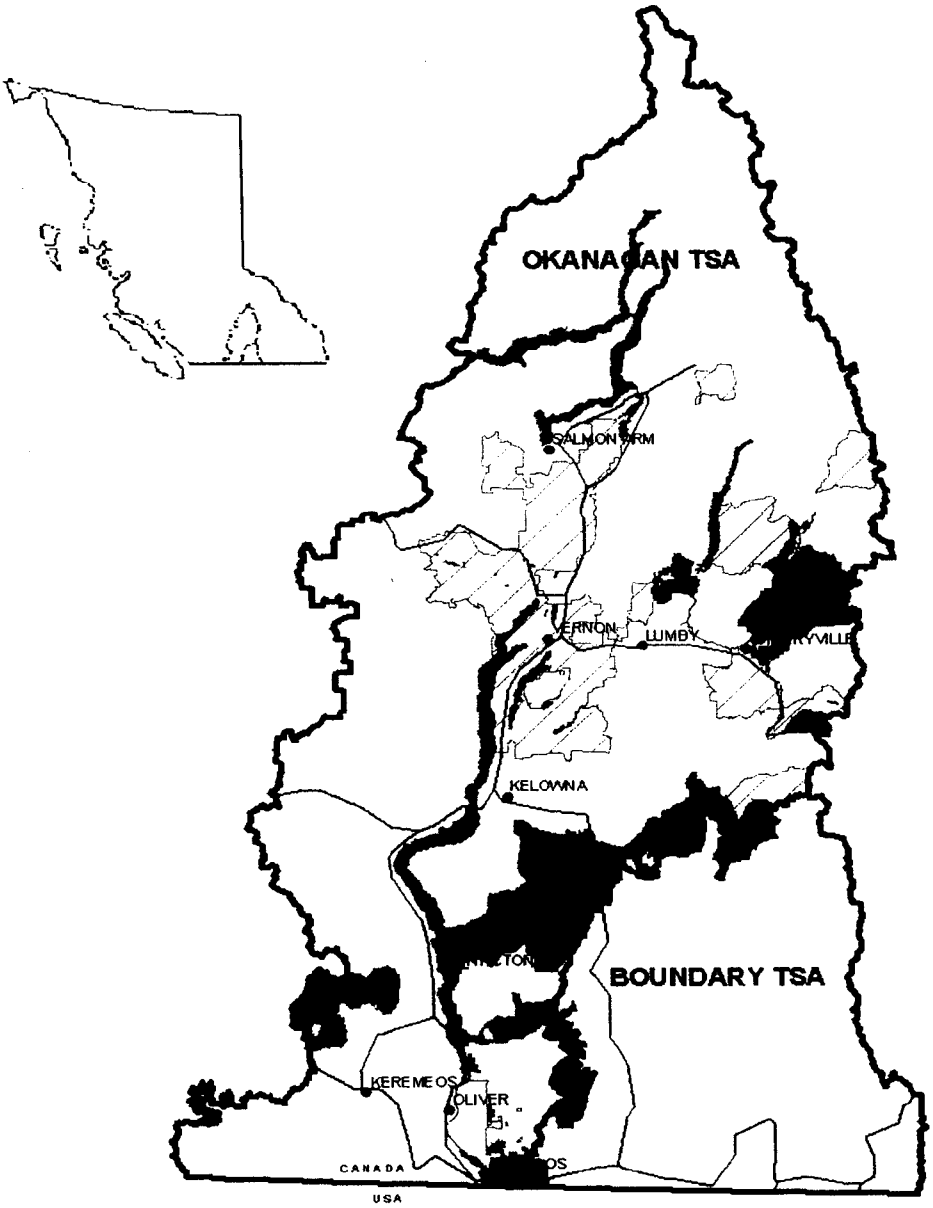
APPENDIX 4; OKANAGAN FALLS/LUMBY REGIONAL SUSTAINABLE FOREST MANAGEMENT PLAN

Weyerhaeuser/Tolko

Okanagan-Shuswap & Boundary Regional Sustainable Forest Management Plan



February 2004

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Executive Summary

Between May 2000 and March 2001 Weyerhaeuser Okanagan Falls and Lumby and the Ministry of Forests Small Business Forest Enterprise Program (for the area of Tree Farm License 15) worked with a group of local public (the SFM Advisory Group) to develop a Sustainable Forest Management (SFM) Plan.

When the SFM process was initiated the public, including First Nations, were invited to participate in the process. The SFM Advisory Group that was established involved individuals with backgrounds related to recreation, ranching, forestry, conservation, water and community.

The SFM Plan includes a set of values, goals, indicators and objectives that address environmental, economic and social aspects of forest management in Weyerhaeuser's and Tolko's operating area of the Okanagan and Boundary Timber Supply Areas. The Plan is based on the Canadian Standards Association (CSA) Sustainable Forest Management System, which is one of the primary certification systems currently being used in British Columbia. The CSA system sets performance goals and objectives 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 in conjunction with its environmental management system, Weyerhaeuser applied for registration of its operating area and became certified under the CSA standard. Registration is granted following an independent third party audit by a qualified organization.

During the summer of 2003, Weyerhaeuser and Tolko (the licensees) began discussions on the benefits of working together with the SFM Advisory Group to expand and include Tolko Lavington's operating areas within the Okanagan-Shuswap Forest District. This approach was presented at the October, 2003 SFM Advisory Group field-trip and was supported in principle. With this revised process Tolko invited members of the public, including First Nations that have identified resource use/interest within Tolko's operating areas to participate in the public advisory group. The licensees and the SFM Advisory Group started implementing this new approach at their December, 2003 meeting.

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. Each year the SFM Advisory Group will review an annual report prepared by Weyerhaeuser (with input from BC Timber Sales) and Tolko to assess achievement of performance measures. This monitoring process will provide the licensees and the public 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.

Current information on the process – including the SFM Plan – can be obtained by calling the Weyerhaeuser offices in Okanagan Falls (497-8211), Kamloops (372-2217) or the Tolko Lavington office (545-4992).

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 forest products have been produced using environmentally and socially responsible forest practices.

The Canadian Standards Association (CSA) Sustainable Forest Management System is one of the primary certification systems currently being used in British Columbia. The CSA system sets performance goals and objectives 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.

The Licensees with advice from the SFM Public Advisory Group have used the CSA certification system as a basis to develop the Okanagan-Shuswap/Boundary Sustainable Forest Management (SFM) Plan. The Plan provides management direction for all of Weyerhaeuser's and Tolko's operating area in the Okanagan and Boundary Timber Supply Areas (TSA), Weyerhaeuser private land within the Okanagan, Boundary and Arrow TSAs and overlapping areas where the B.C. Timber Sales tenures exist within Tree Farm License (TFL) 15.

The licensees have been consulting 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. The 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 licensees' commitment to adapt their management practices in response to changes in society's values.

The Sustainable Forest Management Plan is a "roadmap" to current and future strategies related to long-term performance. The performance measures have been developed using the CAN/CSA Z809, *A Sustainable Forest Management System: Specifications Document.* This document describes the various components of the plan as it relates to Weyerhaeuser's and Tolko's Defined Forest Area in the Okanagan and Boundary Timber Supply Areas (TSA).

The SFM Plan includes six sections:

Section 1.0	Introduction and Overview
Section 2.0	The Plan Area
Section 3.0	The Planning Process
Section 4.0	Values and Goals
Section 5.0	Indicators, Objectives and Variances
Section 6.0	Links to Other Planning Processes

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

Appendix 1 Defined Forest Area map

Appendix 2 Information for Consideration

Appendix 3 SFM Plan Reporting Format

Appendix 4 Summary of Publicly Developed Values, Goals, Indicators and Objectives

The values, goals, indicators and objectives described in this document were developed with advice form the SFM Advisory Group. The complete list of values, goals, indicators and objectives is provided in Appendix 4. These values, goals, indicators and objectives will be adhered to by the licensees to achieve sustainable forest management for their Okanagan-Shuswap/Boundary operating area. Applicable indicators and objectives will also be adhered to by B.C. Timber Sales for its harvest volume within TFL 15.

A number of suggested values, goals, indicators and objectives were not included in the SFM Plan due to either insufficient data or a means to measure the indicator. These suggestions have been included in Appendix 2 (Information for Consideration) and will be considered as part of the continual improvement process during subsequent reviews 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.

2.0 The Plan Area

The Defined Forest Area (DFA) for Weyerhaeuser's operations in Okanagan Falls and Lumby and Tolko's Lavington operation are located in the Okanagan and Boundary Timber Supply Areas (TSA). The boundary of the DFA is specified in the licensees' geographic information system (GIS) inventory. A map of the area is shown in Appendix 1.

The DFA within Weyerhaeuser's traditional operating areas in the Okanagan and Boundary TSAs, includes Tree Farm License (TFL 15), Forest License FL A18674, Forest License FL A18970 and Weyerhaeuser's private land in the Okanagan, Boundary and Arrow TSAs. The DFA within Tolko's traditional operating areas in the Okanagan TSA includes Forest License A18672, A18686 and Timber Sale License A18632. These replaceable licenses give the licensees the authority to harvest trees and construct roads along with the responsibility for forest planning, reforestation and road maintenance. The DFA also includes other Crown lands with the exception of Woodlot Licenses. Private land other than that held by Weyerhaeuser is also excluded from the DFA.

The following chart indicates the distribution of land classes with the DFA. Approximately 30 percent of the DFA (including parks, inoperable areas, and non-productive areas) is not available for harvesting (see table 1). These other areas are included in the DFA because they play a role in biodiversity and landscape level ecosystem functions.

Table 1: DFA Allocation for Weyerhaeuser and Tolko (net areas in hectares)

Land Classification	Weyerhaeuser Area (hectares)	Tolko Area (hectares)	Total Area (hectares)
Parks/protected areas (approved study areas / areas of interest)	10,342	10,849	21,191
Streams, wetlands, lakes	5,617	8,181	13,798
Non-contributing forest (deciduous, problem forest type, ESA's, inoperable, NP, NPBR)	44,968	40,010	64,008
Non Forest Land (alpine, rock, open range)	16,356	12,280	28,636
Productive Crown forest	227,784	130,069	357,853
Weyerhaeuser private forest	2,373	0	2,373
Total Defined Forest Area	**307,440**	**201,389**	**508,829**

Within the Tree Farm License 15, the B.C. Timber Sales holds an overlapping license on the DFA to harvest 5 percent of TFL cut level per year. B.C. Timber Sales is participating in the SFM Plan process and is, committed to the objectives in the plan and to reporting annually on its performance relative to the plan indicators.

The DFA has forests with a mix of age classes and species types (Figures 1 - 4). The distribution of age classes is weighed slightly towards trees 140 to 250 years of age (26 percent of all forests). Coniferous tree species comprise more than 98 percent of the forest types.

Figure 1: DFA Species Type for Tolko

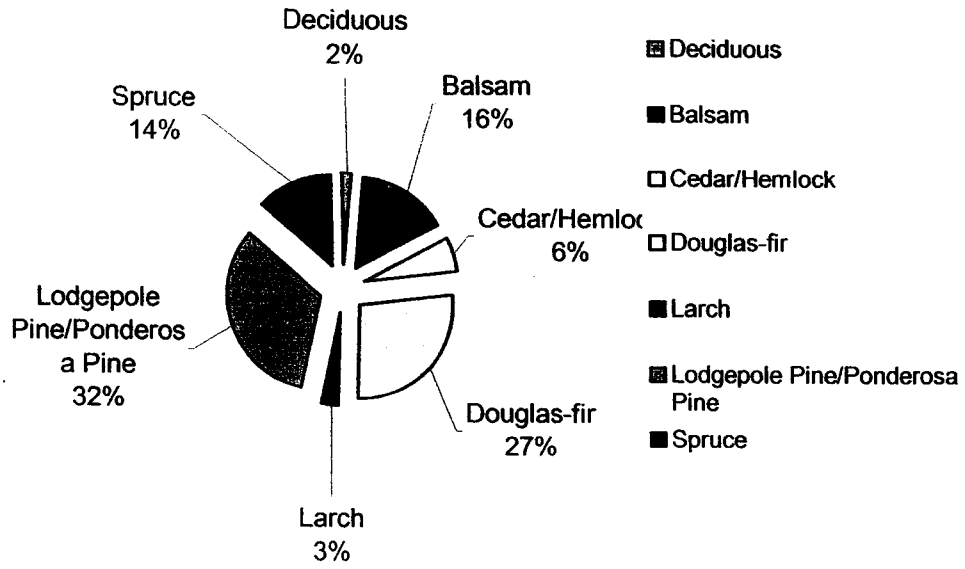


Figure 2: DFA Species Type for Weyerhaeuser

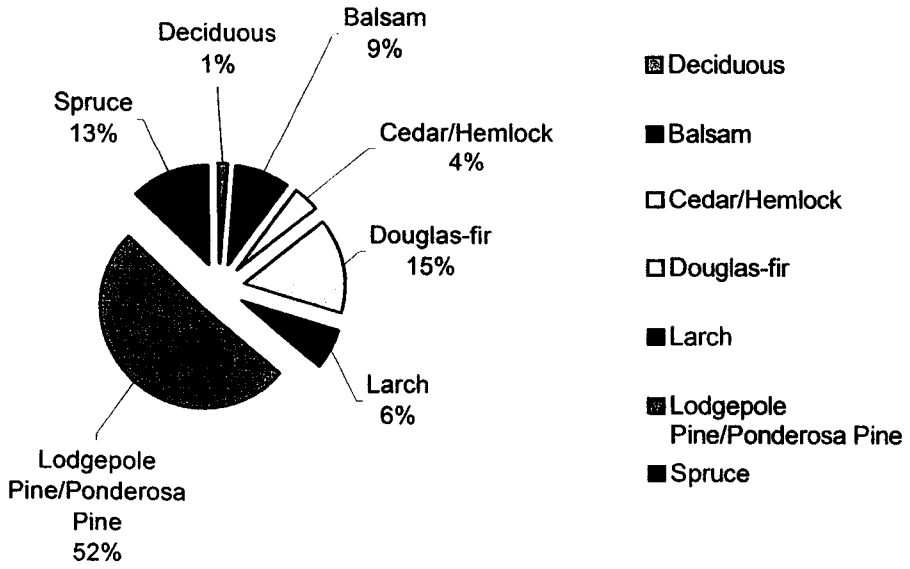


Figure 3: DFA Species Type Tolko and Weyerhaeuser Combined

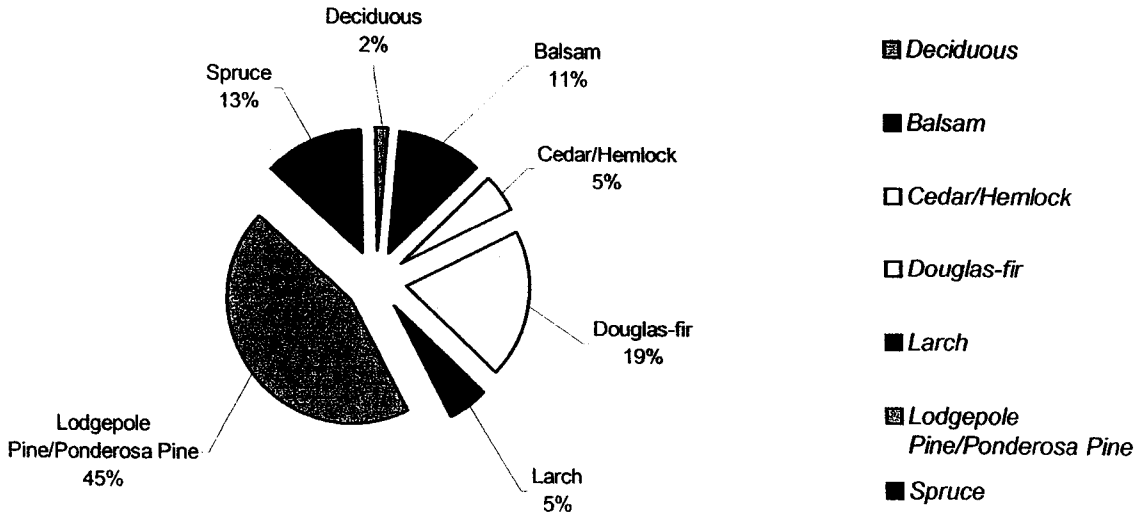
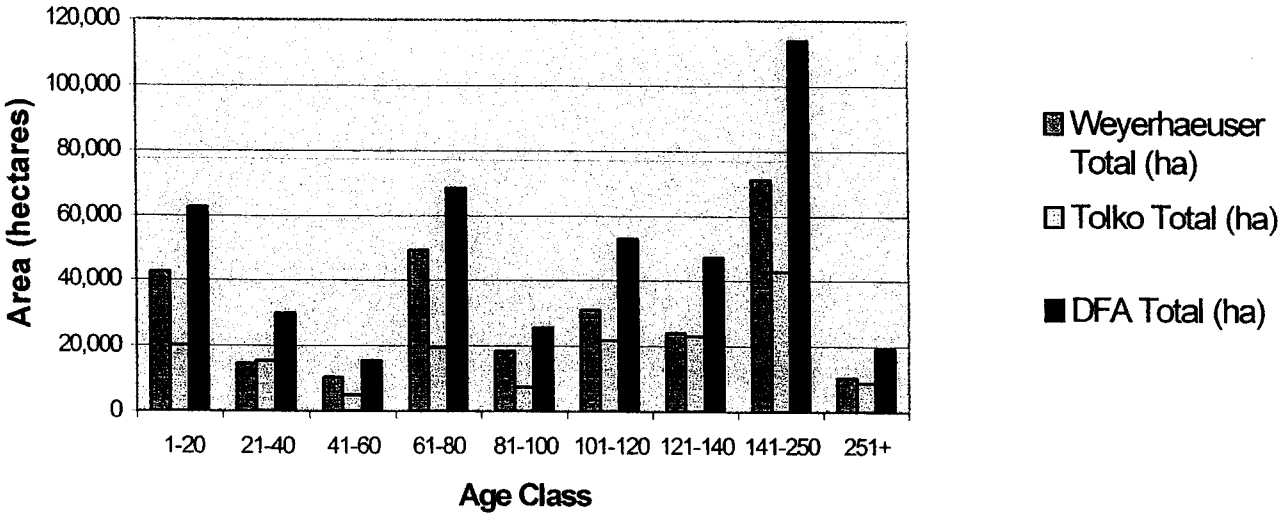


Figure 4: DFA Age Class Distribution



The Crown land portion of the DFA proposed for harvesting and related development must be referred to the public, and approved by the appropriate government agencies. All activities must be consistent with all government regulations, as well as government regional and subregional planning direction, such as the Okanagan Shuswap Land and Resource Management Plan (OSLRMP) and Kootenay Boundary Land Use Plan (KBLUP). The licensees incorporate any applicable regulation, direction and information into its Forest Development Plans, which are referred to the public for comment.

3.0 The Planning Process

3.1 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.[1]

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

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

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 is as follows.

3.1.1 Public 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:

1. Conservation of biological diversity;
2. Maintenance and enhancement of forest ecosystem condition and productivity;
3. Conservation of soil and water resources;
4. Forest ecosystem contributions to global ecological cycles;
5. Multiple benefits to society; and
6. Accepting society's responsibility for sustainable development.

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

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[1] This includes compliance with the strategic direction provided in the Okanagan-Shuswap Land and Resource Management Plan and Kootenay Boundary Land Use Plan.

For each set of criteria and critical elements, forest managers, and the advisory group identify local values and goals. Indicators and objectives are assigned to the values and goals to measure performance.

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

Goals describe the desired future condition, given an identified value. For example, the goal 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 a goal. 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 critical element and associated value.

Objectives are specific short-term (one or two year) commitments to achieve identified goals. Objectives 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 "reduction in area of the timber harvesting landbase", an objective might be "to have less than x percent of harvested areas in roads and landings."

Values, goals, indicators, and objectives apply to socioeconomic and ecological criteria and may address process as well as on-the-ground forest management activities.

As part of the process of developing values, goals, indicators and objectives, the SFM Advisory Group also assisted in the development of forecasts of predicted results for indicators and objectives. This information and interrelationship is further described in Appendix 4.

Forecasts are the long-term projection of expected future indicator levels. These have been incorporated into the SFM Plan objectives as predicted results or outcomes for each objective. Forecasting is further described in Section 5.

Audits and Public Review

Each year, Weyerhaeuser, Tolko and the B.C. Timber Sales will compile a report that summarizes results for each of the performance measures (see Appendix 3: 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 comparison of the actual results to forecasts will enable the effectiveness of the SFM Plan to be continually improved, in keeping with CSA standards.

The achievement of performance measures (indicators and objectives) will be assessed annually through surveillance audits carried out by a registered third party auditor. The audits will determine whether the registrant has successfully implemented the SFM Plan and continues to meet the CSA Standard.

3.1.2 Internal Infrastructure: Systems Components

The CSA SFM system includes a number of processes or systems-related requirements called "systems components" as follows:

- **Commitment:** A demonstrated commitment to developing and implementing the SFM Plan.

- **Advisory Group participation:** The CSA standards require informed, inclusive, and fair consultation with the Advisory Group during the development and implementation of the SFM Plan. The Okanagan/Boundary SFM Advisory Group was established to provide advice and recommendations to the licensees regarding the development of values, goals, indicators and objectives. Local First Nations groups were invited to participate in the process and received regular updates on the development of the SFM Plan, but have had limited participation. In 2003 Tolko invited members of the public, including First Nations that have identified resource use/interest within Tolko's operating areas in efforts to add geographic representation to the advisory group.

- **CSA-aligned management system:** The management system is an integral part of the implementation of the SFM Plan and is designed to meet CSA standards. The management system has four basic elements: 1) Planning; 2) Implementing; 3) Checking and Monitoring; and 4) Review and Improvement. Weyerhaeuser's and Tolko's management system, has the following base components:

  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, and public process to ensure that the management system is being implemented as effectively as possible.

3.2 The Okanagan-Shuswap/Boundary Regional SFM Planning Process

The initial SFM Plan was developed by Weyerhaeuser 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 Okanagan-Shuswap LRMP and the Kootenay-Boundary Land Use Plan. The licensees participate in the maintenance and continual improvement of the plan.

3.2.1 SFM Advisory Group

The SFM Advisory Group was formed to assist Weyerhaeuser, B.C. Timber Sales and Tolko in developing and maintaining the SFM Plan by identifying local values, goals, indicators and objectives and evaluating the effectiveness of the Plan.

Members of the SFM Advisory Group represent a cross-section of local interests including environmental organizations, forest workers, fish and wildlife, agriculture, and research specialists. An open and inclusive process was used to establish the public advisory group. Local First Nations, TFL 15 advisory table members and other interested community members were formally invited to participate. The Ministry of Forests and Ministry of Water, Land and Air Protection provide technical support to the SFM planning process including information and advice on land and resource and policy issues. The SFM Advisory Group developed and is guided by a terms of reference and procedures consistent with the CSA standard. Specified in the Terms of Reference and Procedures is that the process for developing the SFM Plan will be open and transparent.

During the plan development process, a number of potential indicators and objectives were suggested by the SFM Advisory Group that have not been incorporated into the SFM Plan because of either a lack of data or a means to measure the indicator. These suggestions are included Appendix 2 and will be considered as part of the continual improvement process during subsequent reviews 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.

Each year the SFM Advisory Group will review an annual report prepared by the licensees to assess achievement of performance measures. This monitoring process will provide the 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.

3.2.2 Government and First Nations Participation

Government agencies participate in the SFM planning process in two roles: 1) as a forest licensee, and 2) to provide technical support to the planning process (see section 3.2.1). The Ministry of Water, Land and Air Protection (formerly the Minister of Environment) also participated in the development of the Plan in a resource/support capacity. First Nations have chosen to limit their participation in the process, but were kept advised throughout Plan development.

Government agency and First Nations participation in the maintenance of the SFM Plan would lead to a stronger and more inclusive plan. To reflect the addition of Tolko and its Okanagan-Shuswap District operating areas, Tolko distributed invitations to five First Nations, MOF, MWLAP, DFO and several regional districts and municipalities.

4.0 Values and Goals

The following local values and goals were identified by the SFM Advisory Group to address each of the criterion[2] and associated critical elements prescribed by the CSA standards.

A number of indicators and associated objectives have been developed to meet these local values and goals. SFM Plan indicators and objectives are described in Section 6. A summary table showing all criteria and critical elements and associated local values, goals, indicators, and objectives is provided in Appendix 4.

Criterion 1: Conservation of Biological Diversity

Biological diversity is conserved by maintaining the variability of living organisms and the complexes of which they are a part.

Critical Element 1a: Ecosystem Diversity

Ecosystem diversity is conserved if the variety and landscape-level patterns of communities and ecosystems that naturally occur on the defined forest area are maintained through time.

Local Values	Goals	Indicators/Objectives
• Healthy, productive, well-balanced ecosystem • Well functioning, ecologically diverse ecosystem • Abundance of connected and productive habitat (i.e. distribution across the landscape)	• Maintenance of a full range of seral stage distribution • Maintain full range of habitat • Retention of vertical structure for stand level attributes	1, 2, 3, 4, 5, 6, 37

Critical Element 1b: Species Diversity

Species diversity is conserved if all native species found on the defined forest area prosper through time.

Local Values	Goals	Indicators/Objectives
• Sustainable populations of flora and fauna native to the DFA (including subspecies) and the abundance and distribution of species within their natural range of variation	• Species native to the DFA are maintained at endemic and sustainable levels	1, 2, 3, 4, 5, 6, 7, 10, 11, 37

[2] It should be noted that the in Criterion 6 , the phrase "society's responsibility for sustainable development" was interpreted by the SFM Advisory Group to mean "society's concerns and interests with respect to sustainable development".

Critical Element 1c: Genetic Diversity

Genetic diversity is conserved if the variation of genes within species is maintained.

Local Values	Goals	Indicators/Objectives
• Diversity of genetic material within species • Adaptability to change • Sustainable populations of flora and fauna native to the DFA (including subspecies) and the abundance and distribution of species within their natural range of variation	• Maintain genetic diversity of all species (and subspecies) native to the DFA	1, 2, 3, 4, 5, 7, 9

Criterion 2: Maintenance and Enhancement Of Forest Ecosystem Condition And Productivity

Forest ecosystem condition and productivity are conserved if the health, vitality, and rates of biological production or maintained.

Critical Element 2a: Forest Health

Forest health is conserved if biotic (including anthropogenic) and abiotic disturbances and stresses maintain both ecosystem processes and ecosystem conditions within a range of natural variability.

Local Values	Goals	Indicators/Objectives
• Well functioning ecosystems that sustain forest health, support natural processes and represent the full range of forest age classes	• Healthy forest ecosystems with a representation of natural attributes and natural systems	1, 2, 3, 4, 12, 13, 14, 15

Critical Element 2b: Ecosystem Resilience

Ecosystem resilience is conserved if ecosystem processes and the range of ecosystem conditions allow ecosystems to persist, absorb change, and recover from disturbances.

Local Values	Goals	Indicators/Objectives
• Resilient forest ecosystems	• Forest management does not compromise ecosystem resilience	1, 2, 3, 16, 17, 18,

Critical Element 2c: Ecosystem Productivity

Ecosystem productivity, including biomass, is conserved if ecosystem conditions are capable of supporting all naturally occurring species.

Local Values	Goals	Indicators/Objectives
• Well-functioning, biologically productive forest ecosystems	• Forest ecosystems that support a full range of timber and non-timber values	4, 16, 17, 19, 20

Criterion 3: Conservation of Soil and Water Resources

Soil and water resources and physical environments are conserved if the quantity and quality of soil and water within forest ecosystems are maintained.

Critical Element 3a: Physical Environments

Physical environments are conserved if the permanent loss of forest area to other uses or factors is minimized and if rare physical environments are protected.

Local Values	Goals	Indicators/Objectives
• Soil and water health for future generations • Integrity of soil and water systems • Rare physical environments	• Non-timber values and cultural values are maintained and/or enhanced (e.g., grasslands conserved) Conversion of forests to other uses (e.g., road development) minimized • Riparian areas managed to support integrity of water and quality of aquatic ecosystems • Rare physical environments protected	2, 4, 12,

Critical Element 3b: Soil Resources

Soil resources are conserved if the ability of soils to sustain forest productivity is maintained within characteristic ranges of variation.

Local Values	Goals	Indicators/Objectives
• Soil health and productivity - Biological - Physical	• Minimize physical and biological degradation of soil	4, 11, 12, 14, 19, 21, 22

Critical Element 3c: Water Resources

Water resources are conserved if water quality and quantity is maintained.

Local Values	Goals	Indicators/Objectives
• Protection and security of the water resource	• Stream flow regimes that provide levels of water quality and quantity within a natural range of variability • Retain natural systems that support water quality and quantity (e.g., beaver) • Protection of quality and quantity of water in licensed domestic watersheds	4, 11, 21, 22, 23, 24

Criterion 4: Forest Ecosystem Contributions to Global Ecological Cycles

Forest conditions and management activities contribute to the health of global ecological cycles.

Critical Element 4a: Element Recycling

The contribution to the health of global ecological cycles is maintained if the processes that are responsible for recycling water, carbon, nitrogen, and other life-sustaining elements are maintained.

Local Values	Goals	Indicators/Objectives
• Balanced, well-functioning ecological processes that support healthy, productive forest ecosystems	• Forest management activities are conducted in ways that maintain ecological processes	1, 4, 6, 16, 17, 25

Critical Element 4b:Utilization and Rejuvenation

The contribution to the health of global ecological cycles is maintained if utilization and rejuvenation are balanced and sustained.

Local Values	Goals	Indicators/Objectives
• Sustainable supply of timber and non-timber resources	• Sustainable harvest levels balanced with sustainable non-timber resources	1, 4, 16, 17, 25

Critical Element 4c: Protection of Forest Lands

The contribution to the health of global ecological cycles is maintained if forest lands are protected from sustained deforestation or conversion to other uses.

Local Values	Goals	Indicators/Objectives
• Protection and security of forest land to ensure health of global ecological cycles	• Maintain healthy, productive forest land base	11, 12, 13, 16, 21, 22, 25

Criterion 5: Multiple Benefits to Society

Forests provide a sustained flow of benefits for current and future generations if multiple goods and services are provided over the long term.

Critical Element 5a: Long-term Productive Capacity

Multiple benefits are maintained if extraction rates are within the long-term productive capacity of the resource base.

Local Values	Goals	Indicators/Objectives
• Continual and satisfactory flow of timber and non-timber benefits from the forest	• A prosperous forest industry with sustainable supply of timber and non-timber resources	12, 13, 14, 16, 17, 25

Critical Element 5b: Fair Competition

Multiple benefits are maintained if resource businesses exist within a fair and competitive investment and operating climate.

Local Values	Goals	Indicators/Objectives
• Economic benefits to society	• A prosperous forest industry with sustainable supply of timber and non-timber resources	25, 26

Critical Element 5c: Market and Non-Market Goods and Services

Multiple benefits are maintained if forests provide a mix of market and non-market goods and services.

Local Values	Goals	Indicators/Objectives
• Forests contribute to the quality of life	• Opportunity and access to the forest resource for a variety of commercial and non-commercial uses	27, 28, 30, 31

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.

Critical Element 6a: Social Values

Sustainable forest management requires that forests are managed in ways that reflect social values, and management is responsive to changes in those values.

Local Values	Goals	Indicators/Objectives
• Forest management responsive to changing social values	• Inclusion of social values to support fair, equitable and effective decision-making	27, 28, 31, 33

Critical Element 6b: Aboriginal and Treaty Rights

Sustainable forest management requires that duly established Aboriginal and treaty rights be respected.

Local Values	Goals	Indicators/Objectives
• Respect for Aboriginal and treaty rights	• Duly established Aboriginal and treaty rights considered in forest management planning and opportunities provided for meaningful participation by First Nations in forest management and planning	29

Critical Element 6c: Special and Unique Needs of Aboriginal Peoples

Sustainable forest management requires that the special and unique needs of Aboriginal peoples are respected and accommodated in forest management decisions.

Local Values	Goals	Indicators/Objectives
• Respect for the special and unique needs of Aboriginal peoples	• Participation by First Nations in forest management and planning to ensure that the special and unique needs of Aboriginal peoples are respected and accommodated in forest management decisions	28, 29, 32

Critical Element 6d: Decision-making Process

Sustainable forest management requires that the decision-making process be developed with input from directly affected and local interested parties.

Local Values	Goals	Indicators/Objectives
• Local public involvement	• Directly affected and local interested parties have input into decisions	28, 31, 33

Critical Element 6e: Fair Consultation

Sustainable forest management requires that decisions be made as a result of informed, inclusive, and fair consultation with people who have an interest in forest management or are affected by forest management decisions.

Local Values	Goals	Indicators/Objectives
• Recognition of public values	• Public values are incorporated in decision-making processes and fairly considered in forest management decisions	28, 31, 33

Critical Element 6f: Collective Understanding of Forest Ecosystems

Sustainable forest management requires that collective understanding of forest ecosystems, values, and management is increased and used in the decision-making process.

Local Values	Goals	Indicators/Objectives
• Shared knowledge and informed decisions	• Adaptive forest management that is responsive to research, experience and public input	28, 30, 33, 34, 35, 36

(1) Representation of seral stage distribution by Natural Disturbance Type.	**Objective 1:**	Report annually on early, mature and old seral stage distribution by Natural Disturbance Type (NDT). Maintain old seral distribution at values recommended by the Biodiversity Guidebook.
	Variance:	None

Forecast, predicted result or outcome: Healthy ecosystems with a diversity, abundance and full range of seral stage distributions to support native species and habitats.

- Age class and seral stage distribution of forests are forecast as part of the Timber Supply Review every five years to monitor impacts on the landscape. Okanagan-Shuswap LRMP allocated approximately 62,000 ha on the Timber Harvesting Landbase and 124,000 ha on the Non-Timber Harvesting Landbase for Old Growth Management Areas to align with the Provincial biodiversity strategy. Additionally, 7500 ha is available on the Timber Harvesting Landbase for Identified Wildlife Management Strategy and "interim measures document". A forecast for these areas will be provided in the next Timber Supply Review.
- The Ministry of Water, Land and Air Protection (WLAP) has a desire to protect old forests not currently protected by the OSLRMP but previously highlighted by the Land Use Planning Guidebook. The licensees will adhere to the OSLRMP and will look to find innovative solutions to manage for old forest attributes.

Monitoring/Reporting: Utilize GIS inventory information for age-class distribution by NDT type for the DFA. Reporting will also include the historic age-class distribution by NDT types as suggested in the Biodiversity Guidebook.

(2) Incidents of harvesting in rare ecosystems. **Non-compliance with the Identified Wildlife Management Strategy (IWMS).** **Non-compliance with OSLRMP/ KBLUP strategies for identified wildlife.**	**Objective 2:**	No harvesting in "known" rare ecosystems contained within Old Growth Management areas. Adhere to the IWMS and management strategies for rare species in the OSLRMP and KBLUP.
	Variance:	None

Forecast, predicted result or outcome: A diversity of healthy ecosystems while maintaining "rare" attributes as well as a diversity and abundance of naturally occurring wildlife and their habitats.

- Okanagan-Shuswap LRMP allocated approximately 62,000 ha on the Timber Harvesting Landbase and 124,000 ha on the Non-Timber Harvesting Landbase for Old Growth Management Areas to align with the Provincial biodiversity strategy. Additionally, 7500 ha is available on the Timber Harvesting Landbase for Identified Wildlife Management Strategy and "interim measures document". A forecast for these areas will be provided in the next Timber Supply Review.

Monitoring/Reporting: Should "known" rare ecosystems information be provided by government authorities (known information is defined in glossary), it will be incorporated into the licensees GIS database and available for forest development planning.

- For the reporting period, the licensees will report the number of hectares harvested in known rare ecosystems within OGMA's, by utilizing their GIS database. The licensees will report the number of cutblocks approved/signed in the reporting period that were influenced by IWMS management strategies (Wildlife Habitat Areas and associated General Wildlife Measures) and report any non- conformance.

- Any non-conformance to OSLRMP direction impacting Identified Wildlife (Appendix 14 - interim measures, and polygon specific resource management zones for: big-horn sheep; grizzly bear; mountain caribou; mountain goat; fisher as per capability mapping) and KBLUP (grizzly bear) will be included in the report.

Private Land: Development of Weyerhaeuser's private land will comply with the Identified Wildlife Management Strategy. Rare ecosystems identified on the private land will be reserved from harvesting.

(3) Report on total area of clearcuts by size categories.	**Objective 3:**	Report annually on clearcut cutblocks by size categories that were Site Plan approved/signed in the reporting period.
	Variance:	None

Forecast, predicted result or outcome: A diversity of cutblock sizes emulates natural disturbance patterns on the landscape.

Monitoring/Reporting: Report net area to be reforested for clearcut cutblocks or variants of clearcuts (clearcut with reserves and seed tree) and the number of cutblocks in the following size class ranges: 0-40 hectares, 41+ hectares for cutblocks approved/ signed in reporting period. Site Plan exempt areas will not be reported on.

(4) Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	**Objective 4:**	Zero non-conformances of plan commitments impacting values in riparian management areas.
	Variance:	Five percent

Forecast, predicted result or outcome: Healthy ecosystems with a diversity and abundance of native species and habitats. Properly functioning riparian systems.

- Okanagan-Shuswap LRMP established an additional 10,000 ha for the TSA for enhanced riparian protection. This area will be forecast in the next Timber Supply Review.
- The KBLUP has established riparian management direction specific to some streams licensed for human water consumption.

Monitoring/Reporting: Report the number of non-conformances to plan commitments impacting riparian values as reported through incident reports during the reporting period.

(5) Percent of cutblocks requiring a site plan with associated wildlife tree retention (patches and/or individual trees).	**Objective 5:**	100 percent of harvested cutblocks requiring a site plan will have associated wildlife tree retention. 80 percent of harvested cutblocks have in block stubs and/or wildlife trees with consideration given to spatial distribution.
Percent of harvested cutblocks that contain an average of 2-5 stubs or standing trees per hectare, giving consideration to spatial distribution.	Variance:	None

Forecast, predicted result or outcome: Healthy ecosystems with retention of vertical structure for stand level attributes.

- Provincial Wildlife Tree Management Recommendations from February 2000 ensure alignment between Landscape Unit Planning guide and Timber Supply impacts. Distributions of age classes as a result of Wildlife Tree retention are forecast as part of the Timber Supply Review.
- The target objective for stub trees and standing trees considers worker safety and operational constraints.

Monitoring/Reporting: To enable reporting, the following steps will occur:

1. An information system will be used to generate a list of cutblocks where harvesting was completed during the reporting period, as well as a list of cutblocks that contained mature reserve summary data and/or reserve trees and/or reserve stubs.
2. Remaining harvested cutblocks not identified in the information system as having reserve trees or patches associated with the harvest area, will be cross referenced with GIS database, Forest Development Plan or other plans.

(6) Percent of cutblocks where management of Coarse Woody Debris (CWD) is consistent with plans.	**Objective 6:**	100 percent of cut-blocks will be consistent with the CWD requirements identified in plans.
	Variance:	None

Forecast, predicted result or outcome: Healthy ecosystems with a diversity and abundance of native species and habitats.

- Coarse woody debris management is in its infancy within the province. Additional research an information gathering will help improve the ability to predict desired levels and impact. Policies provide consistency with the Timber Supply Review to ensure no Timber Supply impact.

Monitoring/Reporting: Report on adherence to CWD strategies identified in plans for cutblocks where harvesting was completed during reporting period. To enable reporting, an information system will be used to generate a list of cutblocks where harvesting was completed and a list of cutblocks that comply with the stated CWD objectives.

(7) Percent of harvested cutblocks having three or more tree species identified in the free growing inventory.	**Objective 7:**	70 percent of cutblocks harvested will have three or more tree species (includes conifer and deciduous comprising one percent or more of total trees) in the free growing survey.
	Variance:	None

Forecast, predicted result or outcome: Diversity and abundance of naturally occurring tree species on the landscape. Native species are maintained at endemic and sustainable levels.

- Species composition information is utilized in the Provincial Timber Supply Review.

(12) Annual percent of opening areas in permanent access structures.	**Objective 12:** Less than 6 percent of cut block areas in permanent access structures. Variance: None

Forecast, predicted result or outcome: Productive forest soils with minimized losses to forest development.

- Permanent access structures (percent non-productive unnatural) are utilized in Provincial Timber Supply Review.

Monitoring/Reporting: To enable reporting, the following steps will occur:

1. An information system will be used to generate a list of cutblocks where harvesting was completed during the reporting period.
2. An information system will be used to provide a summary of gross cutblock area and planned area of permanent roads and landings within these cutblocks.

(13) Silviculture systems applied by area.	**Objective 13:** Report annually on the silviculture systems applied by area. Variance: None

Forecast, predicted result or outcome: Cutblock silviculture systems that meet social, economic and biological objectives.

Monitoring/Reporting: Forest Development Plans identify silviculture systems proposed for development. An information system will be used to provide annual summary of information for areas of approved/signed cutblocks during the reporting period related to the following silviculture systems: clearcut, clearcut with reserves, patch cut, retention harvest, seed tree, selection.

(14) Number of induced slides resulting from forest management activities (>.1 hectare) originating in or adjacent to harvested areas or inspected permanent roads.	**Objective 14:** Zero slides induced from forest management activities. Variance: None

Forecast, predicted result or outcome: Decreased forest soil exposure from slides will reduce the potential for sedimentation thereby contributing to the maintenance of water quality and provide landbase for facilitating timber production.

Monitoring/Reporting: Utilize incident reports completed for the reporting year to compile the number of slides >0.1 hectare from forest management activities versus the cutblock area for blocks where harvest completed during the reporting period. For perspective, cutblock area where harvesting was completed during the reporting period and kilometres inspected of permanent roads will be provided.

(15) Percent of harvest priorities related to forest health completed by date set out in strategies.	**Objective 15:** Meet with government agencies (and other licensees and public where appropriate) on an ongoing basis to review forest health programs (e.g., pests, fires and windthrow) and complete 100 percent of harvest priorities by completion date set out in strategy. Variance: None

Forecast, predicted result or outcome: Logical priorities established and communicated to aid in control of forest health issues.

Monitoring/Reporting: To enable reporting, the following steps will occur:

1. Forest health strategies available and communication documented on priority action file.
2. Harvest priorities established in strategy are monitored and revised as new information is made available. Report percentage of harvest and/or road priorities completed during the reporting period and cross-reference with strategy.
3. List other strategies employed other than priority harvest.

Private Land: Any forest health issues discovered on Weyerhaeuser's private land will be addressed with a harvesting or monitoring strategy.

(16) Percent of cutblock area planned for planting is completed before or during the second complete growing season.	**Objective 16:** 70 percent of cutblock area planned for planting is completed within two growing seasons.
Percent of naturally regenerated cutblock area not meeting the natural regeneration delay.	100 percent of natural regeneration cutblock area meeting natural regeneration delay.
	Variance: None

Forecast, predicted result or outcome: Prompt reforestation ensures that the productive capacity of forest landbase to grow trees is maintained. Promptness also aids in providing younger trees a head start against competing vegetation, helping to reduce the need for manual or chemical brushing treatments.

- Regeneration delay information (eventually effects age class distribution) is utilized in the Timber Supply Review. The Ministry of Forests is responsible for forecasting key dates such as regeneration delay, based on specific biogeoclimatic information for each site.

Monitoring/Reporting: To enable reporting, the following steps will occur:

1. An information system will be used to generate a summary of area where harvesting was completed and the time delay to have the planned cutblock area planted.
2. An information system will be used to generate a summary of area to state the percentage of naturally regenerated cutblocks, which have met regeneration delay.

(17) Percentage of cutblock area that meets free growing requirements on or before the latest date.	**Objective 17:** All cutblocks will reach free growing requirements on or before the latest date.
	Variance: Variance is provided for within the legal framework.

Forecast, predicted result or outcome:

- Achievement of the earliest free growing date will help ensure that the productive capacity of the forest landbase to grow trees is maintained.
- Providing crop trees with a head start against competing vegetation will help to reduce the need for manual or chemical brushing treatments.

The Ministry of Forests is responsible for providing guidelines on key dates such as free growing, based on specific biogeoclimatic information for each site.

Monitoring/Reporting: Report on the cutblock area (hectares) that achieved free growing status and the average time (years) that the cutblock outperformed late free growing date (weighted average). In addition, report as general information, the volume of chemicals (items covered by the Pesticide Control Act and broadcast fertilizer applications) that are applied annually.

Private Land: Weyerhaeuser promptly regenerates its private forest land after harvest and monitors growth. There are no free growing requirements on private land and thus Weyerhaeuser will not be reporting on its performance.

(18) Report on access management commitments contained in forest development plans (FDPs).	**Objective 18:** 100 percent of annual access management commitments contained within the FDP will be implemented during the reporting period. Variance: None

Forecast, predicted result or outcome: Implemented access controls will minimize disruption to the sensitive ecosystems and disruption to sensitive wildlife populations.

Monitoring/Reporting: To enable reporting, the following steps will occur:

1. Utilize Forest Development Plan access and timing restriction information.
2. To determine the above has been achieved, refer to the information system for road completion status, access management commitment status, and other relevant information.

(19) Percent of cutblocks harvested in which soil disturbance exceeds level specified in plan.	**Objective 19:** Zero percent of cutblocks harvested in which soil disturbance exceeds specified level of disturbance. Variance: None

Forecast, predicted result or outcome: Productive forest soils with minimized losses to forest development.

- This objective reflects the Forest Practices Code – Soil Conservation Guidebook standards. Timber supply impacts of this FPC requirement were analyzed in the Forest Practices Code Analysis Report – 1996.

Monitoring/Reporting: Utilize incident reports completed for the reporting year to determine the number of non-conformances related to soil disturbance commitments made in plans.

(20) Incidents of non-conformance with government direction on recovery plans for regionally significant species.	**Objective 20:** Follow government direction set out in recovery plans for regionally significant species. Variance: None

Forecast, predicted result or outcome: A diversity of healthy ecosystems while prescribing to strategies established for regionally significant species.

- Okanagan-Shuswap LRMP allocated approximately 62,000 hectares on the Timber Harvesting Landbase and 124,000 hectares on the Non-Timber Harvesting Landbase for Old Growth Management Areas to align with the Provincial biodiversity strategy. Additionally, 7500 hectares is available on the Timber Harvesting Landbase for Identified Wildlife Management Strategy and "interim measures document". A forecast for these areas will be provided in the next Timber Supply Review.

Monitoring/Reporting: Recovery plans and strategies may be outside the control of forest licensees. "Known" information (see Glossary) that is provided by government authorities, will be incorporated into the company's GIS database and available for forest planning.

Licensees will report the number of cutblocks approved/signed in the reporting period that were influenced by IWMS (recovery plans) for regionally significant species. To enable reporting, an information system will be used to generate a list of applicable cutblocks that were approved/ signed and had incorporated a strategy.

Private Land: Development of Weyerhaeuser's private land will comply with recovery plans for regionally significant species referenced in the Identified Wildlife Management Strategy.

(21) Percent of permanent status roads that have had inspections completed as per plans.	**Objective 21:** 100 percent of permanent status roads will have risk assessments and plans developed based on assessments. Variance: None

Forecast, predicted result or outcome: Active road maintenance and deactivation programs, particularly during the spring snowmelt, will assist in the prevention of soil movement and sedimentation; thereby, contributing to the maintenance of water quality and soil productivity.

Monitoring/Reporting: To enable reporting, the following steps will occur:

1. Business units will keep a file for inspection frequency schedule for high, medium and low risk roads.
2. For the reporting period, query road information system for inspections complete on road.

3. Cross reference frequency schedule with query output.

(22) Percent of temporary status roads inspected at least once per year until road has been rehabilitated.	**Objective 22:** Inspect all temporary status roads at least once per year until rehabilitated. Variance: None

Forecast, predicted result or outcome: Active road maintenance and deactivation programs, particularly during the spring snowmelt, will assist in the prevention of soil movement and sedimentation; thereby, contributing to the maintenance of water quality and soil productivity. Temporary roads are generally rehabilitated following harvesting and/or site preparation operations. Where prompt rehabilitation has not occurred, the road is deactivated to ensure water quality until such time as rehabilitation occurs.

Monitoring/Reporting: Inspections on temporary roads (where not rehabilitated at the completion of harvesting) are conducted in the field and will be recorded. Information systems will be used to ensure rehabilitation activities are completed as planned. To enable reporting, complete the following steps:

1. For the reporting period, query road information system or areas having outstanding rehabilitation requirements of temporary roads where site preparation has already occurred.
2. Confirm that road inspections have occurred for these areas.

(23) Percent of the licensee's forest operations employees and primary contractors trained in Spill Preparedness and Response procedures.	**Objective 23:** 100 percent of the licensee's forest operations employees and primary contractors trained each year in procedures for Spill Preparedness and Response (fueling, maintenance, pesticides). Variance: None

Forecast, predicted result or outcome: Trained forest workers will provide enhanced emergency response to minimize detrimental environmental impact.

Monitoring/Reporting: Utilize a training tracking system and query if training update has occurred.

(24) Number of legally reportable spills.	**Objective 24:** Zero spills. Variance: None

Forecast, predicted result or outcome: Trained forest workers will provide enhanced emergency response to minimize detrimental environmental impact from a spill.

Monitoring/Reporting: Utilize EMS incident reports for spills and follow-up action items if spills require reporting to Provincial Emergency Program (PEP)

(25) Harvest level.	**Objective 25:** Harvest the allowable cut over the five-year cut control period. Variance: According to the Cut Control Regulation or government policy.

Forecast, predicted result or outcome: 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 last completed in 1996. The next review is scheduled for completion in 2005.

- Timber Supply Review has detailed forecasts which then rely on the Chief Forester to provide a determination of harvest levels utilizing forecast information, Crown objectives and input from public.

Monitoring / Reporting: The licensees will report annual harvest during the reporting period, and a 5 year harvest summary when at the end of a cut control period. The existing scaling system in place (monitored by MoF) tracks volume delivered.

Private Land: Weyerhaeuser's private land will be managed in a sustainable manner with no annual harvest commitment.

(26) Report annual initiatives/ partnerships.	**Objective 26:** Maintain active involvement with value-added and business initiatives/partnerships. Variance: None

Forecast, predicted result or outcome: Support for local communities through business relationships provides employment diversification and increased local revenue.

Monitoring/Reporting: Report on value added and business initiatives/partnerships.

(27) Level of compliance with preservation, retention and partial retention of visual quality objectives in operational plans.	**Objective 27:** Full compliance with preservation, retention and partial retention of visual quality objectives. Variance: None

Forecast, Predicted Result or Outcome: Management for visual quality within scenic areas is based on social preferences. Visually sensitive areas were identified in the Okanagan Shuswap 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.

Monitoring/Reporting: Report on the number of cutblocks harvested in the reporting period that had preservation, retention or partial retention visual quality objectives, and the number of cutblocks that achieved the visual intent as planned. Achievement of visual intent will be confirmed with photos from a key viewpoint demonstrating that operations provided results similar to plan. To enable reporting, an information system will be used to generate a list of blocks harvested with VQO objectives and their compliance.

(28) Report on OSLRMP committee involvement, number of Forest Development Plan meetings attended, and number of stakeholder meetings attended.	**Objective 28:** Participate in the following public processes: OSLRMP committee meetings; Forest Development Plan meetings; Stakeholder meetings (e.g., TFL Advisory Group, Vaseaux Sheep Recovery Group, etc.). Variance: None

Forecast, predicted result or outcome: Public participation in forest planning and operations that is open, inclusive and responsive to public concerns.

Monitoring / Reporting Documentation for OSLRMP and Forest Development Plan meetings are kept at the appropriate licensee's office.

Private Land: Weyerhaeuser will report on the number of meetings with interested parties concerning the private land.

(29) Report on number of meetings attended to support government in First Nation consultations.	**Objective 29:** Attend meetings to assist government in First Nations consultations where appropriate. Variance: None

Forecast, predicted result or outcome: Forest operations that reflect the timber and non-timber sensitivities by local First Nations.

- As a responsible steward of public forest land, the licensees will work proactively to build mutually beneficial relationships with Aboriginal peoples.

Monitoring/Reporting: To enable report, documentation of First Nations discussion related to the Forest Development Plan will be retained in the appropriate licensees office.

Private Land: Government consultation with First Nations does not apply to Weyerhaeuser's private land.

(30) Report educational and research initiatives.	**Objective 30:** Maintain involvement and sponsorship in research and educational initiatives (e.g., summer students, post graduate research projects, volunteer sites for studies, association support – FERIC, Forest Products Association of Canada, OSLRMP Wildlife subcommittee, Vaseaux Sheep Study, etc.). Variance: None

Forecast, predicted result or outcome: Adaptive forest management, based on facts and data, that is supported by ongoing monitoring and research.

- Responsive research programs are contributing to better quality decisions for sustainable forest management.

Monitoring/Reporting: To enable reporting, documentation on research programs and educational initiatives will be retained at the appropriate licensee's office.

(31) Percent response to written communications received.	**Objective 31:** Respond to all written public communications related to forest operations within 30 days of receipt. Variance: None

Forecast, predicted result or outcome: Public participation in forest planning and operations that is open, inclusive and responsive to public concerns.

Monitoring/Reporting: Review documentation contained within the Forest Development Plan for Weyerhaeuser's and Tolko's responses to public communications.

Private Land: Weyerhaeuser will report on the percentage of public communications pertaining to the private land that Weyerhaeuser provided a response.

(32) Report annually on the number of First Nation partnerships.	**Objective 32:** Support partnership opportunities with First Nations through mutually beneficial involvement in forest management. Variance: None

Forecast, predicted result or outcome: The licensees are supportive of partnership opportunities with First Nations to assist in building organizational capacity.

- As responsible stewards of public forest land, the licensees will work proactively to build mutually beneficial relationships with Aboriginal peoples.

Monitoring/Reporting: Documentation and reporting on First Nations partnerships will be retained at the appropriate licensees office.

(33) Number of annual meetings with local advisory group.	**Objective 33:** Meet at least once per year. Variance: None

Forecast, predicted result or outcome: Demonstration of the licensee's commitment to sustainable forestry and continual improvement.

Monitoring/Reporting: Okanagan Boundary documentation related to advisory group will be filed at the appropriate licensee's office.

(34) Number of students involved with educational classroom visits.	**Objective 34:** Conduct educational classroom visits in public schools. Variance: None

Forecast, predicted result or outcome: An educated and informed public with a broad based understanding of forestry that can provide local input into forest planning and operations.

Monitoring/Reporting: A periodic report summary is used to track the number of classroom visits and the total number of people reached by extension.

(35) Number of participants involved with forestry tours.	**Objective 35:** Promote public participation in forestry tours. Variance: None

Forecast, predicted result or outcome: An educated and informed public with a broad based understanding of forestry that can provide local input into forest planning and operations.

Monitoring/Reporting: A periodic report summary is used to track the forestry tours and the total number of people reached by extension.

(36) Number of participants involved with public presentations.	**Objective 36:** Conduct public presentations to increase public knowledge and understanding about sustainable forest management. Variance: None

Forecast, predicted result or outcome: An educated and informed public with a broad based understanding of forestry that can provide local input into forest planning and operations.

Monitoring/Reporting: A periodic report summary is used to track the public presentations and the total number of people reached by extension.

(37) Percentage of cutblocks where coarse woody debris piling is necessary to achieve silviculture activities that a proportion was then retained in loose piles or windrows within 50 meters of timber edge or riparian management areas.	**Objective 37:** 100 percent of cut blocks that require debris accumulating to meet reforestation objectives have a proportion of loose piles or windrows retained. Variance: 10 percent

Forecast, predicted result or outcome: Retention of large organic debris on harvested sites and utilization as habitat for wildlife.

Monitoring/Reporting:

To enable reporting, an information system will be used to generate a list of blocks where burning of accumulations piled during site prep occurred, and those blocks which met the objective of retaining a portion of loose piles or windrows within 50 meters of timbers edge or riparian management area.

6.0 Links to Other Planning Processes and Policies

Resource use planning in British Columbia occurs at a variety of levels ranging from strategic land use plans (LRMPs) to Landscape Unit plans to site specific plans for small areas (e.g., site plans for individual cutblocks).

Strategic land use plans provide broad direction for the sustainable management of land and resources through the establishment of resource management zones (e.g., protected areas, special management areas and general resource management zones) management objectives and strategies to guide land and resource management activities.

Landscape Unit Plans occur at a smaller scale than strategic land use plans and are intended to ensure that biodiversity objectives identified in the Forest Practices Code are met. Landscape Unit Plans address Old Growth Management Areas and wildlife tree retention.

Operational plans address resource management at a site-specific level and are guided and often regulated by objectives and strategies in strategic land use plans and Landscape Unit plans.

Provisions in resource use plans that pertain to forest resource uses and management practices may be implemented as legally enforceable provisions by being formally established as " higher level plans" under the Forest Practices Code. Examples of forest uses that may be governed under higher-level plans include:

- timber production, utilization and related purposes
- forage production and grazing by livestock and wildlife and related purposes
- recreation, scenery and wilderness purposes
- water, fisheries, wildlife, biological diversity and cultural heritage resource purposes
- any purpose permitted by the regulations.

Figure 5 on Page 50 illustrates the links between various levels of provincial resource use plans and related policies and procedures.

6.1 Kootenay Boundary Land Use Plan

The Kootenay-Boundary Land Use Plan was developed in the early 1990s based on regional land use plans developed by the Commission on Resources and Environment (CORE) for the East Kootenay and West Kootenay-Boundary regions of the province. The provincial government announced the Kootenay Boundary Land Use Plan in 1995 and approved a more detailed implementation strategy in 1997. As of January 31, 2001, the government approved the Kootenay-Boundary Higher Level Plan, which makes key parts of the plan legally binding.

Key elements of the higher-level plan include:

- a timber supply target of 4.7 million cubic metres per year;
- mature forest retention targets;
- measures to address caribou, regional connectivity and important avalanche tracks for grizzly bears;

- green-up reduced, while maximum patch size increased in accordance with natural forest disturbance patterns;
- enhanced resource development zones for timber;
- restoration of fire-maintained ecosystems
- some increased protection for streams within domestic watersheds; and
- establishment of scenic areas.

6.2 Okanagan-Shuswap Land and Resource Management Plan

The Okanagan-Shuswap Land and Resource Management Plan was completed in September 2000. A wide cross-section of stakeholders, interest groups and members of the general public from throughout the area developed the plan. The OSLRMP was approved in January 2001.

The Okanagan-Shuswap LRMP is intended to reflect a balance of social, economic and environmental values. It incorporates the principles of sustainability and integrated resource management into a long term, strategic vision for Crown land and resource development for the plan area and will assist statutory decision-makers in making determinations about land and resource use. It will also assist in building cooperation and partnerships among government agencies, First Nations, licensed tenure holders and other interested stakeholders in the plan area.

The OSLRMP provides strategic direction to the management of land and resources on all Crown lands in the Okanagan-Shuswap plan area. Direction is provided through the establishment of resource management zones (e.g., protected areas), management objectives and strategies. Objectives define the intent or desired future state for a particular resource value and strategies are the activities or conditions that must me met to the achieve the objective. The objectives in the plan that relate to forest management may be 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, and agriculture) are government policy and provide strong direction to management decision-making in the plan area.

In the hierarchy of planning for forest management, LRMPs provide direction to landscape unit plans, which provide direction to operational plans. Local plans and other public input processes, including the SFM Advisory Group, feed into this process (see Figure 5, Page 52). The OSLRMP will be monitored annually to assess implementation progress and the effectiveness of the plan in meeting its stated goals and objectives.

A number of objectives and strategies in the Okanagan-Shuswap LRMP relate to the values, goals, indicators and objectives in the SFM Plan as follows.

Protected Areas

The Protected Areas Strategy was established by the provincial government in 1992 with the objective of protecting 12 percent of the province's land base by the year 2000. In the Okanagan-Shuswap LRMP, lands were recommended for protection based on their representation of natural diversity, wildlife, wilderness, recreation and cultural and heritage values. As a result of the

OSLRMP, an additional 122,963 hectares of protected area was added increasing the total amount of protected area from 2.9 percent to 7.9 percent of the plan area. 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.

Forest Ecosystem Management

The Okanagan-Shuswap LRMP contains a wide variety of forest ecosystems. Within the TSA ecosystems range from grassland and semi-arid ecosystems in the south and as elevation increases, ponderosa pine and Douglas-fir forests give way to lodgepole pine, sub-alpine fir and spruce, which are common in the south and central plateaus. The northern part of the TSA is much wetter and supports cedar and hemlock forests at low elevations, and sub-alpine fir and spruce at upper elevations, before rising to rugged mountains. All operating areas within the DFA are south of Salmon Arm and therefore do not include the wetter cedar and hemlock dominated stands. In the south and central portion of the TSA where the DFA is located these forest ecosystems have been historically influenced by the presence or absence of fire as a dominant form of natural disturbance. The similarities in fire return intervals, and disturbance sizes and patterns form the basis for categorizing each of the ecosystems into natural disturbance types (NDT), which in turn is used to provide guidance for maintaining biodiversity.

Biological diversity (biodiversity) is the diversity of plants, animals and other living organisms in all their forms and levels of organization. It includes the diversity of genes, species, and ecosystems and the functional and evolutionary processes that link them. The great diversity of physical features and prevailing climatic conditions in the Okanagan-Shuswap plan area has resulted in a great diversity of habitats and species. Biodiversity can be affected by the disruption of natural processes. Future maintenance of biodiversity is dependent upon:

- the protection and connectedness of representative ecosystems as ecological benchmarks at the provincial and regional level;
- the maintenance and connectivity of representative habitats and seral stages at the landscape and watershed level;
- management for important attributes at the stand (site) level; and
- protection of rare and endangered species and ecosystems.

The overall goal for forest ecosystem management is to maintain a representation of the biological and physical diversity native to the plan area, and maintain forested ecosystem functions and conditions.

Key objectives related to the above goal include:

- maintain well distributed habitat for wildlife tree dependent species (retain wildlife tree patches and individual wildlife trees);
- avoid disturbances to rare ecosystems;
- maintain representative old growth forests throughout the plan area;

- maintain functional connectivity (movement of plants and animals) at the regional, landscape and stand level; and
- retain coarse woody debris.

Wildlife Tree Retention

Strategies related to wildlife tree retention are consistent with the direction in the Landscape Unit Planning Guide with additional consideration for individual large diameter stems in NDT4.

Rare Ecosystems

Rare ecosystems are those of limited distribution or those that have been altered through historic land use practices. In the southern part of the plan area, the very dry desert ecosystems are considered rare. Key strategies for managing rare ecosystems include avoidance of new road construction where practicable and inclusion of rare ecosystems as areas to be given priority for the establishment of old growth management areas.

Maintain Representative Old Growth Forests

Strategies for biodiversity include direction to landscape unit planning, identifying areas where conservation is a priority through assignment of biodiversity emphasis options. The OSLRMP has assigned preliminary biodiversity emphasis options to each landscape unit in the plan area. Old growth management areas (OGMA's) will be established through Landscape Unit planning. OGMA's will be defined in a manner that is biologically relevant (i.e., considers connectivity, age and spatial distribution, etc.)

The plan calls for the avoidance of harvesting in OGMA's until such time as the structural and functional attributes can be identified and maintained during timber harvesting.

Connectivity

Connectivity will be achieved at the Landscape Unit planning level through the placement of OGMA's or by planning for harvested and leave areas that maintain mature/older stands in a connected manner.

Coarse Woody Debris

Coarse woody debris (i.e., 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 OSLRMP 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.

Forest Health

In the Okanagan-Shuswap LRMP healthy forests are described as having "a condition that does not pose unacceptable risks to resources or values; characterized by biodiversity, the forest contains sustained habitat for indigenous life and meets present and future resource and value objectives". Biotic forest health factors and abiotic factors that impact the health of forests are (e.g., fire, root rot, bark beetle, mammal, weevil, defoliators, wind, sun, drought and bacteria).

The general approach suggested in the OSLRMP for managing forest health is to identify a favourable forest health condition for an area, or type of area, and that management strategies be focused on support of that condition.

Land and Soils

Soil productivity is vital to all forest resource interests. Objectives in the Okanagan-Shuswap LRMP are aimed at preserving soil resources, managing plant-soil systems and minimizing the potential for the contamination of water resources by naturally occurring uranium deposits. OSLRMP goals for land and soil resource include:

- healthy plant soil systems;
- forest health, productivity and full functioning ecosystems; and
- minimal dissolution of naturally occurring uranium.

Regulations and guidelines in the Forest Practices Code complement strategies for land and soils in the Okanagan-Shuswap LRMP. For example the Code sets out forest management guidelines to minimize soil disturbance and degradation.

Range

In the Okanagan-Shuswap LRMP range is broadly defined as any land that provides food and habitat for animals, both wildlife and domestic livestock. Rangeland includes natural grasslands, forests, alpine communities, parklands and cutblocks. Two key issues related to range management include the loss of range from forest ingrowth (due largely to fire suppression) and invasion by noxious weeds that out compete native vegetation and threaten the biodiversity and long-term viability of susceptible grassland ecosystems.

The goal of the range management in the OSLRMP is to maintain and/or enhance the long-term productivity and sustainability of the range resource for all users.

Wildlife

The Okanagan-Shuswap LRMP has a great diversity of wildlife including several species that are considered rare at the provincial level. A key management requirement for sustaining wildlife populations is the protection, maintenance and enhancement of wildlife habitat. To address the needs of wildlife habitat, resource managers have recently begun to adopt an ecosystem approach that addresses the needs of many species at a landscape level. However, in following this approach, the habitat needs of certain key species may not be addressed and additional specific actions may be required to deal with these needs (e.g., mule deer, bighorn sheep).

The OSLRMP plan area provides habitat through protected areas and OGMA's for several rare (red and blue-listed) species and plant communities. Many of these are associated with the lower

elevations of main valleys, particularly in the South Okanagan and the lower Similkameen valleys. Habitat loss or alteration of habitat has contributed to the threat to some of these species, however, many are naturally rare (they have sparse distributions or numbers, or are near the geographic limits of their distribution).

The Identified Wildlife Management Strategy (IWMS) provides some management direction for rare species, however, it does not address all rare species in the plan area and only addresses site level features (e.g., den or nest sites). Additional species are managed under the "Interim Measures" document developed as part of the Okanagan-Shuswap LRMP.

Fisher and pine marten are two of the rare species that are addressed in the OSLRMP as well as in the IWMS. These species occupy forested ecosystems dominated by mature and older seral stages. Retention of forest attributes – including intact riparian systems and coarse woody debris – during forest operations can reduce many of the impacts on these two species.

The primary goal for wildlife management is to maintain adequate habitat for all naturally occurring and regionally important species through appropriate management of cover requirements, access, forage productivity, movement opportunities and protection of special features.

In addition to the management direction provided for wildlife management through general resource management objectives and strategies, polygon-specific resource management zones (RMZs) were established for NDT4, Bighorn Sheep, Elk, Grizzly Bear, Moose, Mountain Caribou, Mountain Goat and Mule Deer. These zones provide area specific objectives and strategies for managing the values identified in the RMZ.

Fish and Aquatic Habitat, Riparian and Wetlands

There are some 43 species of fish found within the Okanagan-Shuswap LRMP plan area. Salmon are an important resource in the area and depend on the streams and lakes for migration, spawning and rearing. The Okanagan River – which takes in some of Weyerhaeuser's forestlands in the south of the plan area – supports one of only two viable sockeye stocks remaining on the entire Columbia River system.

Human population growth, urban development, land and resource development and water use have all had a cumulative impact on fish populations and fish habitat. A combination of low summer flows, high water temperatures, fines in the gravel and shortage of pools has seriously diminished the quality of fish habitat in many watersheds. Impacts include changes in flow rates, loss of riparian vegetation, destabilization of stream channel, erosion and sedimentation.

The Interior Watershed Assessment Procedure (IWAP) is a program for assessing the cumulative impacts of disturbance to a watershed. IWAPs identify impacts that affect fish habitat and water quality and quantity and include recommendations for mitigating impacts and preventing further impacts from occurring.

The main goal of the OSLRMP is to conserve the natural diversity of fish and fish habitat, with priority given to wild fish stocks. Key objectives for achieving this goal include protecting the integrity of critical and environmentally sensitive fish habitats and maintaining and restoring the structural and functional integrity of streams, stream channels, lakes, riparian areas and other aquatic ecosystems.

Objectives that relate to the SFM Plan include:

- reduce the impacts of development activities on fish habitat;
- maintain stream temperature conditions considered necessary to sustain and protect fish and fish habitat;
- rehabilitate and stabilize stream banks that have been impacted by resource development activities;
- achieve and maintain properly functioning conditions of streams including the timing and magnitude of flows;
- provide adequate riparian habitat to sustain healthy aquatic ecosystems, fish and wildlife populations; and
- identify and protect wetlands in provincial forests.

Regulations and guidelines in the Forest Practices Code complement strategies for aquatic and riparian ecosystems in the Okanagan-Shuswap LRMP. For example, management within riparian areas is outlined in the Code and in the *Riparian Management Area Guidebook.* The Penticton, Vernon and Boundary Forest Districts also have district policies for riparian and lakeshore management[3].

Water

The Okanagan-Shuswap LRMP recognizes water as a primary and fundamental resource. Water is a crucial component of the plan area's ecosystems with lakes, rivers and riparian areas providing critical habitat for many fish and wildlife species. Water is also an important resource for human consumption. As a finite resource it needs to be protected and managed in order to sustain human populations and natural ecosystems.

Fish and wildlife and domestic and industry water users rely on a stable supply of water as well as good quality water. A major concern related to water quality is sedimentation, which can impact aquatic life by smothering the streambed organisms that fish depend upon for food. Sedimentation can also impact water quality for human use.

A major issue in the plan area is the protection of water quality and quantity in watersheds in the face of increasing population growth and resource development activities. Activities such as urban development, agriculture, forestry and other land uses have created cumulative impacts for some of the area's watersheds. For example, uncontrolled timber harvesting and road development may contribute to increases in peak season flows resulting in erosion, channel destabilization and sedimentation of streams.

OSLRMP objectives for water management that relate to the SFM plan include:

- manage surface water quality and timing of flow to meet both instream and consumptive requirements;
- protect and/or enhance both surface and ground water quality and quantity;

[3] The Boundary Forest District does not have specific policies for lakeshore management over and above those contained in the Forest Practices Code.

- do not increase the risk to life and property from floods, erosion, mass wasting and debris torrents and protect ecosystem values;
- maintain and/or restore the functional and structural integrity of streams, stream channels, lakes, riparian areas and aquatic ecosystems; and
- manage the water resource on a watershed basis.

Timber and Silviculture

The forest industry in the Okanagan-Shuswap LRMP area plays an important role in the regional and provincial economies and accounts for approximately 4 percent of the provincial allowable annual cut (AAC). Within the Okanagan Timber Supply Area (TSA) approximately 65 percent of the 2.2 million hectare landbase is considered productive Crown forest and 45 percent of the land base is deemed suitable for harvesting. The difference between the productive forest land base and the timber harvesting land base is largely attributable to unmerchantable forest types, roads and landings, and inoperable areas.

Key land and resource issues for the forest industry in the plan area include security of timber supply and increased costs associated with managing other resource values (e.g., forage for livestock, wildlife habitat, visual quality, etc.). Cost increases are a major concern to the forest industry as they may affect its international competitiveness.

The goal of the OSLRMP for timber and silviculture is to maintain or enhance the sustainable supply of economically viable timber and minimize costs while maintaining environmental standards and addressing other resource values.

Objectives relating to the SFM Plan include:

- maintain or enhance AAC as determined by the Chief Forester for Tree Farm Licenses (TFLs) and the Timber Supply Areas (TSA);
- when constructing new forest development roads, minimize, where practical, site disturbance that causes permanent withdrawals from the timber harvesting land base;
- maintain a diversity of tree species in managed forests; and
- Where practical, important range use related information will be incorporated into forestry operational plans.

Access Management

The Okanagan-Shuswap LRMP does not contain a specific section on access management, but does include the following principles (somewhat abbreviated) for coordinated access management planning[4]:

- incorporate the advice of a broad spectrum of user groups;
- organized forest users must assume some responsibility for resolution;
- roaded access may not be compatible with all forest uses and may be a detriment to some;

[4] Based on a review by BC Environment of the Ministry of Forests Publication: A Guide to Coordinated Access Management Planning (1989)

- road networks may need to change over time;
- access use decisions should be made in the context of a larger plan area to accommodate the full spectrum of user's demands;
- scheduled review periods are required to address new information;
- utilize a range of alternatives (e.g., physical closure, signage and enforcement); and
- information/education strategies to increase public awareness and acceptance of the plan.

6.3 Provincial 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 the most important part 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 OGMA's. The Okanagan-Shuswap LRMP has defined target amounts of OGMA for each biogeoclimatic subzone variant and or the timber harvesting land base and the non-timber harvesting landbase.

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; and
- 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; and
- temporal and spatial distribution of cutblocks (patch size).

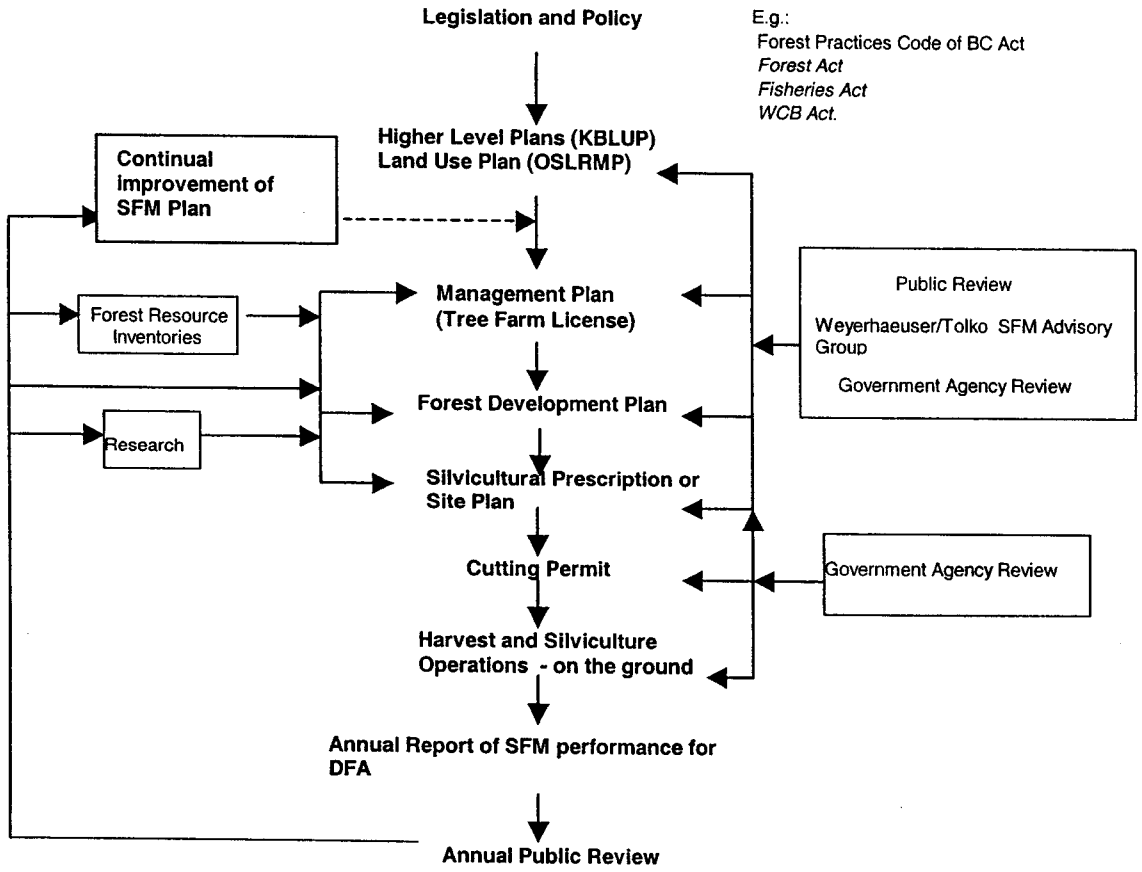
Forest resources planning may include objectives for any of the following resources:
- timber;
- recreation;
- water;
- botanical forest products;
- wildlife;
- forage; and
- fisheries.

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.

6.4 Operational Plans, Policies and Management Strategies to Support the Achievement of the SFM Plan

The SFM Plan is a complementary plan that demonstrates field level performance of commitments made within this plan, the Okanagan-Shuswap LRMP and higher-level plans such as the Kootenay-Boundary Land Use Plan, and operational plans. Figure 5 shows the flow of input and direction to operational 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 operational plans.

Figure 5: Links Between Plans



The intent is, over the long term, to rigorously apply the management direction provided through the hierarchy of planning shown in Figure 5, combined with regular monitoring and assessment. Through this process, the SFM plan will continue to be updated and improved to incorporate new information and best management practices based on the most current understanding of effective resource management practices.

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 including the following:

- **Public Involvement:** Public and stakeholder involvement in operational plans such as 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 are submitted to the development proponent in writing. The licensees will 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 address the request.

  The Forest Practices Code requires that licensees consider "known information" on resources during operational planning. "Known information" is formally made available to licensees through a higher-level plan, or by government agencies. Input provided by the public and First Nations contributes to the government data/knowledge prior to the government making the "known information" available to licensees for planning.

  The licensees are committed to working with directly affected stakeholders and members of the public on forest management issues and have a well-established history of participation in community meetings, including local planning processes. In addition, the licensees are committed to providing topical education 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 participate in strategic and local planning processes and meetings on forest management issues.

- **Access Management:** government develops Access Plans with input from public and other stakeholders. 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, recreation, sensitive ecosystems, or other

values due to open public access and introducing public access controls, where required. Once of the concerns identified by the SFM Advisory Group for consideration in access management planning is the potential impact of motorized access on sensitive wildlife habitat.

- **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 *Landscape Unit Planning Guide*. During operational activities, tree species of merchantable size 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 deciduous 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 insects, or are blown down will still contribute to biodiversity goals. 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.

- **Pest Management:** The licensees are required under their Crown licenses to address forest pest/health at the operational level. Managing for health must take into account the natural variability and cyclical variations that occur on the landscape. Management for forest health includes both preventive action and proactive response measures. Examples include participation in overview flights, focused reconnaissance action resulting from overview flights, strategies and coinciding action plans, communication, implementation and review.

- **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 operational 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. Weyerhaeuser has committed to promptly re-vegetate road cuts and fills in order to reduce the spread of noxious weeds.

- **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 the Ministry of Forests providing details on the location of personnel and equipment in the event of a wildfire. Weyerhaeuser employees and contractors are trained and knowledgeable in preventing and actioning wildfires. As well, the company monitors 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.

- **Free to Grow Silviculture Practices:** A free growing stand is defined in the Forest Practices Code as a healthy stand of trees of a commercially valuable species, the growth of which is not impeded by competition from plants, shrubs or other trees.

  Prior to 1987, the Ministry of Forests funded all stand establishments to the free to grow stage on Crown lands. With a change to the Forest Act that year, stand establishment (basic silviculture) became the financial responsibility of the licensee. Weyerhaeuser's normal assessment regime for each site prior to claiming free growing status is:

  i. A post harvest inspection confirms whether or not the treatments in the Silviculture Prescription (SP) Forest Development Plan or Site Plan regarding slash loading and disposal, site preparation, regeneration method and timing still apply.

  ii. Where natural regeneration had been prescribed, a stocking survey is made at least two years prior to the end of the regeneration delay period. If it appears the target will not be met, alternate actions – which may include one or more of mechanical site preparation, weed control, or planting – will be undertaken. If necessary, an amendment is made.

  iii. A survival survey generally occurs approximately one growing season after planting. If necessary, a fill plant or a replant is scheduled.

  iv. At least one regeneration performance survey is made to confirm stocking status three years after planting or three years after declaring an area stocked naturally. If needed, fill planting or weed control is scheduled.

  v. A free growing survey is made near the early free growing date. Necessary weeding or spacing treatments are scheduled. The free growing survey will use the inventory label,

which is a combination of coniferous tree species acceptable within the silviculture regime and other indigenous coniferous and deciduous species.

vi. If determined during the early free growing survey, a final free growing survey is carried out near the end of the late free growing date.

The regeneration date is the date by which at least the minimum number of healthy well-spaced trees of the preferred and acceptable species per hectare must be established and subsequently maintained until the stand is declared free growing. The free growing assessment period is the time within which a free growing stand must be established as required in the silviculture prescription. A survey must be conducted on or before the latest free growing date to determine whether the number of free growing trees per hectare meets the number set in the silviculture prescription.

- **Quality of seed for revegetation of right-of-ways:** Grass seeding is carried out for three reasons: 1) noxious weed control; 2) erosion prevention; and, 3) to provide forage. The seed used for revegetation is graded by Agriculture Canada to protect against the presence of noxious weeds and other unwanted species. Measures used to ensure seed quality in the production cycle include sowing seeds with clean equipment, crop inspection, crop certificate permitting seed from inspected crop to be sold as certified seed, seed crop harvested with clean equipment, seed inspected, graded and sealed to Canada Seeds Act requirements by Agriculture Canada.

- **Genetic diversity:** The process for developing seedlings in provincial seed orchards is closely regulated by BC's chief forester to ensure that genetic diversity and seedling quality is maintained. The Chief Forester appoints the Tree Improvement Council (TIC) to provide advice on the provincial tree improvement program including issues of seed production, genetic gain, and gene resource management.

  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.

- **Retention of fine organic materials:** Weyerhaeuser operates across a variety of ecosystems within the Defined Forest Area. In the drier zones with high fire frequency there are sites with very thin litter and humus layers. Harvesting and site preparation systems that remove high proportions of the fine organic material in tree tops, branches and needles have the potential to reduce the already limited nutrient capital on these sites. In order to maintain the

long-term productivity of these sites, Weyerhaeuser will endeavor to leave a portion of limbs and tops on site.

- **Determination of Forest Practices Code contravention:** If a contravention is reported, a letter is sent to the licensee with notification of investigation/inspection (data gathering). The licensee will be given the opportunity to be heard (sharing data) and the District Manager (Ministry of Forests) will make a determination based on information from all parties. If the contravention is confirmed, the licensee may appeal the ruling and/or the penalty levied.

- **Road construction and maintenance procedures:** Certain soil types are sensitive to disturbance especially from road construction and harvesting activities involving mobile equipment such as excavators and skidders. These sensitive soils are identified in advance to help prevent/minimize soil compaction, poor drainage, puddling and soil displacement that result in loss of productive forest sites. With respect to forest roads, the soil and water information collected during the planning phase and future expected use of the road are used to determine the type of road constructed and level of maintenance, deactivation or rehabilitation to be prescribed. Deactivation and rehabilitation provides a distinction between the varying construction standards and duration of roads as follows:

    - Deactivation: The intent is to control water and maintain natural drainage patterns based on the risks associated. Activity includes: cross ditches, waterbars, backup drainage control or removing culverts, bridges, seeding and revegetation and pulling back of material (recontouring or returning material).

    - Rehabilitation: some of the same prescriptions above may be completed to control water and maintain natural drainage; however, the intent is to have the site capable of growing a productive crop of trees. Potential strategies may include pulling back of material (recontouring or returning material), seeding and revegetation and decompaction.

There are two administrative categories of road types: status and non-status.

i. Status roads are ones held under road permit or road use permit by Weyerhaeuser giving the company responsibility for maintaining it. There are two types of status roads:
    - *permanent roads* are long term roads that may be deactivated for control of water
    - *temporary roads* are short-term roads that will be rehabilitated – including water management – to return the area into a productive growing site.

    Commitments related to the amount of permanent access structures (i.e. roads, gravel pits) are included in site-specific plans. Temporary access structures included in plans are part of the net area that requires reforestation and must be suitably treated to enable tree survival and growth.

i. Non-status roads have no assigned permit holder and responsibility is that of the Crown (usually old trails and roads)

- **Global climate change:** Global climate change refers to a change in climate caused by a buildup of greenhouse gases in the earth's atmosphere. Greenhouse gases such as carbon dioxide trap heat that in turn raises the earth's average temperature and alters the global climate. Some of the worst case scenarios associated with global climate change include rising ocean levels, summer water shortages and drought in some regions, and dying forests and wildfires. A key source for the buildup of greenhouse gases in the atmosphere is through emissions from fossil fuels.

  One of the ways to offset the buildup of greenhouse gases is through the maintenance and establishment of carbon sinks – either naturally or through the use of technology. Carbon sinks capture and store carbon and keep it out of the atmosphere. Productive forests are a good example of a carbon sink. Growing trees sequester (absorb) carbon dioxide from the atmosphere through the process of photosynthesis and convert it and store it the form of cellulose.

  There is debate as to whether managed forests (i.e., harvesting and post harvest silvicultural treatments) contribute to an increase or decrease in the natural carbon storage capacity of a forest. In general it is believed that managed forests that increase the average rotation age beyond that which occurs through natural disturbances (i.e., fire) contribute to an increase in carbon storage capacity[6]. This means that for interior forests where the typical managed stand rotation is greater than the average cycle of stand-replacing natural disturbances, there is likely to be an increase in carbon storage capacity, assuming that natural disturbances (e.g., fire) are suppressed. Additionally, studies have determined that the total ecosystem carbon storage increases as the age of the forest increases toward maturity. This means that a managed forest with an older age class distribution is likely to provide increased carbon storage over a forest with a younger age class distribution.

  The licensees recognize that global climate change is an important international issue in which forestry and forestry products can make a significant contribution. The licensees participate in a number of initiatives at a corporate level that are intended to contribute to improvements in global climate change. Forest Products Association of Canada (FPAC);

- **Visual management:** Visually sensitive areas are viewsheds or viewscapes visible from communities, public use areas and travel corridors, or viewpoints identified through a variety of referral or planning processes where the maintenance of visual quality is important. The OSLRMP has identified and mapped the priority (Zone 1) areas for visual management. Planned harvesting within this priority area requires a visual impact assessment and operations must be conducted to maintain visual quality. Measures to maintain visual quality are included in operational plans.

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[6] See Price et al, "Comprehensive assessment of carbon stocks and fluxes in Boreal-Cordilleran forest management unit, *Canadian Journal of Forest Resources*, 30 July 1997.

- **Archaeology:** During plan development, cutblock and road proposals are provided to archeologists to determine if there is potential significance through an archaeological overview assessment. If yes, then additional fieldwork is scheduled as an archaeological impact assessment and any necessary changes are incorporated into the appropriate operational plan.

Glossary of Terms

Glossary of Terms

The following definitions were taken from the licensees, the CAN/CSA-Z808-96 and Z809-96, the Okanagan-Shuswap LRMP, the *Forest Practices Code of British Columbia Act* and the Ministry of Forests Glossary of Resource Planning Terms (April, 1996).

Adaptive management – a learning approach to management that incorporates the experience gained from the results of previous actions into decisions. (CAN/CSA-Z808/809-96)

Biodiversity (or biological diversity) – the diversity of plants, animals, and other living organisms in all their forms and levels of organization, including genes, species, ecosystems, and the evolutionary and functional processes that link them. (Glossary of Resource Planning Terms)

Cultural heritage resource – means an object, a site or the location of a traditional societal practice that is of historical, cultural or archaeological significance to British Columbia, a community or an aboriginal people. (*Forest Practices Code of British Columbia Act)*

Defined Forest Area (DFA) – a specified area of forest, land, and water delineated for the purposes of registration of a Sustainable Forest Management system. (CAN/CSA-Z808/809-96)

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

Free growing stand – a stand of healthy trees of a commercially valuable species, the growth of which is not impeded by competition from plants, shrubs or other trees. (*Forest Practices Code of British Columbia Act)*

Goal – a broad, general statement that describes a desired state or condition related to one or more forest values. (CAN/CSA-Z808/809-96)

Indicator – a measurable variable used to report progress toward the achievement of a goal. (CAN/CSA-Z808/809-96)

Information System – A system to manage harvesting, road activities and reforestation obligations and commitments. (The licensees)

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 operational plan is submitted for approval. (*Forest Practices Code of British Columbia Act)*

Objective – a clear, specific statement of expected quantifiable results to be achieved within a defined period of time related to one or more goals. An objective is commonly stated as a desired level of an indicator. (CAN/CSA-Z808/809-96)

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

Operational 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. Operational plans include forest development plans, range use plans, and silviculture prescriptions. (*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)*

Potential natural community (PNC) – the biotic community that would become established on an ecological site if all successional sequences were completed without interference by humans under the present environmental conditions. Natural disturbances are inherent in its development. The PNC may include acclimatized or naturalized non-native species. (*Ministry of Forests Range Management Guidebook)*

Range development – means (a) a structure or excavation related to the management, for range purposes, of range land or livestock; (b) a practice, excluding grazing, that is designed to improve range conditions or facilitate more efficient use of range land for range purposes; and (c) any other feature designated in the regulations. (*Forest Practices Code of British Columbia Act)*

Recreation feature – means a biological, physical, cultural or historic feature that has recreational significance or value. (*Forest Practices Code of British Columbia Act)*

Resource feature – includes all of the following: (a) a cultural heritage resource; (b) a recreation feature; and (c) a range development that is a structure, excavation or constructed livestock trail. (*Forest Practices Code of British Columbia Act)*

Riparian reserve zones – means that portion, if any of the riparian management area or lakeshore management area located adjacent to a stream, wetland or lake of a width determined in FPC to be protected. (*Forest Practices Code of British Columbia Act,* Operational Planning Regulation)

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)

Rare physical environment – a landscape where very uncommon features are present including wildlife, plants, vegetation associations and rock formations (Okanagan-Shuswap LRMP)

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)

Stubs – Merchantable residual tree cut by a mechanical harvester and retained during harvest with an approximate height of 3-5 meters. (The licensees)

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-Z808/809-96)

Sustainable forest management system – the structure, responsibilities, practices, procedures, processes, and timeframes set by a registration applicant for implementing, maintaining, and improving sustainable forest management. (CAN/CSA-Z808/809-96).

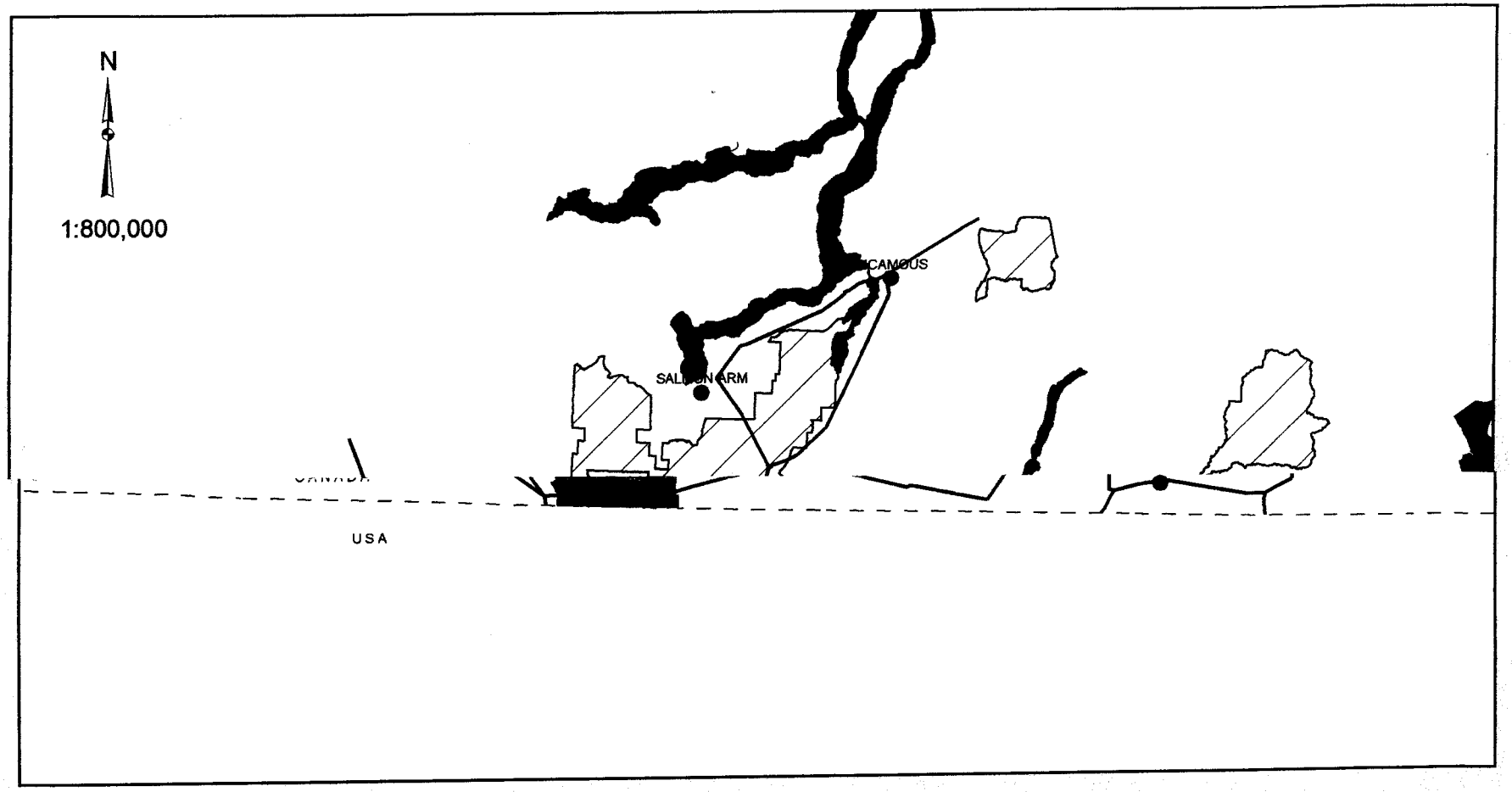
Appendix 1

Defined Forest Area Map

Appendix 1: Weyerhaeuser/Tolko Okanagan-Shuswap/Boundary Defined Forest Area

The following map shows the defined forest area (DFA) for the Weyerhaeuser/Tolko Okanagan-Shuswap/Boundary Regional Sustainable Forest Management Plan.

Weyerhaeuser - Okanagan Falls/Lumby
Tolko - Lavington
Defined Forest Area



Major Highways
Lakes, Rivers
Weyerhaeuser Private Land
Weyerhaeuser Okanagan FL A18674
Weyerhaeuser Boundary FL A18970
Weyerhaeuser TFL 15
Tolko FL A18672
Tolko FL A18686

October 17, 2003

Appendix 2

Information for Future Consideration

Appendix 2: Information for Future Consideration

The licensees and the Sustainable Forest Management Advisory Group decided that the "parking lot" items should be added to the SFM Plan as an appendix to ensure the ideas are not forgotten. Items were placed in the parking lot generally because they lacked information or a practical means of measurement.

Information below will be revisited periodically to determine if new information allows for their incorporation into the indicator set.

1. Future Indicators

Genetic Diversity

- Develop indicators to measure genetic diversity in the plan area

Ecosystem changes

- Develop indicators to measure:
  - Wildlife population census
  - Changes in landscape capability/suitability (habitat suitability index)
  - Site index productivity measures
  - Extent to which disturbance exceeds natural range of variability
  - Forest fragmentation and connectedness (patch size)
  - Retention of natural forest attributes in managed forests

Global Carbon Modeling

- Determine the extent to which forested areas in the DFA are a source or sink

FPC Contraventions Relating to Resource Features

- Develop possible indicators to address conformance with Identified Wildlife Management Strategies.

2. Other Parking Lot Information

Definitions for Critical Element 1a

- Well balanced ecosystems
- Full range of seral stage distribution

Definitions for Critical Element 1b

- Maintained at endemic and sustainable level

Critical Element 5a

- Indicator/objective 30 is a result of a process that accounts for current management, and does not fully consider non-timber values. A more appropriate indicator would be to track what non-timber values that are being requested from the DFA, and actions that have been made to address them.

- Indicator/objective 30 should be adjusted, or another set established, that reports on the Allowable Annual Cut versus the long-term timber supply forecast. We should rationalize whether the short-term harvest level is really sustainable if it exceeds the long term forecast.

Appendix 3

SFM Plan Reporting Format

Appendix 3: SFM Plan Reporting Format

The following table is the reporting form that licensees will use when reporting the results of monitoring the SFM Plan. The Plan will be monitored annually and the information will contribute to an annual review to confirm that CSA that performance measures are being met. The SFM Advisory Group will review and comment on the annual report.

Okanagan/Boundary Sustainable Forest Management Plan Annual Report

Licensee Name and Reporting Year:_____

Obj No.	Monitoring parameter	Monitoring results
1	Early mature and old seral stage. GIS output.	
2	A. Number of hectares harvested in known rare ecosystems contained in (draft) OGMA's. B. Cutblocks, or roads influenced by, and in compliance with IWMS strategies (General Wildlife Measures within WHAs). C. Cutblocks, or roads influenced by, and in compliance with OSLRMP/KBLUP strategies specific to rare species (OSLRMP link to red and blue listed coverage). ***Data pool:*** *A. Cutblocks with harvest complete in reporting period. Site Plan exempt areas are excluded.* *B &C. Cutblocks with Site Plans signed/approved, or road designs signed in the reporting period. Site Plan exempt areas are excluded.*	A. _____Hectares B. _____Number of cutblocks, or roads influenced by IWMS strategies. _____Number of cutblocks, or roads in non- compliance with strategies. C. _____Number of cutblocks, or roads influenced by OSLRMP/KBLUP strategies specific to rare (identified) species. _____Number of cutblocks, or roads in non-compliance with OSLRMP/KBLUP strategies specific to rare species.
3	Area and number of clearcuts, or variants of clearcuts (clearcut with reserves, seed tree) by size category. ***Data pool:*** *Cutblocks with Site Plan signed/approved in the reporting period (NAR). Site Plan exempt areas are excluded.* *Qualify any area add-ons (amendments) to previously harvested*	0-40 hectares_____ units _____ area 41+ hectares_____ units _____ area

Obj No.	Monitoring parameter	Monitoring results
	blocks with a text notation.	
4	Non-conformance to FPC and plan commitments impacting values in riparian management areas. ***Data pool:*** *incident reports in reporting period.*	_____ Number of non-conformance incidents.
5	Percent cutblocks requiring a site plan with associated wildlife tree retention (patches and/or individual trees). Percent harvest units with an average of 2-5 stubs or wildlife trees per hectare. ***Data pool:*** *Cutblocks with harvest complete in the reporting period. Site Plan exempt areas are excluded.*	_____ Number of cutblocks requiring a site plan with associated wildlife tree retention/_____total number cutblocks harvested. _____ Percent _____ Number of units with an average of 2-5 in-block stubs or trees per hectare/_____total number units harvested. _____ Percent
6	Percent of cutblocks where management of Coarse Woody Debris (CWD) is consistent with plans. ***Data pool:*** *Cutblocks with harvest complete in the reporting period. Site Plan exempt areas are excluded.*	_____ Cutblocks meeting CWD requirements identified in Plans/_____total cutblocks harvested. _____ Percent

Obj No.	Monitoring parameter	Monitoring results
7	Percent of cutblocks with three or more tree species identified at free growing. ***Data pool:*** • *MLSIS reporting of free growing during reporting period where entire block has achieved free growing.* • *Reporting of Net Area to be reforested.* • *Species data is based on inventory layer* • *Weighted average is based on number units meeting the objective.*	_____ Hectares of cutblocks with three or more species/_____total hectares achieving free growing status. _____ Percent For cutblocks with three or more tree species : _____ Percent primary species (average) _____ Percent secondary species (average) _____ Percent remaining species (average)
9	Planted area is regenerated in accordance with seed transfer guidelines. ***Data pool:*** *incident reports in the reporting period and area planted in the reporting period.*	_____ Planted area not in accordance to guidelines _____ Total area planted
10	Percent of R/W's revegetated with Canada No.1 or equivalent grass seed. ***Data pool:*** *quantity purchased in reporting period.*	_____ Kilograms of Canada No.1 or equivalent seed/_____ total kilograms of Canada No.1 or equivalent seed. _____ Percent
11	Permanent roads with re-vegetation application carried out on average within one month in normal conditions, and within seven months for winter construction. ***Data pool:*** *total kilometres of permanent road constructed in the reporting period.*	_____ Total kilometres of permanent non-winter constructed road re-vegetated. _____ Average time for re-vegetation application (normal conditions). _____ Total kilometres of winter constructed road revegetated _____ Average time for re-vegetation application (winter conditions).

Obj No.	Monitoring parameter	Monitoring results
12	Percent permanent access structures. ***Data pool:*** *Cutblocks with harvest complete in reporting period. Site Plan exempt areas are excluded.*	_____ Hectares of access structures/_____hectares total gross block area. _____ Percent
13	Area of silviculture systems. ***Data pool:*** *Cutblocks having Site Plans approved/signed in the reporting period.*	_____ Hectares clear cut _____ Hectares of retention harvest _____ Hectares of clear cut with reserves _____ Hectares of seed tree _____ Hectares of patch cut _____ Hectares of selection
14	Number of slides >.1 hectare induced by forest management activities. For perspective, report gross block area harvested and kilometres of permanent roads inspected. ***Data pool:*** *Incident reports in reporting period (slides); cutblocks with harvest complete (GCA); and permanent road inspected in the reporting period.*	_____ Slides _____ Hectares harvested. _____ Kilometres of permanent roads inspected.
15	Percent of forest health strategies completed as per plan. ***Data pool:*** *include Site Plan exempt cutblocks.*	Forest health strategies available _____yes _____no _____ Hectares of harvest priorities completed/_____hectares of harvest priorities planned. _____ Percent List other strategies employed other than priority harvest: •

Obj No.	Monitoring parameter	Monitoring results
16	Percent of cut block area planned for planting are completed during, or prior to the second complete growing season. Percent of naturally regenerated cutblock area meeting regeneration delay. ***Data pool:*** *Regeneration delay due (by SU) in the reporting period.* • *For SU's with 4 year delay due, compare planting dates and harvest completion date.* • *For SU's with 7 year delay due, compare declaration met with due date.*	_____ Hectares planted within, or prior to the second complete growing season/_____total hectares planted for planting. _____ Percent _____ Hectares natural regeneration meeting regeneration delay/_____total hectares of natural regeneration expected to meet regeneration delay. _____ Percent
17	Area of cutblocks that achieved free growing status prior to or at late free growing due date and the average time (years) that the cutblock out performed late date. ***Data pool:*** *cutblocks where late free growing date is due in the reporting period.*	____ Hectares of cut blocks that achieved free growing status. ____ Total hectares where late free-growing date is due in the reporting period. ____ Average time (years) that cut blocks out performed late date.
18	Access management commitments contained in FDPs. ***Data pool:*** *Notable features or strategies that we play a role in, as documented in our FDP. Not to include status on deactivation -plan versus actual, cattle guard dynamics.*	List access management commitments as per FDP that were implemented: _____ _____ List access management commitments as per FDP that were not implemented _____ _____ _____

Obj No.	Monitoring parameter	Monitoring results
19	Percent of cutblocks harvested which exceeded specified soil disturbance levels. ***Data pool:*** *incident reports in reporting period.*	_____ Cut blocks harvested within soil disturbance levels. _____ Total blocks harvested. _____ Percent
20	Number of cut blocks in non-compliance on recovery plans for regionally significant species. ***Data pool:*** *cutblocks with Site Plan approved/signed, and road design signed in reporting period (not Site Plan exempt areas).*	_____ Number of cutblocks, and roads influenced by IWMS (recovery plans). _____ Number of cut blocks and roads in non-compliance.
21	Percent of permanent status roads that have inspections completed as per plan.	_____ Kilometres of permanent status road with inspections completed/_____total kilometres of permanent status road. _____ Percent
22	Percent of temporary status roads inspected.	_____ Kilometres of temporary roads with inspections completed/_____total kilometres of temporary roads. _____ Percent
23	Percent of the licensee's operations forest employees and primary contractors trained in Spill Preparedness and response procedures.	_____ Forest operations employees and contractors trained/_____total number of operations staff and contractors. _____ Percent
24	Number of legally reportable spills. ***Data pool:*** *incident reports in reporting period relating to legally reportable quantities.*	_____ Number of spills requiring legal reporting to BC Government (PEP).

Obj No.	Monitoring parameter	Monitoring results
25	Report annual volumes harvested, and 5 year cut (if at the end of cut control).	TFL 15 _____m3 annual harvest _____m3 5 year allocation. SBFEP on TFL 15 _____m3 annual harvest FLA18674_____m3 annual harvest _____m3 5 year allocation FLA18970_____m3 annual harvest _____m3 5 year allocation FLA 18672_____m3 annual harvest _____m3 5 year allocation FLA 18686_____m3 annual harvest _____m3 5 year allocation TSL A 18632_____m3 annual harvest _____m3 5 year allocation
26	Business relationships and partnerships in reporting period.	_____ _____ _____
27	Number of harvested cutblocks that achieve the visual objective as described in operational plans versus the number of cutblocks harvested that had preservation, retention or partial retention visual quality objectives. ***Data pool:*** *Cutblocks with harvest completed in the reporting period that have visual objectives as above. Confirmation of meeting objective is comparing post harvest photo to pre-harvest model.*	Number of cutblocks with preservation, retention or partial retention achieving visual intent _____ Number of cutblocks harvested with VQOs: _____
28	Involvement in OSLRMP, Forest Development Plans, stakeholder meetings in the reporting period.	OSLRMP committee involvement: yes_____ no_____ Forest Development Plan meetings attended _____ Stakeholder meetings attended _____ Meetings with interested parties concerning private land_____

Obj No.	Monitoring parameter	Monitoring results
29	First Nations consultations (joint Licensee/MoF) related to the FDP in the reporting period.	First Nations consultations _____
30	Educational and research initiatives in the reporting period.	List involvement in educational and research initiatives: _____ _____
31	Percent response to written communications related to forest operations within 30 days of receipt. ***Data pool:*** *FDP comments and response time during the reporting period.*	_____ Total number of communications related to Forest Development Plan. _____ Number of written communications responded to. _____ Number of times communication response occurred within 30 days.
32	First Nations partnerships in the reporting period.	List partnerships with First Nations: _____ _____
33	Number meetings with local advisory group in the reporting period.	_____ Meetings held.
34	Number of students involved with classroom visits in the reporting period.	_____ Number of students. _____ Number of classroom visits.

Obj No.	Monitoring parameter	Monitoring results
35	Number of individuals involved with forest tours in the reporting period.	_____ Number of individuals involved with forest tours. _____ Number of tours.
36	Number of people involved with public presentations in the reporting period.	_____ Number of people involved with public presentations. _____ Number of presentations
37	Percent of cutblocks retaining piles/ debris accumulations resulting from site preparation activities ***Data pool:*** *Cutblocks with mechanical site preparation that resulted in debris accumulations and post burn plan results. Focus is 50 metres from timber edge and riparian as preferred.*	_____ Number of cutblocks where a portion of debris accumulations were retained (not burned) / Number of cutblocks where debris accumulations occurred. _____ Percent

Appendix 4

Summary of Publicly Developed Values, Goals, Indicators, and Objectives

Appendix 4: Summary of Publicly Developed Values, Goals, Indicators, and Objectives

Criterion 1 Conservation of Biological Diversity

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
1a) Ecosystem diversity is conserved if the variety and landscape level patterns of communities and ecosystems that naturally occur on the DFA are maintained through time.	• Healthy, productive, well-balanced ecosystem • Well functioning, ecologically diverse ecosystem • Abundance of connected and productive habitat (i.e. distribution across the landscape) •	• Maintenance of a full range of seral stage distribution • Maintain full range of habitat • Retention of vertical structure for stand level attributes	1. Representation of seral stage distribution by Natural Disturbance Type.	1. Report annually on early, mature and old seral stage distribution by Natural Disturbance Type (NDT). Maintain old seral distribution at values recommended by the Biodiversity Guidebook.
			2. Incidents of harvesting in rare ecosystems -Non-compliance with the Identified Wildlife Management Strategy (IWMS) -Non-compliance with OSLRMP/ KBLUP strategies for identified wildlife.	2. No harvesting in "known" rare ecosystems contained within Old Growth Management areas. Adhere to the IWMS and management strategies identified for rare species in the OSLRMP and KBLUP.
			3. Report on total area of clearcuts by size categories.	3. Report annually on clearcut cutblocks by size categories that were Site Plan approved/ signed in the reporting period.
			4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	4. Zero non-conformances of plan commitments impacting values in riparian management areas.
			5. -Percent of cutblocks requiring a site plan with associated wildlife tree retention (patches and/or individual trees) -Percent of harvested cutblocks that contain an average of 2-5 stubs or standing trees per hectare, given consideration to spatial distribution.	5. -100% of harvested cutblocks requiring a site plan wi have associated wildlife tree retention. -80% of harvested cutblocks have in block stubs and/or wildlife trees with consideration given to spatial distribution.
			6. Percent of cutblocks where management of Coarse Woody Debris (CWD) is consistent with plans.	6. 100% of cutblocks will be consistent with the CWD requirements identified in plans.
			37. Percentage of cutblocks where coarse woody debris piling is necessary to achieve silviculture activities that a proportion was then retained in loose piles or windrows within 50 meters of timber edge or riparian management areas.	37. 100% of cutblocks that require debris accumulation to meet reforestation objectives have a proportion of loose piles or windrows retained.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
1b) Species diversity is conserved if all native species found on the DFA prosper through time	• Sustainable populations of flora and fauna native to the DFA (including subspecies) and the abundance and distribution of species within their natural range of variation	• Species native to the DFA are maintained at endemic and sustainable levels	1. Representation of seral stage distribution by Natural Disturbance Type.	1. Report annually on early, mature and old seral stage distribution by Natural Disturbance Type (NDT). Maintain old seral distribution at values recommended by the Biodiversity Guidebook.
			2. Incidents of harvesting in rare ecosystems -Non-compliance with the Identified Wildlife Management Strategy (IWMS) -Non-compliance with OSLRMP/KBLUP strategies for identified wildlife.	2. No harvesting in "known" rare ecosystems contained within Old Growth Management areas. Adhere to the IWMS and management strategies identified for rare species in the OSLRMP and KBLUP.
			3. Report on total area of clearcuts by size categories.	3. Report annually on clearcut cutblocks by size categories that were Site Plan approved/ signed in the reporting period.
			4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	4. Zero non-conformances of plan commitments impacting values in riparian management areas.
			5. -Percent of cutblocks requiring a site plan with associated wildlife tree retention (patches and/or individual trees) -Percent of harvested cutblocks that contain an average of 2-5 stubs or standing trees per hectare, given consideration to spatial distribution.	5. -100% of harvested cutblocks requiring a site plan will have associated wildlife tree retention. -80% of harvested cutblocks have in block stubs and/or wildlife trees with consideration given to spatial distribution.
			6. Percent of cutblocks where management of Coarse Woody Debris (CWD) is consistent with plans.	6. 100% of cutblocks will be consistent with the CWD requirements identified in plans.
			7. Percent of harvested cutblocks having three or more tree species identified in the free growing inventory.	7. 70% of cutblocks harvested will have three or more tree species (includes conifer & deciduous comprising 1% or more of total trees) in the free growing survey.
			10. Percent of right-of-ways (R/W) revegetated with grass seed that is "graded acceptable".	10. 100% of R/Ws revegetated for noxious weed and erosion control with Canada #1 or equivalent grass seed.
			11. Amount of time for road cut and fill slope revegetation application (control of noxious weed).	11. Road cut and fill slope revegetation application carried out on average within 1 month of road completion under normal conditions; for roads completed during winter, revegetation application will be completed prior to favourable germinating conditions the following spring.
			37. Percentage of cutblocks where coarse woody debris piling is necessary to achieve silviculture activities that a proportion was then retained in loose piles or windrows within 50 meters of timber edge or riparian management areas.	37. 100% of cutblocks that require debris accumulation to meet reforestation objectives have a proportion of loose piles or windrows retained.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
1c) Genetic diversity is conserved if the variation of genes within species is maintained.	• Diversity of genetic material within species • Adaptability to change • Sustainable populations of flora and fauna native to the DFA (including subspecies) and the abundance and distribution of species within their natural range of variation	• Maintain genetic diversity of all species (and subspecies) native to the DFA	1. Representation of seral stage distribution by Natural Disturbance Type. 2. Incidents of harvesting in rare ecosystems -Non-compliance with the Identified Wildlife Management Strategy (IWMS) -Non-compliance with OSLRMP/KBLUP strategies for identified wildlife. 3. Report on total area of clearcuts by size categories. 4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams. 5. -Percent of cutblocks requiring a site plan with associated wildlife tree retention (patches and/or individual trees) -Percent of harvested cutblocks that contain an average of 2-5 stubs or standing trees per hectare, given consideration to spatial distribution. 7. Percent of harvested cutblocks having three or more tree species identified in the free growing inventory. 9. Percent of planted area for the current planting year regenerated in accordance with seed transfer guidelines.	1. Report annually on early, mature and old seral stage distribution by Natural Disturbance Type (NDT). Maintain old seral distribution at values recommended by the Biodiversity Guidebook. 2. No harvesting in "known" rare ecosystems contained within Old Growth Management areas. Adhere to the IWMS and management strategies identified for rare species in the OSLRMP and KBLUP. 3. Report annually on clearcut cutblocks by size categories that were Site Plan approved/ signed in the reporting period. 4. Zero non-conformances of plan commitments impacting values in riparian management areas. 5. -100% of harvested cutblocks requiring a site plan will have associated wildlife tree retention. -80% of harvested cutblocks have in block stubs and/or wildlife trees with consideration given to spatial distribution. 7. 70% of cutblocks harvested will have three or more tree species (includes conifer & deciduous comprising 1% or more of total trees) in the free growing survey. 9. 100% of planted area will be regenerated in accordance with the seed transfer guidelines.

Criterion 2 Maintenance and Enhancement of Forest Ecosystem Condition and Productivity

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
2a) Forest health is conserved if biotic (including anthropogenic) and abiotic disturbances and stresses maintain both ecosystem processes and ecosystem conditions within a range of natural variability.	• Well functioning ecosystems that sustain forest health, support natural processes and represent the full range of forest age classes	• Healthy forest ecosystems with a representation of natural attributes and natural systems	1. Representation of seral stage distribution by Natural Disturbance Type.	1. Report annually on early, mature and old seral stage distribution by Natural Disturbance Type (NDT). Maintain old seral distribution at values recommended by the Biodiversity Guidebook.
			2. Incidents of harvesting in rare ecosystems -Non-compliance with the Identified Wildlife Management Strategy (IWMS) -Non-compliance with OSLRMP/ KBLUP strategies for identified wildlife.	2. No harvesting in "known" rare ecosystems contained within Old Growth Management areas. Adhere to the IWMS and management strategies identified for rare species in the OSLRMP and KBLUP.
			3. Report on total area of clearcuts by size categories	3. Report annually on clearcut cutblocks by size categories that were Site Plan approved/ signed in the reporting period.
			4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	4. Zero non-conformances of plan commitments impacting values in riparian management areas.
			12. Annual percent of opening areas in permanent access structures.	12. Less than 6 % of cutblock areas in permanent access structures.
			13. Silviculture systems applied by area.	13. Report annually on the silviculture systems applied by area.
			14. Number of induced slides resulting from forest management activities (>.1 ha) originating in or adjacent to harvested areas or inspected roads.	14. Zero slides induced from forest management activities.
			15. Percent of harvest priorities related to forest health completed by date set out in strategies.	15. Meet with government agencies (and other licensees and public where appropriate) on an ongoing basis to review forest health programs (e.g., pests, fires and windthrow) and complete 100% of harvest priorities by completion date set out in strategy.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
2b) Ecosystem resilience is conserved if ecosystem processes and the range of ecosystem conditions allow ecosystems to persist, absorb change, and recover from disturbances.	• Resilient forest ecosystems	• Forest management systems do not compromise ecosystem resilience	1. Representation of seral stage distribution by Natural Disturbance Type.	1. Report annually on early, mature and old seral stage distribution by Natural Disturbance Type (NDT). Maintain old seral distribution at values recommended by the Biodiversity Guidebook.
			2. Incidents of harvesting in rare ecosystems -Non-compliance with the Identified Wildlife Management Strategy (IWMS) -Non-compliance with OSLRMP/ KBLUP strategies for identified wildlife.	2. No harvesting in "known" rare ecosystems contained within Old Growth Management areas. Adhere to the IWMS and management strategies identified for rare species in the OSLRMP and KBLUP.
			3. Report on total area of clearcuts by size categories	3. Report annually on clearcut cutblocks by size categories that were Site Plan approved/ signed in the reporting period.
			16. -Percent of cutblock area planned for planting is completed before or during the second complete growing season; -Percent of naturally regenerated cutblock area not meeting the natural regeneration delay.	16. -70% of cutblock area planned for planting is completed within 2 growing seasons; -100% of natural regeneration cutblock area meeting natural regeneration delay.
			17. Percentage of cutblock area that meets free growing requirements on or before the latest date.	17. All cutblocks will reach free growing requirements on or before the latest date.
			18. Report on access management commitments contained in forest development plans (FDPs).	18. 100% of annual access management commitments contained within the FDP will be implemented during the reporting period.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
2c) Ecosystem productivity is conserved if ecosystem conditions are capable of supporting all naturally occurring species.	• Well-functioning, biologically productive forest ecosystems	• Forest ecosystems that support a full range of timber and non-timber values	4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	4. Zero non-conformances of plan commitments impacting values in riparian management areas.
			16. -Percent of cutblock area planned for planting is completed before or during the second complete growing season; -Percent of naturally regenerated cutblock area not meeting the natural regeneration delay.	16. -70% of cutblock area planned for planting is completed within 2 growing seasons; -100% of natural regeneration cutblock area meeting natural regeneration delay.
			17. Percentage of cutblock area that meets free growing requirements on or before the latest date.	17. All cutblocks will reach free growing requirements on or before the latest date.
			19. Percent of cutblocks harvested in which soil disturbance exceeds level specified in plan.	19. Zero percent of cutblocks harvested in which soil disturbance exceeds specified level of disturbance.
			20. Incidents of non-conformance with government direction on recovery plans for regionally significant species.	20. Follow government direction set out in recovery plans for regionally significant species.

Criterion 3 Conservation of Soil and Water Resources

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
3a) Physical environments are conserved if the permanent loss of forest area to other uses or factors is minimized, and if rare physical environments are protected.	• Soil and water health for future generations • Integrity of soil and water systems • Rare physical environments	• Non-timber values and cultural values are maintained and/or enhanced (e.g., grasslands conserved) Conversion of forests to other uses (e.g., road development) minimized • Riparian areas managed to support integrity of water and quality of aquatic ecosystems • Rare physical environments protected	12. Annual percent of opening areas in permanent access structures. 2. Incidents of harvesting in rare ecosystems -Non-compliance with the Identified Wildlife Management Strategy (IWMS) -Non-compliance with OSLRMP/ KBLUP strategies for identified wildlife. 4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	12. Less than 6 % of cutblock areas in permanent access structures. 2. No harvesting in "known" rare ecosystems contained within Old Growth Management areas. Adhere to the IWMS and management strategies identified for rare species in the OSLRMP and KBLUP. 4. Zero non-conformances of plan commitments impacting values in riparian management areas.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
3b) Soil resources are conserved if the ability of soils to sustain forest productivity is maintained within characteristic ranges of variation.	• Soil health and productivity • Biological • Physical	• Minimize physical and biological degradation of soil	19. Annual percent of cutblocks harvested in which soil disturbance exceeds level specified in plan.	19. Zero percent of cutblocks harvested in which soil disturbance exceeds specified level of disturbance.
			12. Annual percent of opening areas in permanent access structures.	12. Less than 6 % of cutblock areas in permanent access structures.
			4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	4. Zero non-conformances of plan commitments impacting values in riparian management areas.
			21. Percent of permanent status roads that have had inspections completed as per plans.	21. 100% of permanent status roads will have risk assessments and plans developed based on assessments.
			22. Percent of temporary status roads inspected at least once per year until road has been rehabilitated.	22. Inspect all temporary status roads at least once per year until rehabilitated.
			11. Amount of time for road cut and fill slope revegetation application (control of noxious weed).	11. Road cut and fill slope revegetation application carried out on average within 1 month of road completion under normal conditions; for roads completed during winter, revegetation application will be completed prior to favorable germinating conditions the following spring.
			14. Number of induced slides resulting from forest management activities (>.1 ha) originating in or adjacent to harvested areas or inspected roads.	14. Zero slides induced from forest management activities

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
3c) Water resources are conserved if water quality and quantity is maintained.	• Protection and security of the water resource	• Stream flow regimes that provide levels of water quality and quantity within a natural range of variability • Retain natural systems that support water quality and quantity (e.g., beaver) • Protection of quality and quantity of water in licensed domestic watersheds	4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams. 11. Amount of time for road cut and fill slope revegetation application (control of noxious weed). 21. Percent of permanent status roads that have had inspections completed as per plans. 22. Percent of temporary status roads inspected at least once per year until road has been rehabilitated. 23. Percent of the licensees' forest operations employees and primary contractors trained in Spill Preparedness and Response procedures. 24. Number of legally reportable spills.	4. Zero non-conformances of plan commitments impacting values in riparian management areas. 11. Road cut and fill slope revegetation application carried out on average within 1 month of road completion under normal conditions; for roads completed during winter, revegetation application will be completed prior to favorable germinating conditions the following spring. 21. 100% of permanent status roads will have risk assessments and plans developed based on assessments. 22. Inspect all temporary status roads at least once per year until rehabilitated. 23. 100% of the licensees' forest operations employees and primary contractors trained each year in procedures for Spill Preparedness and Response (fueling, maintenance, pesticides). 24. Zero spills.

Criterion 4 Forest Ecosystem Contributions to Global Ecological Cycles

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
4a) This contribution is maintained if the processes that are responsible for recycling water, carbon, nitrogen, and other life sustaining elements are maintained.	• Balanced, well-functioning ecological processes that support healthy, productive forest ecosystems	• Forest management activities are conducted in ways that maintain ecological processes	1. Representation of seral stage distribution by Natural Disturbance Type.	1. Report annually on early, mature and old seral stage distribution by Natural Disturbance Type (NDT). Maintain old seral distribution at values recommended by the Biodiversity Guidebook.
			4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	4. Zero non-conformances of plan commitments impacting values in riparian management areas.
			6. Percent of cutblocks where management of Coarse Woody Debris (CWD) is consistent with plans.	6. 100% of cutblocks will be consistent with the CWD requirements identified in plans.
			25. Harvest level.	25. Harvest the allowable cut over the five-year cut control period.
			17. Percentage of cutblock area that meets free growing requirements on or before the latest date.	17. All cutblocks will reach free growing requirements on or before the latest date.
			16. -Percent of cutblock area planned for planting is completed before or during the second complete growing season; -Percent of naturally regenerated cutblock area not meeting the natural regeneration delay.	16. -70% of cutblock area planned for planting is completed within 2 growing seasons; -100% of natural regeneration cutblock area meeting natural regeneration delay.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
4b) This contribution is maintained if utilization and rejuvenation are balanced and sustained.	• Sustainable supply of timber and non-timber resources	• Sustainable harvest levels balanced with sustainable non-timber resources	1. Representation of seral stage distribution by Natural Disturbance Type.	1. Report annually on early, mature and old seral stage distribution by Natural Disturbance Type (NDT). Maintain old seral distribution at values recommended by the Biodiversity Guidebook.
			4. Riparian management areas (as per the FPC and the approved OSLRMP/KBLUP) for wetlands, lakes and streams.	4. Zero non-conformances of plan commitments impacting values in riparian management areas.
			25. Harvest level.	25. Harvest the allowable cut over the five-year cut control period.
			17. Percentage of cutblock area that meets free growing requirements on or before the latest date.	17. All cutblocks will reach free growing requirements on or before the latest date.
			16. -Percent of cutblock area planned for planting is completed before or during the second complete growing season; -Percent of naturally regenerated cutblock area not meeting the natural regeneration delay.	16. -70% of cutblock area planned for planting is completed within 2 growing seasons; -100% of natural regeneration cutblock area meeting natural regeneration delay.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
4c) This contribution is maintained if forest lands are protected from sustained deforestation or conversion to other uses.	• Protection and security of forest land to ensure health of global ecological cycles	• Maintain healthy, productive forest land base	25. Harvest level.	25. Harvest the allowable cut over the five-year cut control period.
			16. -Percent of cutblock area planned for planting is completed before or during the second complete growing season; -Percent of naturally regenerated cutblock area not meeting the natural regeneration delay.	16. -70% of cutblock area planned for planting is completed within 2 growing seasons; -100% of natural regeneration cutblock area meeting natural regeneration delay.
			11. Amount of time for road cut and fill slope revegetation application (control of noxious weed).	11. Road cut and fill slope revegetation application carried out on average within 1 month of road completion under normal conditions; for roads completed during winter, revegetation application will be completed prior to favorable germinating conditions the following spring
			21. Percent of permanent status roads that have had inspections completed as per plans.	21. 100% of permanent status roads will have risk assessments and plans developed based on assessments.
			22. Percent of temporary status roads inspected at least once per year until road has been rehabilitated.	22. Inspect all temporary status roads at least once per year until rehabilitated.
			12. Annual percent of opening areas in permanent access structures.	12. Less than 6 % of cutblock areas in permanent access structures.
			13. Silviculture systems applied by area.	13. Report annually on the silviculture systems applied by area.

Criterion 5 Multiple Benefits to Society

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
5a) Multiple benefits are maintained if extraction rates are within the long-term productive capacity of the resource base.	• Continual and satisfactory flow of timber and non-timber benefits from the forest	• A prosperous forest industry with sustainable supply of timber and non-timber resources	25. Harvest level.	25. Harvest the allowable cut over the five-year cut control period.
			13. Silviculture systems applied by area.	13. Report annually on the silviculture systems applied by area.
			14. Number of induced slides resulting from forest management activities (>.1 ha) originating in or adjacent to harvested areas or inspected roads.	14. Zero slides induced from forest management activities
			16. -Percent of cutblock area planned for planting is completed before or during the second complete growing season; -Percent of naturally regenerated cutblock area not meeting the natural regeneration delay.	16. -70% of cutblock area planned for planting is completed within 2 growing seasons; -100% of natural regeneration cutblock area meeting natural regeneration delay.
			17. Percentage of cutblock area that meets free growing requirements on or before the latest date.	17. All cutblocks will reach free growing requirements on or before the latest date.
			12. Annual percent of opening areas in permanent access structures.	12. Less than 6 % of cutblock areas in permanent access structures.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
5b) Multiple benefits are maintained if resource businesses exist within a fair and competitive investment and operating climate.	• Economic benefits to society	• A prosperous forest industry with sustainable supply of timber and non-timber resources	26. Report annual initiatives/partnerships. 25. Harvest level.	26. Maintain active involvement with value-added and business initiatives/partnerships. 25. Harvest the allowable cut over the five-year cut control period.
5c) Multiple benefits are maintained if forests provide a mix of market and non-market goods and services.	• Forests contribute to the quality of life	• Opportunity and access to the forest resource for a variety of commercial and non-commercial uses	27. Level of compliance with preservation, retention and partial retention of visual quality objectives in operational plans. 28. Report on: -OSLRMP committee involvement -Number of Forest Development Plan meetings attended -Number of stakeholder meetings attended. 30. Report educational and research initiatives 31. Percent response to written communications received.	27. Full compliance with preservation, retention and partial retention of visual quality objectives. 28. Participate in the following public processes - OSLRMP committee meetings. - Forest Development Plan meetings - Stakeholder meetings (e.g., TFL Advisory Group, Vaseaux Sheep Recovery Group, etc.). 30. Maintain involvement and sponsorship in research and educational initiatives (e.g., summer students, post graduate research projects, volunteer sites for studies, association support – FERIC Forest Products Association of Canada, OSLRMP Wildlife subcommittee, Vaseaux Sheep Study, etc.) 31. Respond to all written public communications related to forest operations within 30 days of receipt.

Criterion 6 Accepting Society's Responsibility for Sustainable Development

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
6a) Sustainable forest management requires that forests are managed in ways that reflect social values, and management is responsive to changes in those values.	• Forest management responsive to changing social values	• Inclusion of social values to support fair, equitable and effective decision-making	28. Report on: -OSLRMP committee involvement -Number of Forest Development Plan meetings attended -Number of stakeholder meetings attended. 27. Level of compliance with preservation, retention and partial retention of visual quality objectives in operational plans. 31. Percent response to written communications received. 33. Number of annual meetings with local advisory group.	28. Participate in the following public processes - OSLRMP committee meetings. - Forest Development Plan meetings - Stakeholder meetings (e.g., TFL Advisory Group, Vaseaux Sheep Recovery Group, etc.). 27. Full compliance with preservation, retention and partial retention of visual quality objectives. 31. Respond to all written public communications related to forest operations within 30 days of receipt. 33. Meet at least once per year.
6b) Sustainable forest management requires that duly established Aboriginal and treaty rights be respected.	• Respect for Aboriginal and treaty rights	• Duly established Aboriginal and treaty rights considered in forest management planning and opportunities provided for meaningful participation by First Nations in forest management and planning	29. Report on number of meetings attended to support government in First Nation consultations.	29. Attend meetings to assist government in First Nations consultations where appropriate.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
6c) Sustainable forest management requires that the special and unique needs of Aboriginal peoples are respected and accommodated in forest management decisions.	• Respect for the special and unique needs of Aboriginal peoples	• Participation by First Nations in forest management and planning to ensure that the special and unique needs of Aboriginal peoples are respected and accommodated in forest management decisions	28. Report on: -OSLRMP committee involvement -Number of Forest Development Plan meetings attended -Number of stakeholder meetings attended. 29. Report on number of meetings attended to support government in First Nation consultations. 32. Report annually on the number of First Nation partnerships.	28. Participate in the following public processes - OSLRMP committee meetings. - Forest Development Plan meetings - Stakeholder meetings (e.g., TFL Advisory Group, Vaseaux Sheep Recovery Group, etc.). 29. Attend meetings to assist government in First Nations consultations where appropriate. 32. Support partnership opportunities with First Nations through mutually beneficial involvement in forest management.
6d) Sustainable forest management requires that the decision making process is developed with input from directly affected and local interested parties.	• Local public involvement	• Affected and local interested parties have input into decisions	28. Report on: -OSLRMP committee involvement -Number of Forest Development Plan meetings attended -Number of stakeholder meetings attended 31. Percent response to written communications received. 33. Number of annual meetings with local advisory group.	28. Participate in the following public processes - OSLRMP committee meetings. - Forest Development Plan meetings - Stakeholder meetings (e.g., TFL Advisory Group, Vaseaux Sheep Recovery Group, etc.). 31. Respond to all written public communications related to forest operations within 30 days of receipt. 33. Meet at least once per year.
6e) Sustainable forest management requires that decisions are made as a result of informed, inclusive, and fair consultation with people who have an interest in forest management or are affected by forest management decisions.	• Recognition of public values	• Public values are incorporated in decision-making processes and fairly considered in forest management decisions	28. Report on: -OSLRMP committee involvement -Number of Forest Development Plan meetings attended -Number of stakeholder meetings attended 31. Percent response to written communications received. 33. Number of annual meetings with local advisory group.	28. Participate in the following public processes - OSLRMP committee meetings. - Forest Development Plan meetings - Stakeholder meetings (e.g., TFL Advisory Group, Vaseaux Sheep Recovery Group, etc.). 31. Respond to all written public communications related to forest operations within 30 days of receipt. 33. Meet at least once per year.

CRITICAL ELEMENT	VALUE	GOAL	INDICATOR	OBJECTIVE
6f) Sustainable forest management requires that collective understanding of forest ecosystems, values, and management is increased and used in the decision making process.	• Shared knowledge and informed decisions	• Adaptive forest management that is responsive to research, experience and public input	34. Number of students involved with educational classroom visits.	34. Conduct educational classroom visits in public schools.
			35. Number of participants involved with forestry tours.	35. Promote public participation in forestry tours.
			36. Number of participants involved with public presentations.	36. Conduct public presentations to increase public knowledge and understanding about sustainable forest management.
			28. Report on: -OSLRMP committee involvement -Number of Forest Development Plan meetings attended -Number of stakeholder meetings attended	28. Participate in the following public processes - OSLRMP committee meetings. Forest Development Plan meetings Stakeholder meetings (e.g., TFL Advisory Group, Vaseaux Sheep Recovery Group, etc.).
			30. Report educational and research initiatives.	30. Maintain involvement and sponsorship in research and educational initiatives (e.g., summer students, post graduate research projects, volunteer sites for studies, association support – FERIC, Forest Products Association of Canada, OSLRMP Wildlife subcommittee, Vaseaux Sheep Study, etc.).
			33. Number of annual meetings with local advisory group.	33. Meet at least once per year.