submits a written declaration to the district manager specifying the obligations that have been met. This section shifts the onus from a compliance based approach where a licensee must demonstrate prior to approval how requirements have been met to a conformance based approach, where a licensee is required to make a declaration regarding conformance with standards or obligations.

# **Glossary of Terms**



# Glossary of Terms

The following definitions were taken from the CAN/CSA-Z809 02, the *Forest Practices Code of British Columbia Act*, the Ministry of Forests Glossary of Resource Planning Terms (April, 1996) and from discussions with the SFM Advisory Group.

**Aboriginal Rights:** are recognized and affirmed by *Sec. 35(1) of the Constitution Act, 1982*. Aboriginal rights involve practices that were integral to the aboriginal society before contact. For example, Aboriginal rights may include (but are not limited to) fishing, hunting, gathering, trapping, and the use of land and resources for social, medicinal, spiritual and ceremonial purposes (*Sparrow Decision, Guerin Decision, Calder Decision, Jack Decision*). Generally the priority set in the Courts is conservation first, aboriginal rights to carry on an activity and/or practice next. (SFM Advisory Group)

**Aboriginal Title:** (*Delgamuukw Decision*): is an Aboriginal right recognized and affirmed in Section 35(1) of the *Constitution Act, 1982*. Aboriginal title is right to the land itself and encompasses the right to exclusive use and occupation of the land held pursuant to that title for a variety of purposes, which need not be aspects of those aboriginal practices, customs and traditions which are integral to distinctive aboriginal cultures (Para 177). Aboriginal title also encompasses within it a right to choose to what ends a piece of land can be put (Para 168). (SFM Advisory Group)

**Adaptive management:** a learning approach to management that recognizes substantial uncertainties in managing forests and incorporates into decisions experience gained from the results of previous actions. (CAN/CSA-Z809-02)

**Biological Diversity:** means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (UN Convention on Biological Diversity).

**Cultural and spiritual resources and values:** To assist readers and users of the plan in understanding the nature of resources and values, the following examples are provided. It should be understood that there are many more cultural and spiritual resources than these few examples. (SFM Advisory Group)

	Resource	Value
<b>Cultural</b>	<ul style="list-style-type: none"><li>▪ Thompson River salmon</li><li>▪ Deer</li><li>▪ Berries</li></ul>	<ul style="list-style-type: none"><li>▪ Fishing</li><li>▪ Hunting</li><li>▪ Gathering</li></ul>
<b>Spiritual</b>	<ul style="list-style-type: none"><li>▪ Sacred medicinal plants</li><li>▪ Spiritual site</li></ul>	<ul style="list-style-type: none"><li>▪ Spiritual medicines (herbs/weeds)</li><li>▪ Vision quest</li></ul>

**Defined Forest Area (DFA):** a specified area of forest, including land and water (regardless of ownership or tenure) to which the requirements of this Standard apply. The DFA may or may not consist of one or more contiguous blocks or parcels. (CAN/CSA-Z809-02)

**Forest resources:** all resources and values associated with forests and range including, without limitation, timber, water, wildlife, fisheries, recreation, tourism, botanical forest products, forage, and biological diversity. (*Forest Practices Code of British Columbia Act*)

**Indicator:** a variable that measures or describes the state or condition of a value (see Figure 5 of Standard). (CAN/CSA-Z809-02)

**Licensee SFM Plan:** An SFM plan specific to the DFA for a licensee seeking or having acquired CSA Z09 certification.

**Known information:** a feature, objective or other thing that is contained in a higher level plan or is otherwise made available by a district manager or designated environment official at least four months before the Licensee plan is submitted for approval. (*Forest Practices Code of British Columbia Act*)

**Objective:** a broad statement describing a desired future state or condition of a value (see Figure 5 of Standard). (CAN/CSA-Z809-02)

**Old growth management area: means** an area established under a higher level plan which contains or is managed to replace structural old growth attributes. (*Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation*)

**Plans:** There are a variety of plans that apply to forest management including the following.

**Regional and subregional plans** – apply to large areas of the Crown land base (i.e. 500,000 to 5 million hectares). These plans establish direction for land use in the form of general resource management objectives that are applied consistently across the plan area and area specific resource management zones that provide objectives for a defined portion of the plan area.

**Sustainable resource management plans** – translate broad ‘strategic’ land use plans (i.e., regional and sub-regional plans) into more specific and tangible resource management direction that is needed for operational planning and day-to-day resource management decisions at a landscape or watershed level. SRMPs define resource objectives in precise terms that are measurable, geographically specific, and clearly communicate the intended resource integration or trade-offs.

**Forest stewardship plans** – Forest stewardship plans describe the approaches that the licensee will use to achieve the results specified in resource management objectives, but do not specify the planning and forest management prescriptions that will be applied to achieve the target results for the objectives

**Site plans** – are required for any cutblocks or roads prior to harvesting on the cutblock or harvesting in relation to the road construction. A site plan must identify the approximate

location of cutblocks and roads, be consistent with the forest Stewardship Plan and identify how the intended results or strategies described in the forest stewardship plan apply to the site.

**Woodlot licence plan** – must specify intended results and strategies and be consistent with objectives set by government for a defined set of resource values

**Licensee plans** – detail the logistics for forest and range development in particular locations. Methods, schedules and responsibilities for accessing, harvesting, renewing, and protecting the resources are set out to enable site specific operations to proceed. Licensee plans include forest development plans, range use plans, silviculture prescriptions and site plans. (*Forest Practices Code of British Columbia Act*)

**Permanent access structures:** are roads, landings, borrow pits, gravel pits, and quarries that are required to be used or provide access for timber harvesting or other forest management activities and whose continuous or periodic use will continue for a long enough time to prevent the re-establishment of forested vegetation. Permanent access structures are not part of productive landbase. (*Forest Practices Code of British Columbia Act*)

**Rare ecosystem:** is an ecosystem (site series or surrogate) that makes up less than 2 percent of a landscape unit and is not common in adjacent landscape units. (*Forest Practices Code of British Columbia Act, Biodiversity Guidebook*)

**Seral stage distribution:** the stages of ecological succession of a plant community (e.g., from young stage to old stage). The characteristic sequence of biotic communities that successively occupy and replace each other by which some components of the physical environment become altered over time. (*Glossary of Resource Planning Terms*)

**Sustainable forest management:** management to maintain and enhance the long-term health of forest ecosystems, while providing ecological, economic, social, and cultural opportunities for the benefit of present and future generations. (CAN/CSA-Z809-02)

**Sustainable forest management system:** the structure, responsibilities, practices, procedures, processes, and time frames set by a registrar for implementing, maintaining, and improving SFM (see Figure 2 of Standard). (CAN/CSA-Z809-02)

**Target:** a specific statement describing a desired future state or condition of an indicator. Targets should be clearly defined, time-limited, and quantified, if possible (see Figure 5 of Standard). (CAN/CSA-Z809-02)



# **Appendix 1**

## **Research and Information Needs**



# Appendix 1: Research and Information Needs

Planning for sustainable forest management requires flexibility and the ability to incorporate new information and methods as they become available. Licensees are committed to increasing their knowledge and understanding of forest ecosystems and sustainable forest management practices. They support various types of research and monitoring both directly and indirectly and are committed to using new information as it becomes available.

Licensees recognize that, in order to allow for improved management decisions, there is a need for better inventories of key forest resources. In general, the gathering of inventories on resource features on Crown Forest Land outside of Tree Farm Licenses are the responsibility of provincial government agencies. The responsibilities associated with a forest license are limited to operational reporting and are primarily related to monitoring and tracking of obligations associated with activities performed under the license. Licensees support government-led initiatives to improve, or add to, existing forest resource inventories and research projects.

The following research and information needs were recommended by the SFM Advisory Group. At a future meeting of the Advisory Group, participants will prioritize the items in this list, in order to provide licensees with an indication of the five most important research needs. This ranking will allow licensees to take forward those deemed to be most important.

## ***Integrating sustainable forest management with First Nations values:***

- Traditional use and cultural heritage studies. This information is needed to protect and manage for cultural and socio-economic First Nations interests in operational and forest development planning and for the timber supply review process, including any and all referral processes.
- Case studies are needed that examine how to best incorporate social, cultural and economic considerations into the conservation and sustainable use of forest biological diversity.
- Methodologies need to be developed to advance the integration of traditional knowledge into sustainable forest management.
- Studies needed to be done on methodologies to help ensure forest plans and practices reflect cultural values of forests as well as other First Nations interests.
- Holistic and inter-sectoral ecosystem approaches that integrate the conservation and sustainable use of biological diversity need to be developed that take into account cultural considerations.

## ***Biodiversity/flora and fauna:***

- There is a need for developing and monitoring biological indicators of actual biodiversity values to verify the surrogate indicators, such as seral stage distribution, identified in the SFM Plan (includes an assessment of monitoring tools and their effectiveness).
- The effectiveness of the size of current riparian leave strips or setbacks in protecting streams from sedimentation and ensuring suitable water temperatures for fish.

- Identifying gaps in species population data, especially rare and endangered species and working towards filling those gaps. Identifying ways to implement the information.

**Water Management:**

- The effectiveness of the current 3 m “green up” criterion for maintaining satisfactory hydrological recovery and to curtail runoff into streams.
- Stream temperature and specific suitable range to maintain healthy aquatic ecosystems.
- Monitoring of the following nine variables of water quality and quantity in selected streams, comparing developed and undeveloped watersheds of equivalent biogeoclimatic characteristics e.g., dry ecosystems and wetter ecosystems:
  - ⇒ Stream flow<sup>20</sup>
  - ⇒ Climatic indices
  - ⇒ Snow Survey
  - ⇒ Suspended sediment
  - ⇒ Turbidity
  - ⇒ Chemistry (could include nitrogen, pesticides, petroleum residues)
  - ⇒ Aquatic invertebrates (as an indicator of water quality and the health of aquatic habitat)
  - ⇒ Channel stability (through periodic aerial survey)
- The adequacy of current methods and schedules to assess water quality, quantity, stream flow, and temperature regimes.

**Forest Management:**

- Improve understanding of forest-grassland encroachment (historical harvesting, wildlife and livestock grazing, fires and fire suppression and climate change)
- How to minimize disruption of soil horizons and maintain productive mycorrhizal populations
- Timber supply – further refine temporal and spatial analysis of timber supply information (including age class distribution)

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<sup>20</sup> Can be used to determine the effects of different silviculture systems on peak/low flows

# **Appendix 2**

## **Identified Wildlife Management Species**



## Appendix 2: Identified Wildlife Management Species

Identified Wildlife Management Species for the Kamloops Timber Supply Area are shown in the following table.

Species	Forest District	BC Status
American Bittern	Kamloops, Headwaters	Blue-listed
Turkey Vulture	Kamloops	Yellow-listed
Rubber Boa	Kamloops	Yellow-listed
Racer	Kamloops	Blue-listed
Bobolink	Kamloops	Blue-listed
Prairie Falcon	Kamloops	Red-listed
Sandhill Crane	Kamloops	Blue-listed
Fisher	Kamloops, Headwaters	Red-listed
Lewis's Woodpecker	Kamloops	Blue-listed
Long-billed Curlew	Kamloops, Headwaters	Blue-listed
Bighorn Sheep	Kamloops	Blue-listed
Gopher Snake	Kamloops	Blue-listed
Bull Trout	Kamloops, Headwaters	Blue-listed
Brewer's Sparrow	Kamloops	Red-listed
Grizzly Bear	Kamloops, Headwaters	Blue-listed
Northern Goshawk	Kamloops, Headwaters	Red-listed
Mountain Goat	Kamloops, Headwaters	Yellow-listed



# **Appendix 3**

## **SFM Plan Reporting Format**



## **Appendix 3: SFM Plan reporting format**

Following is the format that licensees will use when reporting the results of monitoring the SFM Plan. Licensees provide the information required in the form annually. Information from individual licensees is compiled into a TSA Annual Monitoring Report. The Monitoring Report contributes to an annual review to confirm that the CSA performance measures are being met. The SFM Advisory Group reviews and comments on the Monitoring Report.



## Kamloops TSA Sustainable Forest Management Plan Annual Report

Name of licensee: \_\_\_\_\_

Reporting year: \_\_\_\_\_

Tar #	Monitoring parameter	Monitoring results
1	Have Licensees respected and are they living up to the intent of the direction set forth in the LRMP relating to old forest retention?	Yes _____ No _____
2	Licensees will report on the number of riparian and lakeshore non conformances to plans occurring during the reporting year as compared to the gross area harvested of cutblocks having riparian management areas within or adjacent to them.  Variance: To accommodate non conformance to plans that have little or no impact to the environment and/or to the social and ecological objectives or lakeshore areas.	Number of riparian and lakeshore non conformances to plans _____  Gross area harvested of cutblocks having RMAs within/adjacent: _____
3	Area (ha) harvested meeting LRMP caribou strategies against the area harvested within the LRMP caribou strategy area during the reporting year.  Variance: As provided for within the legal framework. The statutory decision maker may approve variances from standard requirements provided adequate rationale is provided and long-term objectives continue to be met.	Number of hectares meeting caribou strategies _____  Area harvested within caribou resource management zones _____

Tar #	Monitoring parameter	Monitoring results
4	<p>For cutblocks greater than 5 hectares, the number of cutblocks with wildlife tree patches within or parented to the cutblock and/or individual trees/stubs within the cutblock, versus the total number of cutblocks greater than 5 ha in size upon completion of harvest, during the reporting year.</p> <p>Variance: Acceptable range is between 70 percent and 100 percent.</p>	<p>Number of cutblocks with WTPs _____</p> <p>Total number of cutblocks harvested _____</p>
5	<p>Number of cutblocks where the Coarse Woody Debris (CWD) requirements contained in Licensee plans were followed compared to the number of cutblocks harvested, during the reporting year.</p>	<p>Number of cutblocks where CWD requirements were followed _____</p> <p>Number of cutblocks harvested _____</p>
6	<p>The average time (weighted by area) for regeneration establishment on areas where regeneration delay was declared during the reporting period.</p> <p>Variance: 12 months beyond the 3-year target</p>	<p>Average time for regeneration establishment<sup>21</sup> (months) _____</p>
7	<p>The number of known rare ecosystems in the operating area versus the number of known rare ecosystems where management strategies were followed.</p> <p><i>*Where no activity or planned activity occurred in/around a known rare ecosystem, management strategies are considered to be "followed".</i></p>	<p>Number known rare ecosystems in the operating area _____</p> <p>Number known rare ecosystems where management strategies were followed* _____</p>

<sup>21</sup> For natural regeneration, average age of trees from the first survey and for artificial regeneration, date of initial planting.

Tar #	Monitoring parameter	Monitoring results
8	<p>The area harvested within IWMS areas, whether the harvest areas had strategies to manage for the identified wildlife in plans, and whether the plan was followed.</p> <p>Did harvest areas have strategies to manage for the identified wildlife in plans?</p> <p>Was the plan followed?</p> <p><i>*Where no activity or planned activity occurred in/around IWMS cutblocks, management strategies are considered to be "followed".</i></p>	<p>Area (ha) harvested within IWMS areas _____</p> <p>Yes _____ No _____</p> <p>Yes _____ No _____</p>
9	<p>Age class distribution for coniferous species.</p> <p>Percent of the land base for broad leaf species.</p>	<p>See Indicator 22 information</p> <p>Land base ha. and broad leaf ha. (data to come from current TSR).</p>
10	<p>Area (ha) of permanent roads and landings identified in Licensee plans over gross block area (ha) for cutblocks harvested during the reporting year, using information contained within Licensee plans.<sup>22</sup></p>	<p>Number of hectares of roads and landings within harvested areas _____</p> <p>Gross block area (ha) _____</p>
11	<p>Harvest level allocated for each licensee and harvest level cut (cut control volume) for the past reporting year.</p> <p>Variance: According to Cut Control Regulation and Policy.</p>	<p>Allocated harvest level _____</p> <p>Cut control volume _____</p>

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<sup>22</sup> If Ministry of Forests inspection reports the plan number has been exceeded, the actual number will be used in the report.

Tar #	Monitoring parameter	Monitoring results
12	<p>Licensees will report:</p> <ul style="list-style-type: none"> <li>• Number of meetings and meaningful communications with First Nations that included management and protection of traditional knowledge, non-timber resources, and cultural and spiritual values; and,</li> <li>• Number of cutblocks where specific actions were requested and were taken, using traditional knowledge where available, to manage for and/or protect non-timber resources, and cultural and spiritual values.</li> <li>• Licensees will report on the number of written requests for communication from First Nations versus the number of responses made to First Nations. Reporting is on a one to one ratio (one response for each request)</li> </ul>	<p>Number of meetings and meaningful communications _____</p> <p>Number of cutblocks where specific actions were requested taken _____</p> <p>Number of written requests for communication _____</p> <p>Number of responses made _____</p>
13	<p>Area (ha) where soil disturbance commitments were not achieved as compared to the total gross area (ha) harvested during the reporting year.</p> <p>Licensee performance will be guided by internal and MOF inspections. Reports will use DM determinations or violation tickets, to confirm whether soil disturbance levels were met.</p>	<p>Number of hectares where soil disturbance commitments were not achieved: _____</p> <p>Total gross area harvested during the reporting year (ha): _____</p>
14	<p>Average time for road cut and fill slope seeding application on areas of new road construction during the reporting year.</p>	<p>Average time for application (months) _____</p>

Tar #	Monitoring parameter	Monitoring results
15	Total number of kilometers of status roads and the number of those that have been assigned a risk rating for the purpose of inspections. Licensees will also report on the number of road inspections made against the plan for high, moderate and low risk.	Total number of kilometers of status roads: _____  Of the above, how many kilometers of status roads have been assigned a risk rating for the purpose of inspections: _____  Number of road inspections made against the plan for high _____, moderate _____ and low risk _____.
16	Did you contribute to the annual plan?  Did you participate in a meeting with the SFM Advisory Group?	Yes _____ No _____  Yes _____ No _____
17	Number of registrations to a recognized third party certification that apply over the TSA area for the reporting period.	Number of registrations to a third party certification _____
18	Licensee report the current Protected Area status as last reported by a Timber Supply Review	Number of hectares maintained as Protected Areas (data to come from current TSR).
19	Percent of ranchers affected by planned operations that were communicated with during the reporting period.  Variance: Minus 10 percent of the 90 percent target	Number of affected ranchers _____  Number of affected ranchers communicated with during reporting period _____
20	Number of harvested blocks that achieve the visual intent as described in plans versus the number of blocks harvested within the past year that had preservation, retention or partial retention visual quality objectives.	Number of blocks with preservation, retention or partial retention achieving visual intent _____  Number of blocks harvested with VQOs: _____
21	Licensee report the current mai as last reported by a Timber Supply Review	Current mai in m3/ha/yr (data to come from current TSR).

Tar #	Monitoring parameter	Monitoring results
22	Licensee report the current age class distribution as last reported by a Timber Supply Review	Age class as percent of timber harvesting land base (data to come from current TSR).
23	<p>Number of working relationships with applicable First Nations (partnerships, joint ventures, co-operative agreements, memorandums of understanding, or business contracts* over \$5,000 or over 500 cubic meters in volume) during the reporting year.</p> <p><i>*Examples of a business contract include a work agreement or a direct timber sale with a First Nation Band or First Nation Contractor. For consistency in reporting, count multiple work agreements with one band or contractor or direct sales with one band or contractor as a single business contract. For example, multiple work agreements or multiple direct sales would count as a single business contract if they occurred with the same band or contractor.</i></p>	Number of working relationships _____
24	Number of classroom or field visits during the reporting year.	Number of classroom or field visits in current year _____
25	<p>Licensees will report on the number of cutblocks where an AOA was conducted.</p> <p>Licensees will report on the number of cutblocks where the AOA included a field visit.</p>	Yes _____ No _____
26	<p>Survey responses coded 1 (poor), 2, 3 (satisfactory), 4, 5 (well done)</p> <p>Results of feedback form compiled and reported as part of annual monitoring program.</p>	<p>Response average ____</p> <p>Results of feedback form compiled and reported ____ yes____ no</p>

Tar #	Monitoring parameter	Monitoring results
27	<p>27a: Licensees will report a yes/no answer as to whether the web site is being maintained, and whether SFMP and other information was made publicly available in the last year. Similar to Indicator 28</p> <p>27b: Licensees will report on the number of responses sent out by licensees compared to the number of written requests for communication. Report the average timeline for response. Indicator 28</p>	<p>Web site is being maintained ___ Yes, ___ No</p> <p>SFMP and other information was made publicly available in the last year ___ Yes, ___ No</p> <p>Number of written requests for communication _____</p> <p>Number of responses _____</p> <p>Average timeline for response _____ days</p>
28	<p>28a)</p> <ul style="list-style-type: none"> <li>• Were licensee interests represented at LRMP meetings?</li> <li>• Number of LRUP meeting attended against the number held within their operating area.</li> </ul> <p>Variance: Minus 10 percent to plus 30 percent of the 70 percent target</p> <ul style="list-style-type: none"> <li>• Number of FDP review meetings attended</li> <li>• Number of community meetings held or attended for the reporting period.</li> </ul> <p>28b) Number of responses sent out by licensees compared to the number of written requests from the public for communication. Include average time for response.</p>	<p>Yes _____ No _____</p> <p>Number of LRUP meetings attended _____</p> <p>Number of LRUP meetings held _____</p> <p>Number of FDP review meetings attended _____</p> <p>Number of community meetings attended _____</p> <p>Number of responses from Licensee _____</p> <p>Number of written requests from public _____</p> <p>Average response time (in days)..... _____</p>

Tar #	Monitoring parameter	Monitoring results
29	<p>29a) Are licensees directly or indirectly represented on the Forest Research Extension Partnership?</p> <p>29b) Are TSA wide research results shared with members of the Public Advisory Group on an annual basis?</p> <p>Describe the type of research undertaken and its value and applicability to sustainable forest management.</p>	<p>Yes _____ No _____</p> <p>Yes _____ No _____</p> <p>Research: _____</p> <p>Value and applicability to SFM: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

# **Appendix 4**

## **Summary of Publicly Developed Values, Objectives and Indicators**



*Appendix 4 – Summary of Publicly Developed Values, Objectives, and Indicators*

**CCFM CRITERION: 1) Conservation of Biological Diversity**

<b>ELEMENT</b>	<b>VALUE</b>	<b>OBJECTIVE</b>	<b>INDICATOR</b>
<p><b>1.1 Ecosystem Diversity</b></p> <p>Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA.</p>	<p>Well balanced ecosystems that support natural processes.</p> <ul style="list-style-type: none"> <li>▪ Natural</li> <li>▪ Functioning</li> <li>▪ Healthy</li> <li>▪ Cultural</li> <li>▪ Spiritual</li> <li>▪ Integrity</li> </ul>	<p>Healthy, connected forest ecosystems with a representation of natural attributes.</p> <p>Retain representation of natural forests.</p> <p>Conserve Aboriginal cultural and spiritual resources</p>	<p>(1) Achievement of the TSA’s old forest strategy.</p> <p>(2) Level of conformance to riparian management area and lakeshore commitments contained within plans.</p> <p>(4) Percent of cutblocks greater than 5 hectares that have individual wildlife trees/stubs and/or associated wildlife tree patches upon completion of harvest</p> <p>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</p> <p>(18) Protected Ecosystems</p> <p>(22) Forest age class distribution</p>
<p><b>1.2) Species Diversity</b></p> <p>Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time.</p>	<p>Sustainable populations of native flora and fauna.</p> <ul style="list-style-type: none"> <li>▪ Abundance</li> <li>▪ Distribution</li> <li>▪ Subspecies</li> </ul>	<p>Maintain a variety of habitats for naturally occurring species.</p> <p>Control noxious weeds.</p> <p>Conserve Aboriginal cultural and spiritual resources</p>	<p>(1) Achievement of the TSA’s old forest strategy.</p> <p>(2) Level of conformance to riparian management area and lakeshore commitments contained within plans.</p> <p>(3) Level of FPC compliance with caribou strategies.</p> <p>(8) Level of conformance with management strategies for all identified wildlife (under IWMS).</p> <p>(9) Age class distribution for coniferous species and percent of land base for broad leaf species.</p> <p>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</p> <p>(22) Forest age class distribution</p>
<p><b>1.3) Genetic diversity</b></p> <p>Conserve genetic diversity by maintaining the variation of genes within species.</p>	<p>Sustainable populations of native flora and fauna.</p> <ul style="list-style-type: none"> <li>▪ Abundance</li> <li>▪ Distribution</li> <li>▪ Subspecies</li> </ul>	<p>Maintain or enhance genetic diversity.</p> <ul style="list-style-type: none"> <li>▪ Species population</li> <li>▪ Endemic</li> </ul>	<p>(1) Achievement of the TSA’s old forest strategy.</p> <p>(3) Level of FPC compliance with caribou strategies.</p> <p>(7) Level of compliance with management strategies for all known rare ecosystems.</p> <p>(8) Level of conformance with management strategies for all identified wildlife (under IWMS).</p> <p>(9) Age class distribution for coniferous species and percent of land base for broad leaf species.</p>

**CCFM CRITERION: 1) Conservation of Biological Diversity**

ELEMENT	VALUE	OBJECTIVE	INDICATOR
<p><b>1.4 Protected Areas and Sites of Special Biological Significance</b></p> <p>Respect protected areas identified through government processes. Identify sites of special biological significance within the DFA and implement management strategies appropriate to their long-term maintenance.</p>	<p>Continuing viability of natural functioning ecosystems in Protected Areas and sites of special biological significance.</p> <p>Recreation opportunities</p> <p>Access</p> <p>Aboriginal rights</p>	<p>Protect viable, ecologically important examples of British Columbia's natural diversity.</p> <p>Endeavor to identify and maintain new areas of biological significance.</p> <p>Boundary integrity.</p>	<p>(1) Achievement of the TSA's old forest strategy.</p> <p>(3) Level of FPC compliance with caribou strategies.</p> <p>(7) Level of compliance with management strategies for all known rare ecosystems.</p> <p>(8) Level of conformance with management strategies for all identified wildlife (under IWMS).</p> <p>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</p> <p>(18) Protected Ecosystems</p>

**CCFM CRITERION: 2) Maintenance and Enhancement of Forest Ecosystem Condition and Productivity**

ELEMENT	VALUE	OBJECTIVE	INDICATOR
<p><b>2.1) Forest Ecosystem Resilience</b></p> <p>Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.</p>	<p>Sustainable forest ecosystems.</p> <ul style="list-style-type: none"> <li>▪ Conserve, use and sustainably manage</li> </ul>	<p>Resilient forest ecosystems with a representation of natural attributes.</p> <ul style="list-style-type: none"> <li>▪ Age class distribution</li> <li>▪ Scale (landscape unit)</li> <li>▪ Natural systems (way in which attributes interact)</li> </ul>	<p>(1) Achievement of the TSA's old forest strategy.</p> <p>(2) Level of conformance to riparian management area and lakeshore commitments contained within plans.</p> <p>(4) Percent of cutblocks greater than 5 hectares that have individual wildlife trees/stubs and/or associated wildlife tree patches upon completion of harvest</p> <p>(7) Level of compliance with management strategies for all known rare ecosystems.</p> <p>(9) Age class distribution for coniferous species and percent of land base for broad leaf species.</p>
<p><b>2.2) Forest Ecosystem Productivity</b></p> <p>Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.</p>	<p>Well functioning ecosystems.</p> <ul style="list-style-type: none"> <li>▪ Forest</li> <li>▪ Fragmentation</li> <li>▪ Connectivity</li> <li>▪ Non-timber forest values</li> </ul>	<p>To conserve the forest ecosystem condition and productivity.</p> <ul style="list-style-type: none"> <li>▪ Vitality</li> </ul>	<p>(4) Percent of cutblocks greater than 5 hectares that have individual wildlife trees/stubs and/or associated wildlife tree patches upon completion of harvest</p> <p>(9) Age class distribution for coniferous species and percent of land base for broad leaf species.</p> <p>(21) Mean Annual Increment</p> <p>(22) Forest age class distribution</p>

*Appendix 4 – Summary of Publicly Developed Values, Objectives, and Indicators*

**CCFM CRITERION: 3) Conservation of Soil and Water Resources**

ELEMENT	VALUE	OBJECTIVE	INDICATOR
<p><b>3.1) Soil Quality and Quantity</b></p> <p>Conserve soil resources by maintaining soil quality and quantity.</p>	<p>Conservation of soil resources.</p>	<p>Maintain productive capacity of forest soils.</p> <ul style="list-style-type: none"> <li>▪ Minimize compaction and detrimental disturbance</li> </ul>	<p>(5) Percent of cutblocks consistent with coarse woody debris requirements in plans.</p> <p>(10) Annual percent of harvested areas in permanent access structures (e.g. roads and landings).</p> <p>(13) Level of conformance to soil conservation commitments contained within plans.</p>
<p><b>3.2 Water Quality and Quantity</b></p> <p>Conserve water resources by maintaining water quality and quantity.</p>	<p>Healthy watersheds.</p> <ul style="list-style-type: none"> <li>▪ Functioning</li> <li>▪ Well-balanced</li> <li>▪ Natural</li> </ul>	<p>Acceptable levels of water quality and quantity</p> <ul style="list-style-type: none"> <li>▪ Water quality (clean water).</li> <li>▪ Water quantity (maintain stream-flow regimes within natural variation)</li> <li>▪ Water temperature</li> </ul>	<p>(2) Level of conformance to riparian management area and lakeshore commitments contained within plans.</p> <p>(6) Average regeneration period from time of harvest.</p> <p>(10) Annual percent of harvested areas in permanent access structures (e.g. roads and landings).</p> <p>(14) Number of months for road cut and fill slope seeding application.</p> <p>(15) Percent of status roads inspected in accordance with schedule.</p>

*Appendix 4 – Summary of Publicly Developed Values, Objectives, and Indicators*

**CCFM CRITERION: 4) Forest Ecosystem Contributions to Global Ecological Cycles**

ELEMENT	VALUE	OBJECTIVE	INDICATOR
<p><b>4.1 Carbon Uptake and Storage</b></p> <p>Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems.</p>	<p>Respect natural watershed processes and the intrinsic value of nature.</p> <ul style="list-style-type: none"> <li>▪ Actively growing, healthy forests</li> <li>▪ Maintain all natural sources of nutrient cycling</li> </ul>	<p>Resilient forest ecosystems with a representation of natural attributes.</p> <ul style="list-style-type: none"> <li>▪ Age class distribution</li> <li>▪ Scale (landscape unit)</li> <li>▪ Natural systems (way in which attributes interact)</li> </ul>	<p>(1) Achievement of the TSA’s old forest strategy.</p> <p>(5) Percent of cutblocks consistent with coarse woody debris requirements in plans.</p> <p>(6) Average regeneration period from time of harvest.</p> <p>(21) Mean Annual Increment</p> <p>(22) Forest age class distribution</p>
<p><b>4.2 Forest Land Conversion</b></p> <p>Protect forestlands from deforestation or conversion to non-forests.</p>	<p>Protection and security of the land and resources for future generations.</p> <ul style="list-style-type: none"> <li>▪ Future generations and plant and animal species</li> </ul>	<p>A prosperous forest industry with a sustainable supply of timber.</p> <ul style="list-style-type: none"> <li>▪ Maintain or increase the forest landbase.</li> <li>▪ Non timber resource values</li> </ul> <p>Retain representation of natural forests.</p> <p>All forest types including broad leaf species</p>	<p>(6) Average regeneration period from time of harvest.</p> <p>(10) Annual percent of harvested areas in permanent access structures (e.g. roads and landings).</p> <p>(11) Annual harvest level relative to annual allocation.</p>

*Appendix 4 – Summary of Publicly Developed Values, Objectives, and Indicators*

**CCFM CRITERION: 5) Multiple Benefits to Society**

ELEMENT	VALUE	OBJECTIVE	INDICATOR
<p><b>5.1 Timber and Non-Timber Benefits</b></p> <p>Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.</p>	<p>Diverse use of the forest.</p> <ul style="list-style-type: none"> <li>▪ Cultural and spiritual</li> <li>▪ Wildlife</li> <li>▪ Environmental</li> <li>▪ Recreational</li> <li>▪ Tourism</li> </ul> <p>Traditional public use trail systems</p>	<p>Conserve or enhance non-timber values while-managing forests for timber values.</p> <ul style="list-style-type: none"> <li>▪ Prosperous forest-based industries</li> </ul>	<p>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</p> <p>(19) Percent of affected ranchers with whom meetings are held.</p> <p>(20) Level of conformance to strategies in plans designed to achieve preservation, retention or partial retention visual quality objectives.</p> <p>(25) Participation with First Nations to implement and improve upon the revised Archaeological Overview Assessment model and process.</p> <p>(28) Number of opportunities/avenues for public participation in decision-making processes.</p>
<p><b>5.2 Communities and Sustainability</b></p> <p>Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.</p>	<p>Social and economic stability and vitality of local communities including First Nations</p> <p>Local perspective valued in managing forest resources.</p>	<p>Employment opportunities</p> <p>Economic diversity</p> <p>Local decision making</p> <p>Local education opportunities</p>	<p>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</p> <p>(19) Percent of affected ranchers with whom meetings are held.</p> <p>(23) The number of working relationships with applicable First Nations.</p> <p>(27) Public awareness of the SFMP</p> <p>(28) Number of opportunities/avenues for public participation in decision-making processes.</p>
<p><b>5.3 Fair Distribution of Benefits and Costs</b></p> <p>Promote the fair distribution of timber and non-timber benefits and costs.</p>	<p>Stable and profitable local forest industry.</p>	<p>A prosperous forest industry with access to desired markets.</p>	<p>(11) Annual harvest level relative to annual allocation.</p> <p>(16) Level of participation in the annual reporting of results and the number of advisory group meetings held annually.</p> <p>(17) Number of registrations to a recognized third party certification.</p> <p>(23) The number of working relationships with applicable First Nations.</p>

*Appendix 4 – Summary of Publicly Developed Values, Objectives, and Indicators*

**CCFM CRITERION: 6) Accepting Society’s Responsibility for Sustainable Development**

ELEMENT	VALUE	OBJECTIVE	INDICATOR
<p><b>6.1 Aboriginal and Treaty Rights</b></p> <p>Recognize and respect Aboriginal and treaty rights.</p>	<p>Aboriginal rights and title</p>	<p>Recognition of aboriginal rights and title as related to forest management</p>	<p>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</p> <p>(23) The number of working relationships with applicable First Nations.</p>
<p><b>6.2 Respect for Aboriginal Forest Values, Knowledge, and Uses</b></p> <p>Respect traditional Aboriginal forest values and uses identified through the Aboriginal input process.</p>	<p>Aboriginal rights, title and traditional knowledge are respected.</p>	<p>Protection of important archaeological sites (as interpreted by First Nations)</p> <ul style="list-style-type: none"> <li>▪ Cultural and heritage sites and values, including spiritual.</li> </ul> <p>Use of traditional knowledge</p> <p>Meaningful and informed participation of First Nations.</p>	<p>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</p> <p>(25) Participation with First Nations to implement and improve upon the revised Archaeological Overview Assessment model and process.</p>

*Appendix 4 – Summary of Publicly Developed Values, Objectives, and Indicators*

**CCFM CRITERION: 6) Accepting Society’s Responsibility for Sustainable Development**

ELEMENT	VALUE	OBJECTIVE	INDICATOR
<p><b>6.3 Public Participation</b></p> <p>Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants.</p>	<p>Public and First Nations values are recognized.</p>	<p>Public and First Nations values are incorporated in forest management planning through informed, inclusive and fair processes.</p> <p>All people are invited to participate.</p>	<p>(26) Participant satisfaction survey</p> <p>(27) Public awareness of the SFMP</p>
<p><b>6.4 Information for Decision-Making</b></p> <p>Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.</p>	<p>Adaptive forest ecosystem management.</p> <ul style="list-style-type: none"> <li>▪ Experience and research</li> <li>▪ Understanding of policies and procedures</li> </ul>	<p>Continual increase in knowledge of ecosystem needs and impacts of management techniques.</p> <ul style="list-style-type: none"> <li>▪ Extension</li> </ul> <p>Encourage the development of capacity for First Nations and public to provide informed and meaningful input into the decision making process.</p>	<p>(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.</p> <p>(16) Level of participation in the annual reporting of results and the number of advisory group meetings held annually.</p> <p>(24) Number of classroom and field visits by licensees to elementary, secondary and post-secondary school levels.</p> <p>(26) Participant satisfaction survey</p> <p>(27) Public awareness of the SFMP</p> <p>(28) Number of opportunities/ avenues for public participation in decision-making processes.</p> <p>(29) Report on number of research and extension initiatives licensees have participated in.</p>

# **Appendix 5**

## **Parking Lot**



## **Introduction**

This Appendix, referred to as a Parking Lot, is included in the SFMP to retain improvement ideas. The Parking lot is used to retain and track ideas that time or other constraints precluded immediate attention to. Parking lot items are addressed as part of regular SFMP review with the objective of determining appropriate action (i.e. retain in parking lot, no longer applicable, addressed, develop action plan, action, etc).

## **Parking Lot**

Current Parking Lot improvement ideas/opportunities are:

1. Review SFMP when further provisions of the Species At Risk Act become effective on Provincial land (habitat & species/2004)
2. Element 2.2 Indicators: Forest Ecosystem Productivity  
Indicators are tree oriented. Explore/consider other additional indicators
3. Continue to move from process to results based Indicators (eg Indicator 14)
4. Support for the meaningful participation of First Nations in forest development and planning is inferred but not stated for Indicator 25
5. Discuss the need to have an Indicator in the SFMP regarding "...the number of First Nations person days..."
6. Discuss the need to have number of public that participate in public decision making (eg Indicator 28 Target)
7. Indicator 29 Target: consider the need to change re initiating/using research
8. Review the area covered by plan. Protected Areas?
  - DFA applies to individual certified licensees only.
9. Better understand mean annual increment (mai); Indicator 21
10. Level of public participation in forest management