

Hishuk-ish-tawalk

(everything is one)

Towards Sustainable Forest Management



West Island Timberlands
BC Coastal Group
Weyerhaeuser Company

Sustainable Forest Management Plan

2003 - 2005

Table of Contents

INTRODUCTION	4
Process for developing the SFM criteria and indicators set	6
Links to management plans and operational plans	6
SECTION 1 - SFM CRITERIA AND INDICATORS	7
1.0 CONSERVATION OF BIOLOGICAL DIVERSITY	8
1.1 Ecosystem diversity	8
1.1.1 Variety and patterns of ecosystem types at the landscape level	8
1.1.2 Connectivity and fragmentation	9
1.1.3 Stand level diversity	9
1.2 Species diversity	10
1.2.4 At-risk species	10
1.2.5 Identified species of special interest	10
1.3 Genetic diversity	10
1.4 Management strategy	11
1.4.1 Wildlife	11
1.4.2 Fish protection	12
2.0 FOREST ECOSYSTEM CONDITION AND PRODUCTIVITY	13
2.1 Incidence of disturbance and stress	13
2.1.6 Human induced disturbance and stress	13
2.2 Ecosystem resilience	14
2.2.7 Ecosystem recovery from disturbance and stress	14
2.4 Management strategy	15
2.4.1 Fire control	15
2.4.2 Forest insect control	15
2.4.3 Forest disease control	16
2.4.4 Windthrow control	17
3.0 CONSERVATION OF SOIL AND WATER RESOURCES	17
3.1 Physical environments	17
3.1.8 Forested land	17
3.1.9 Permanent access structures	17
3.1.10 Rare, endangered or under represented features	18
3.2 Soil resources	18
3.2.11 Soil quality	18
3.2.12 Soil cover	18
3.3 Water resources	19
3.3.13 Stream water quality	19
3.3.14 Riparian areas (fresh and marine)	19
3.3.15 Forest hydrologic regimes (including water quantity)	20

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 1 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

3.4	Management strategy	20
3.4.1	Infrastructure and access development	20
3.4.2	Road building and maintenance	20
3.4.3	Site Restoration	20
3.4.4	Soil conservation	21
3.4.5	Water conservation	22
4.0	FOREST CONTRIBUTIONS TO GLOBAL ECOLOGICAL CYCLES	22
4.1	Recycling processes	22
4.1.16	Ecological cycles	22
4.1.17	Carbon budget	23
4.2	Utilization and rejuvenation	23
4.3	Deforestation and conversion	23
4.4	Management strategy	23
4.4.1	Forest growth and yield plan	23
4.4.2	Reforestation	24
5.0	MULTIPLE BENEFITS TO SOCIETY	25
5.1	Extraction rates	25
5.1.18	Non-timber forest products	25
5.1.19	Timber harvest	26
5.2	Investment and operating climate	26
5.3	Goods and services	26
5.3.20	Parks and Ecological Reserves	26
5.3.21	Recreation and tourism	26
5.4	Management strategy	27
5.4.1	Forest recreation	27
5.4.2	Visual landscape management	28
6.0	ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT	28
6.1	Social values	28
6.1.22	Community stability	28
6.1.24	Timber Companies	30
6.2	Aboriginal and treaty rights	30
6.2.25	Aboriginal rights	30
6.4	Decision making process	31
6.5	Decision Making Process	31
6.5.26	Decision making process	32
6.6	Knowledge	32
6.6.27	Education	32

6.7	Management strategies	33
6.7.1	First Nations	33
6.7.2	Public information and involvement	33
6.7.3	Forest research	33

SECTION 2- SUMMARY OF BC COASTAL GROUP FOREST MANAGEMENT STRATEGY 35

SECTION 3- GLOSSARY 38

Appendix 1 – Terms of Reference

Appendix 2 – WIWAG Red Flag Items

Appendix 3 - 2002 SFM Plan Data Set

Appendix 4 – Goals, Indicators & Objectives Table

Appendix 5 – Table of Goals, Indicators over time

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 3 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

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Introduction

The West Island Timberlands Sustainable Forest Management (SFM) Plan is a road map to current and long-term SFM performance objectives and management strategies in the West Island operating area, referred to here as the Defined Forest Area or DFA.

The DFA is situated on west central Vancouver Island, British Columbia. The primary community centers in the area are Port Alberni and Bamfield. The DFA encompasses 315,444 hectares of public and private lands. It coincides roughly with the company’s Tree Farm License 44 (TFL 44), excluding areas that are not expected to remain under long-term management by the company (figure 1).

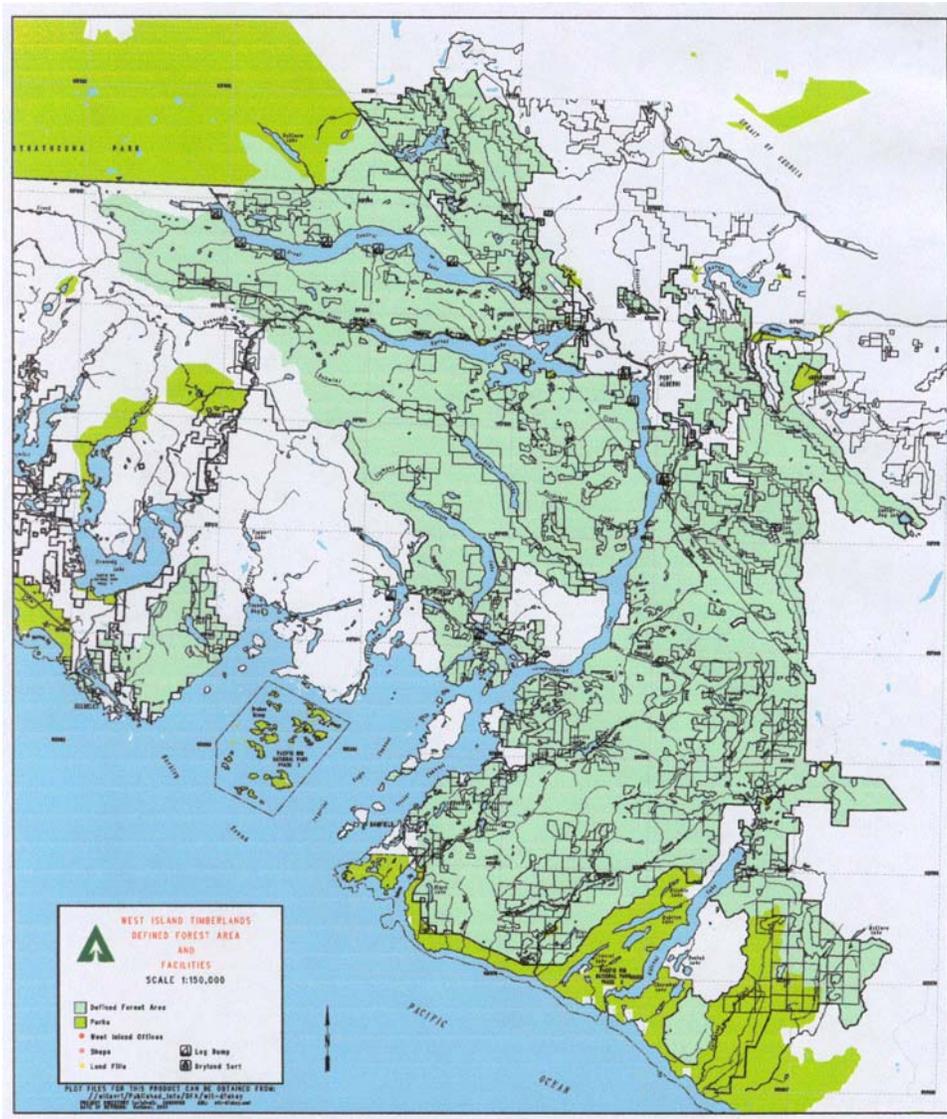


Figure 1: West Island Timberlands' Defined Forest Area

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	Page 4 of 44
Revised: July 16, 2003	

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The SFM Plan is an adaptation of planning processes that have been in place since allocation of the original tree farm licenses for the DFA in 1955. These planning processes include strategic and operational plans, analyses, standards, and monitoring and public review. Management of forest land in the area has continued to evolve over time in response to changes in society's values. Revised Management Plans, submitted at approximately five-year intervals, include objectives, management strategies and analyses of management impacts. Standards and operating plans have been updated as changes occur. Monitoring has included unit reporting as well as TFL 44 and corporate annual reports and compliance audits.

The results of the DFA related public participation processes in past years have contributed to the development of the goals, indicators, and objectives set forth in this plan. The West Island Woodlands Advisory Group (WIWAG) has helped to further develop the SFM performance framework for the DFA. A further description of WIWAG through their Terms of Reference may be found in Appendix 1. Ongoing review and input is provided by the advisory group, TFL management, and others through performance assessments, operational plan reviews, and processes related to specific land use issues such as landscape unit planning and community water supply.

The values, goals, indicators, objectives, and management practices described in this document are currently understood and followed by West Island for achieving sustainable forest management on the DFA. This is an evolving document that is reviewed and revised on an ongoing basis with the community advisory group to reflect changes in the forest and local community. In particular, this SFM Plan will evolve to incorporate the BC Coastal Group's Forest Project⁽¹⁾ strategy, which is directed at replacing clear cutting with Variable Retention silviculture systems and at achieving higher levels of old growth conservation.

The SFM Plan includes this introductory overview and two additional sections:

- Section 1** West Island's SFM values, goals, indicators, and objectives with acceptable variances, forecasts and management strategies. These are organized according to the Canadian Council of Forest Ministers' (CCFM) Criteria and Critical Elements for Sustainable Forest Management as adapted for the CAN/CSA-Z809-96 standard.
- Section 2** A progress report for the BC Coastal Group's "Forest Project," a new (1998) forest management strategy with significant implications for evolving definitions of sustainable forest management in the DFA.
- Section 3** Glossary of terms and acronyms used in this plan.

The plan also includes four appendices:

- Appendix 1** - WIWAG Terms of Reference
- Appendix 2** - WIWAG Red Flag Items
- Appendix 3** - SFM Plan Data Set, including forecasts, data protocol, and historic trends for some of the indicators
- Appendix 4** – Goals, Indicators & Objectives Table

¹ The BC Coastal Group's "Forest Project" strategy is on schedule to meet its target of a five-year transition from clearcutting to variable retention silviculture systems by 2003. See Section 2.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 5 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Process for developing the SFM criteria and indicators set

The DFA's regulatory and management systems — and the values that they recognize — have been developed over several decades and are responsive to the Canadian Standards Association's Sustainable Forest Management standard (CAN/CSA-Z809-96) system criteria, including the requirements for public involvement and a continual improvement process.

This SFM Plan was originally developed in 1999-2000 as a collaborative effort involving WIWAG and West Island staff. The plan has evolved, and will continue to evolve, as the participants are able to better define community values and goals and to identify the most appropriate performance measurements.

Links to management plans and operational plans

Figure 2 shows the links between operational planning and TFL Management Plans with the B.C. Forest Practices Code (FPC).

The SFM Plan is an umbrella plan that links higher level plans, such as the Management Plan, with operational plans. The performance commitments included in the SFM Plan equal or surpass commitments previously approved under TFL 44 Management Plan 4 (2003-2007). The SFM Plan reflects the objectives, management strategies, and reporting structure of management plans. It is influenced by other higher level plans, such as the Vancouver Island Land Use Plan, and by legislation including the FPC Act.

Figure 2 shows the flow of input and direction to operational plans, including Forest Development Plans. It does not show the feedback loops of monitoring and adaptive management that occur from operations to the management plans and other higher level plans.

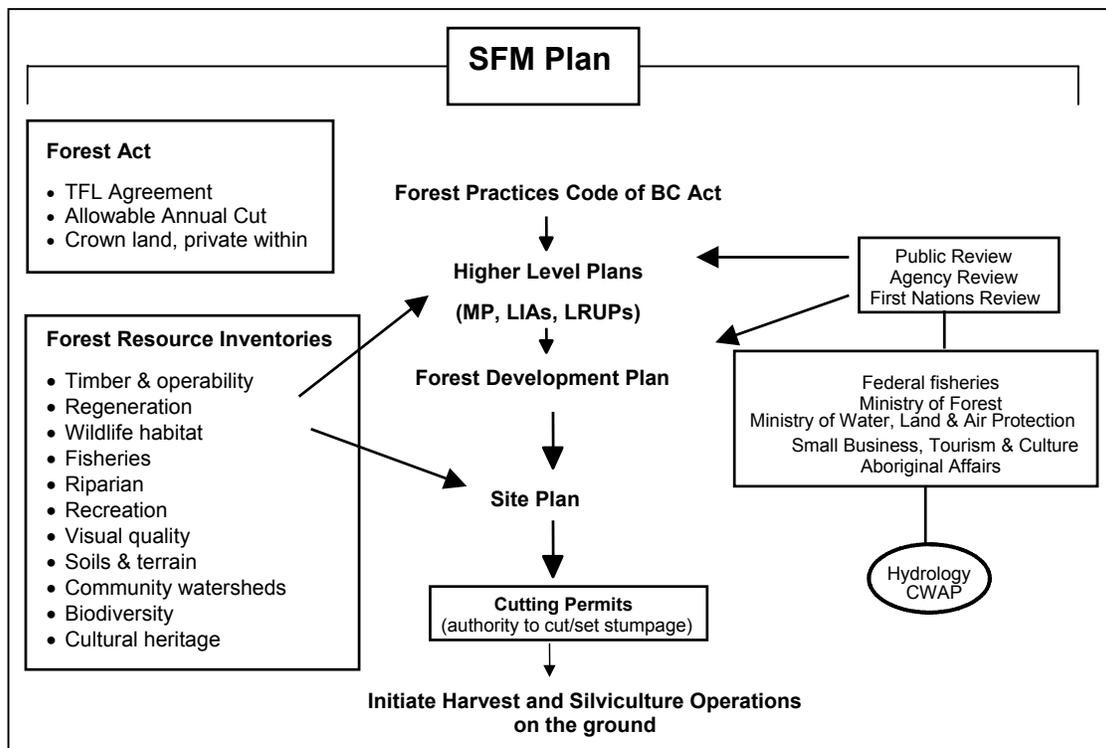


Figure 2: Links between Plans (TFL – with Forest Practices Code)

SECTION 1

SFM Criteria and Indicators

This section of the SFM Plan describes West Island's SFM Values, Goals, Indicators and Objectives for the years 2003 - 2005. As appropriate, an Acceptable Variance is provided for the near term performance level of each Objective and a forecast future condition for each indicator. The section is organized according to the Criteria for Sustainable Forest Management, which was developed by the Canadian Council of Forest Ministers and adapted for the Canadian Standards Association's Sustainable Forest Management standard (CAN/CSA-Z809-96).

As further explanation of the organization of this section:

- The **Criteria** (e.g., below: 1.0 Conservation of Biological Diversity) and **Critical Elements** (e.g., 1.1 Ecosystem diversity) and their accompanying statements are derived from *Defining Sustainable Forest Management: A Canadian Approach to Criteria and Indicators* (Canadian Council of Forest Ministers, Ottawa, 1995).
- The subsidiary **Values** (e.g., 1.11 Variety and patterns of ecosystem types at the landscape level), **Goals, Indicators, Objectives, Acceptable Variances** and **Forecasts** were developed for this plan during discussions among WIWAG members, West Island Timberlands staff and other BC Coastal Group staff.

As used in this plan:

- **Goals** are the conditions that are desired to be sustained or attained in the long term.
- **Indicators** are the means by which performance relative to a Goal is measured. (A more detailed explanation of the Indicators in this section, as well as an explanation of the procedures for data collection, is in Appendix 2.)
- **Objectives** are the near term performance targets representing progress towards the Goals; they are frequently expressed as a level of an Indicator.
- **Acceptable Variances** specify the range of performance results (+ and/or – relative to the Objective) that is deemed to be an acceptable outcome. A result outside this range does not always indicate unacceptable performance. (For example, it could reflect: the impact of an uncontrollable event, such as a natural disaster; the fact that the Objective was based on poor quality or inadequate data; or the effects of a responsible choice between two competing Objectives.) A result outside the Acceptable Variance range does, however, require review, assessment and, possibly, a revision of either the objective or management practices.
- **Forecasts** are the predicted long term condition of an Indicator.

West Island's performance against this plan is subjected to on-going monitoring and to annual review and assessment by West Island management and WIWAG.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 7 of 44

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1.0 Conservation of Biological Diversity

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

1.1 Ecosystem diversity

Ecosystem diversity is conserved if the variety and landscape-level patterns of communities and ecosystems that naturally occur on the Defined Forest Areas (DFA) are maintained through time.

1.1.1 Variety and patterns of ecosystem types at the landscape level

GOAL 1: Maintain representative ecosystems across the landscape

Indicator 1: Percent of commercial tree species in the Defined Forest Area (DFA) compared to historic baseline

Objective: Move toward historic baseline for all commercial tree species, within $\pm 8\%$ of the total

Acceptable Variance: $\pm 15\%$

Forecast: $\pm 10\%$

Indicator 2: Percent of the productive DFA that has $>30\%$ of area in 0-20 year age class in a given landscape unit

Objective: Less than 2% of the total productive area

Acceptable Variance: $\pm 4\%$

Forecast: Zero

Indicator 3: Aspatial modeling of old seral stages [old growth] at the landscape and variant level.

Objective: Provide aspatial modeling of old seral stages at the landscape and variant level, for 300 years in 10 year increments (benchmark).

Acceptable Variance: Identification of spatial modeling software

Forecast: Complete in 2003

Indicator 4: Number of units (as defined below) where inadequate old growth (as defined below) exists.

Definitions: A unit is: Variant within a landscape unit within the DFA that is greater than 250 hecatres.

Inadequate is defined as: the provincial guidelines

Objective: Do not increase the number of units where inadequate old growth exists

Acceptable Variance: - Two units increase

Forecast: Zero increase

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 8 of 44

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Indicator 5: Number of opportunities for WIWAG to participate in the West Island Timberlands (WIT) Old Growth Management Area (OGMA) planning process.

Objective: Invitations are extended to WIWAG for 100% of Landscape Unit planning meetings.

Acceptable Variance: 25%

GOAL 2: Harvest activities reflect natural landscape patterns.

Indicator 4: Number of units (as defined below) where inadequate old growth (as defined below) exists.

Definitions: A unit is: Variant within a landscape unit within the DFA that is greater than 250 hecatres.

Inadequate is defined as: the provincial guidelines

Objective: Do not increase the number of units where inadequate old growth exists

Indicator 6: Percent of area harvested using Variable Retention (VR)

Objective: Year 2003-2005 80% VR by area

Acceptable Variance: ± 15%

Forecast: 90%

1.1.2 Connectivity and fragmentation

GOAL 3: Forest connectivity is maintained (in order to protect genetic and species migration and relationships throughout the landscape unit)

Indicator 7: Forest Ecosystem Network

Objective: Maintain the Forest Ecosystem Network in each LU until such time as the LU planning process has identified OGMA's/

Acceptable Variance: Zero

1.1.3 Stand level diversity

GOAL 4: Structural diversity is maintained at the stand level

Indicator 8: Stand level retention in all cutblocks as percent of total cutblock area

Objective: ≥ 15% in 2003-2005

Acceptable Variance: 10% lower limit

Forecast: 30%

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 9 of 44

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1.2 Species diversity

Species diversity is conserved if all native species found on the DFA prosper through time

1.2.4 At-risk species

GOAL 5: At risk species are identified and their habitat needs are maintained.

Indicator 9: Number of at-risk species in the DFA for which management programs exist as identified in the FDP.

Objective: Support habitat management programs in co-operation with regulatory agencies and others

Acceptable Variance: - 2

Forecast: n/a

GOAL 6: Populations of species are not put at risk as a result of forest management activities

Indicator 10: Number of identified species at-risk in the DFA

Objective: Zero increase in at-risk status attributable to management activities.

Acceptable Variance: Zero

Forecast: Zero

Indicator 11: Sensitive Ecosystem Inventory

Objective: Incorporate the SEI into the planning process.

Acceptable Variance: Zero

Forecast: n/a

1.2.5 Identified species of special interest

GOAL 7: Identified species of special interest and localized populations are inventoried and strategies for their habitat needs are in effect

Indicator 12: Existence of a habitat management program for identified species of special interest (includes a list)

Objective: Support habitat programs in cooperation with regulatory agencies and others.

Acceptable Variance: Zero

Forecast: N/A

1.3 Genetic diversity

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

This Element is managed through Values and Goals in Elements 1.1 and 1.2.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 10 of 44

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1.4 Management strategy

Biological diversity – defined as the variety of life and all the processes that support it – is affected both positively and negatively by forestry practices. The long-term significance of altering biodiversity in our forest ecosystems is unknown, but concerns include losses or reduced abundance of species and sustainability of ecosystem health and resource productivity.

Substantial areas, largely old growth, have been reserved throughout the DFA on inoperable or sensitive soil sites as riparian, wildlife or recreation reserves and, increasingly, as permanent Variable Retention reserves according to the guidelines set forth under the Forest Project. Biodiversity conservation guidelines are in place at the stand level. They are defined at the larger, landscape levels through provincially assigned Biodiversity Emphasis Options and through Forest Project zoning designations.

The strategy for biodiversity conservation is:

- θ Institute landscape-level ecological planning.
- θ Plan forest management activities based on Forest Project stewardship zones. (These zones will require an equal or greater level of biodiversity conservation for a given landscape unit than would the provincially-set requirement for low, medium or high biodiversity emphasis.)
- θ Work with Ministry of Sustainable Resource Management specialists to further develop objectives and strategies for landscape units.
- θ Implement ecologically based stand-level practices as required under the Forest Project strategy.
- θ Choose species mixtures for reforestation based on ecological site adaptation.
- θ Consistent with zoning and VR guidelines, retain leave tree reserves or wildlife tree patches to enhance structural diversity of harvested areas.
- θ Improve knowledge through inventory and research.
- θ Cooperate with other agencies in research and inventory projects on species of concern.
- θ Continue to develop and apply spatial habitat supply modeling to explore conservation strategies, beyond current harvest rules.
- θ Develop an aspatial model which will forecast Old Growth Forest types by variant and Landscape level.

1.4.1 Wildlife

Wildlife issues are twofold in scope: (1) habitat protection for large mammals and threatened or endangered species; and (2) biodiversity concerns related to conservation of animals and plants and the maintenance of ecosystem processes. Current knowledge is often limited and limiting and new knowledge requires a process of adaptive management. The main current issues are:

- θ Identification and protection of specialized habitats for large mammals, primarily deer and elk.
- θ Identification and preservation of the best marbled murrelet nesting areas and release of previously protected areas that appear not to be used.
- θ Actions needed to maintain habitat for rare and endangered plants, animals, and ecosystem processes.

The wildlife protection strategy is to:

- θ Comply with the Forest Practices Code inside the TFL.

Location:	Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised:	July 16, 2003	Page 11 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

- θ Provide operations and agency personnel feedback on guidelines as part of an ongoing process of improving conservation.
- θ Liaise with MWLAP wildlife and habitat protection staff on FDP issues, especially to identify and protect critical habitat for the TFL.
- θ Continue assessments of ranges, habitat diversity, wildlife trees, etc., and protect significant values.
- θ Continue surveys to identify and preserve key marbled murrelet nesting sites and obtain release of protected sites that are apparently of little or no value.
- θ Manage riparian zones as directed by the stream indicators and objectives; as feasible, enhance protection on smaller streams particularly through the use of VR design.
- θ Support other monitoring and research activities to increase knowledge of habitat resource requirements and the impacts of management activities on those (*e.g.*, see *Section 3: Summary of BC Coastal Group Forest Management Strategy*).
- θ Application of the requirements of the FPC and concern for penalties around issues of interpretation.

1.4.2 Fish protection

The fishery resource value is generally high and protection of fish habitat and water quality ranks as a significant priority. Biological issues dominate in the sense of conserving fish stocks and habitat. At the same time, managers are also concerned with meeting the letter of the law. The issues are:

- θ To update classification of waters within the DFA. This includes:
 - Detailed site specific information for operational planning.
 - A broader, but accurate portrayal of the impacts of riparian management for strategic analysis.
- θ Mitigation, enhancement, and habitat restoration.
- θ Cooperation with First Nations and other stakeholder groups.
- θ To determine measures for protecting endangered populations.
- θ Management of riparian areas.

The strategy for responding to these issues is to:

- θ Continue to undertake detailed stream inventories for operational plans.
- θ Continue to identify and implement enhancement, mitigation, and rehabilitation opportunities with FIA funding.
- θ Achieve full compliance in meeting the requirements of the FPC on the TFL.
- θ Work with agencies to design and deliver training to woods workers.

Work with agency staff and other interested parties to suggest improvements and/or changes to guidelines or regulations that will either improve the overall objectives or make interpretation of the guidelines more user-friendly.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 12 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

2.0 Forest Ecosystem Condition and Productivity

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

2.1 Incidence of disturbance and stress

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.

2.1.6 Human induced disturbance and stress

GOAL 8: Minimize impacts on forest health due to human-induced disturbance and stress.

Indicator 13: Annual percent of opening areas in permanent access structures

Objective: ≤ 7% of opening areas in permanent access structures

Acceptable Variance: + 1%

Forecast: 5%

Indicator 14: Operationally-caused fire damage by area

Objective: Zero Hectares

Acceptable Variance: + 10 Hectares

Forecast: 5 hectares

Indicator 15: Area harvested as percent of the total productive forest area

Objective: < 1% with an upper limit of 1.5%

Acceptable Variance: ± 0.5%

Forecast: 1%

Indicator 16: Area harvested as percent of the total productive forest area in each Landscape unit for last 5 years for those areas greater than 10,000 hectares.

Objective: Establish baseline and trends in order to identify areas of high impact.

Indicator 17: Area of operationally-related windthrow

Objective: < 5% harvest area

Acceptable Variance: + 5%

Forecast: 2%

Indicator 18: Area of slides originating in harvested areas or roads

Objective: < 10 hectares

Acceptable Variance: < 20 hectares

Forecast: 2.0 hectares

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 13 of 44

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GOAL 9: Human induced disturbance and stress is rehabilitated promptly

Indicator 19: Area out of conformance with free growing objectives

Objective: Identify and reduce the non-conformance area to below 50 hectares

Acceptable Variance: 100 hectares

Forecast: Zero

2.2 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.

2.2.7 Ecosystem recovery from disturbance and stress

GOAL 10: Forest management activities do not compromise the ability of the ecosystem to recover. (See also Goals 12 & 13.)

Indicator 19: Area out of compliance with free growing objectives

Objective: Identify and reduce the non-conformance area to below 50 hectares

Acceptable Variance: 100 hectares

Forecast: Zero

Indicator 20: Equivalent years of Not Sufficiently Reforested (NSR) as 5-year rolling average

Objective: Maintain NSR equivalency at <3 years harvest area

Acceptable Variance: Zero

Forecast: 1.5 years

Indicator 21: Area out of conformance with regeneration delay obligations

Objective: Less than 20 hectares non-conformance annually with regeneration delay in the DFA

Acceptable Variance: < 40 hectares non-conformance annually

Forecast: Zero

Indicator 8: Stand level retention in all cutblocks as percent of total cutblock area

Objective: **Average** \geq 15% in-stand retention in 2003-2005 (focusing on riparian areas, structure, windfirmness, distribution and key ecological attributes.

Acceptable Variance: 10% lower limit

Forecast: 30%

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 14 of 44

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2.4 Management strategy

Since 1955 when the DFA's original TFL licenses were awarded, neither fire nor forest health problems have been significant. The largest fire, the Tay fire in 1967, started from blasting on the highway when the industry was already shut down because of the fire hazard. The fire burned 2,625 ha (including mature and second-growth areas) and destroyed 1.5 million cubic meters of timber. A black headed budworm outbreak in 1970 was closely watched for two years before the population collapsed and preparation for control abandoned.

2.4.1 Fire control

West Island's primary objective is to prevent fires through good housekeeping, diligent equipment maintenance, and strict control of operations as fire danger rises. The goal is to contain all fires within 24 hours of detection. Fire prevention and control are governed by operating plans and procedures:

- θ Pre-suppression plans are prepared and submitted annually to the Coast Fire Centre;
- θ DFA and regional plans exist for fires not controlled within 24 hours, and
- θ Ground and aerial patrols are made as required by regulation.

West Island and its Contractors maintain and use their own fire suppression equipment. If needed, further equipment can be obtained from other operating units or the MoF.

West Island is connected to the MoF Fire Weather Information Network. West Island also employs strategically located fire weather stations to monitor weather in the various operating areas. Data from these stations are used to modify or cease operations according to hazard rating, risk and fire danger rating.

2.4.2 Forest insect control

- θ Forest Defoliators – The last significant insect epidemic was in 1945-6 when hemlock looper killed mature timber on a significant part of the Nitinat, Pachena, Sarita, and Klanawa River watersheds. A significant percentage of the dead timber was salvaged. The black headed budworm reached epidemic levels in 1972 but then collapsed.

Insect populations tend to build up over a number of years. The company's past experience has been that defoliation is normally reported by staff flying over the inaccessible old forest where such attacks normally start. Evidence of other problems, e.g., Rhizina and laminated root rots, have been identified and reported in the course of fieldwork. Follow up fieldwork has then determined the severity of the problem and decisions on any further action.

When defoliation is reported, it is inspected more carefully, boundaries roughly mapped and recorded in the annual report. If the attacked area increases and/or the extent of defoliation increases significantly, assistance is sought from MoF or Canadian Forest Service (CFS) specialists and plans made for salvage. If warranted, an aerial attack plan is prepared in conjunction with the pertinent federal and provincial agencies.

- θ Balsam Woolly Adelgid – Recent observations have identified Balsam Woolly Adelgid (BWA) as more widespread than previously thought and the area infested is likely to continue to increase. Mortality is occurring in the eastern part of the DFA south and west of Mt. Arrowsmith. Mortality is generally found on drier sites of advanced and old growth stands of amabilis fir and sub-alpine fir in the CWHmm2 and MHmm1 subzones.

Location:	Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised:	July 16, 2003	Page 15 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Future yield losses will be minimized by:

- Further restricting planting of *Abies spp* (true firs);
 - Requiring at least 600 stems per hectare of alternate, acceptable species in natural and planted stands that are principally amabilis fir, within the infected area and adjacent to it;
 - Requiring fill planting of vulnerable stands previously classed as stocked with amabilis fir with alternate, acceptable species where this is feasible and realistic to meet at least minimum stocking, and
 - Favoring other acceptable species when spacing in the quarantine zone and a transition zone bordering the quarantine zone.
- θ Ambrosia Beetles – The DFA has had an active damage prevention program for over 30 years to minimize the significant financial loss these beetles can inflict. After early trials and operational spraying with a number of insecticides, damage is now controlled by careful management of inventories of susceptible logs and the use of pheromones and trap logs around log sort and storage areas.
- θ Other Insects – Rules for planting Sitka spruce are carefully adhered to so as to reduce damage by the Sitka spruce weevil. Active control measures were attempted in the past with marginal success. The company is involved in trials on other tenures with seedlings from weevil resistant provenance. No other insects, e.g., bark beetles or the plantation weevil, have reached epidemic levels.

2.4.3 Forest disease control

Wood volumes lost to disease in the old growth forest have been estimated as highly significant by the CFS. However, measurements from Coastal Group permanent sample plots for nearly 30 years suggest that growth is balancing mortality.

In the new forests, a number of parasitic fungi can kill trees or degrade log quality and value. The most significant of these are hemlock mistletoe, laminated root rot, Annosus root rot, and Armillaria root disease. The design of new variable retention silviculture approaches must take into account the widespread incidence of mistletoe in old growth hemlock and in many of the 40 year plus second growth stands as this can pose a significant risk to the health of regenerating forest areas. Though Annosus is known to be widespread and though various measures were used when spacing or thinning in the 60s and 70s (high stumps and borax), no action is presently undertaken. Though Armillaria is endemic, assessments in Douglas-fir stands made by research staff in the 1950s found evidence of only scattered mortality, which appeared to decline or cease after canopy was formed. It was concluded this pathogen is not presently a cause for concern.

Active preventive measures are now limited to mistletoe and laminated root rot. Strategies are being implemented for addressing infections of *Phellinus weirii*.

Location:	Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised:	July 16, 2003	Page 16 of 44

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Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

- Assessment of susceptibility to windthrow and application of WIT Windthrow Management Strategy.
- Cutblock design (e.g., cutblock size, location and orientation) at the FDP and SP stages based on knowledge of historic wind patterns and assessments. Windfirmness is also a key factor guiding selection of groups and individual trees for in-stand retention.
- Management practices including feathering of edges and pruning of trees is applied according to the assessed risk of windthrow.
- Monitoring of windthrow and recovery of windthrow where practical and ecologically appropriate.
- Use of wind hazard maps.
- Training of field personnel to recognize the potential for windthrow.

3.0 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.

3.1 Physical environments

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

3.1.8 Forested land

GOAL 11: There is no significant conversion of forested land to other uses without due public process

Indicator 22: % productive forest area in the DFA converted to non-forest use.

Objective: Limit conversion to non-forest use to < 0.001% per year

Acceptable Variance: < 0.0027% per year

Forecast: Stable

3.1.9 Permanent access structures

GOAL 12: Access structures are built and maintained for long term uses to support forest maintenance/silviculture, fire protection, and recreation, while also protecting the soil resource.

Indicator 13: Annual percent of opening areas in permanent access structures

Objective: ≤ 7% of opening areas in permanent access structures

Acceptable Variance: + 1%

Forecast: 5%

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 17 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

3.1.10 Rare, endangered or under represented features

GOAL 13: Rare, endangered or otherwise significant features are identified and their important qualities are protected

Indicator 23: The number of rare, endangered or otherwise significant features destroyed by harvest activity.

Objective: Zero rare, endangered or otherwise significant features destroyed by harvest activity.

Acceptable Variance: Zero

Forecast: Zero

3.2 Soil resources

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

3.2.11 Soil quality

GOAL 14: Natural levels of soil productivity and stability are sustained

Indicator 24: Openings harvested in which soil disturbance exceeds pre-harvest level as determined by a post harvest assessment.

Objective: No more than 5% of any opening or no more than 1 opening

Acceptable Variance: 1 opening

Forecast: Zero

3.2.12 Soil cover

GOAL 15: Erosion and loss of soil cover are minimized

Indicator 13: Annual percent of opening areas in permanent access structures

Objective: ≤ 7% of opening areas in permanent access structures

Acceptable Variance: + 1%

Forecast: 5%

Indicator 18: Area of slides originating in harvested areas or roads

Objective: < 10 hectares

Acceptable Variance: < 20 hectares

Forecast: 2.0 hectares

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 18 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

3.3 Water resources

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

3.3.13 Stream water quality

GOAL 16: Natural historic levels of water quality are maintained. (Calcium chloride is concern.)

Indicator: To be determined

Objective: Bring in Shelley Higman to speak to this and develop and indicator

3.3.14 Riparian areas (fresh and marine)

GOAL 17: Riparian areas are managed to protect water quality, water flow, and the habitat needs of land and aquatic species

Indicator 25: Percent of stream length of S4 fish streams buffered ≥ 15 meters in areas harvested annually.

Objective: S4 fish $\geq 85\%$

Acceptable Variance:

Forecast: S4 fish $\geq 85\%$

Indicator 26: Percent of stream length of S4 non-fish streams buffered ≥ 15 meters in areas harvested annually.

Objective: S4 non-fish $\geq 39\%$

Acceptable Variance: S4 non-fish $\geq 10\%$

Forecast: S4 non-fish $\geq 39\%$

Indicator 27: Percent of stream length of S5 streams buffered ≥ 15 meters in areas harvested annually.

Objective: S5 fish $\geq 60\%$

Acceptable Variance: S5 $\geq 15\%$

Forecast: S5 $\geq 60\%$

Indicator 28: Percent of S6 streams with a >15 meter buffer in areas harvested annually

Objective: S6 $\geq 39\%$

Acceptable Variance:- 10%

Forecast: S6 $\geq 39\%$

Indicator 29: Percent of openings harvested where reserve zones (as per table attached) are not maintained (steam crossings are excluded)

Objective: Full reserve zones as per table attached %.

Acceptable Variance: 2 %

Forecast: 100 %

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 19 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

3.3.15 Forest hydrologic regimes (including water quantity)

GOAL 18: Natural hydrological regimes are perpetuated and damaged watersheds (water quality or riparian values) are restored.

Indicator 30: Provide ranking and trend line for watersheds in the DFA.

Objective: To develop a new indicator that measures watershed health.

Acceptable Variance: n/a

Forecast: n/a

3.4 Management strategy

3.4.1 Infrastructure and access development

Locations of new log handling facilities, roads, and bridges are shown in the operational plans at the appropriate planning stage for the detail required.

3.4.2 Road building and maintenance

The Forest Development Plan documents plans for road construction and maintenance and for road deactivation.

The road building and maintenance plan is reviewed with the MoF District Manager as part of the Forest Development Plan process. All permitted roads and bridges will meet the requirements of the Forest Road Regulations. New bridges and major stream crossings are reviewed with and approved by fisheries officials as required by the District Manager.

Where existing non-permitted roads are required for harvesting they are permitted and brought up to standard. Non-permitted roads not required for harvesting are brought up to standard on a priority basis based on discussions with local MoF and MWLAP staff and according to the availability of Forest Investment Account (FIA) funding.

3.4.3 Site Restoration

Roads and landings are maintained or deactivated according to the conditions of the Road Permit unless needed for other purposes. Proposed deactivation is included with the Forest Development Plan. Backspar trails, abandoned roads and, as necessary and appropriate, exhausted or unused gravel pits, and log landings are restored by such techniques as ripping, return of spoil, spreading of debris, construction of anti-erosion barriers, and sowing of soil-improving or soil-holding species.

Non-permitted roads that predate the FPC are rated for urgency of restoration based on an evaluation of environmental risk and work is undertaken as FIA funding is granted.

Areas of landings used in longline, highlead, or helicopter yarding will not exceed the allowable limits for site degradation. Upon completion of logging, site restoration of landings will be completed in conformance with commitments or requirements contained in the SP or Road Plan.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 20 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

3.4.4 Soil conservation

The DFA experiences some of the highest rainfall events in North America. Where these high rainfall events occur on steep terrain, there is potential for landslides and surface soil erosion. Inventories of terrain stability have been completed for most of the DFA. Terrain stability mapping and evaluations of surface erosion potential have also been completed for most of the community watersheds in the DFA. The issues are:

- θ Potentially unstable terrain — Landslides are a natural and inevitable phenomenon that contributes to the evolution of the landscape. Although landslides occur in both logged and unlogged terrain, logging and road building can increase their frequency. Impacts of landslides include acceleration of sediment delivery to streams, possible damage to fish and invertebrate habitat and productivity, loss of productive forest site, unsightly scars, and damage to roads, culverts, and bridges.
- θ Surface soil erosion — Surface soil erosion is the wearing away of the earth’s surface by water, wind, and gravity and includes rill and gully erosion. “Accelerated” erosion, in excess of “geologic” erosion, results from human activities. Accelerated erosion causes on-site impacts (soil loss, nutrient loss, lower productivity) and off-site impacts (water quality, sedimentation, habitat).
- θ Soil disturbance — Certain soil types are sensitive to disturbance from road building and yarding activities. If these sensitive sites are not identified in advance of forest development, then soil compaction, poor drainage, puddling, and soil displacement can result in loss of productive forest sites.

West Island’s strategy for soil conservation is:

- θ Map areas where terrain mapping does not exist.
- θ Assess all Class IV and V (Es1 and Es 2) terrain prior to road construction or harvesting to evaluate terrain stability and provide recommendations on:
 - whether or not development should proceed,
 - best road and cutting boundary locations or changes to proposed layout or road alignment,
 - riparian management areas,
 - possible mitigative actions and criteria,
 - road construction or harvesting constraints, and
 - special road construction or harvesting techniques.
- θ Inspect drainage ditches and culverts regularly and take preventative measures to minimize the potential for debris flow initiation and soil erosion.
- θ Deactivate roads that are no longer needed for management access, forest protection, or other purposes.
- θ Identify potentially unstable (sensitive) sites.
- θ Where ground based harvesting is proposed, carry out site sensitivity assessments for soil compaction, soil displacement, surface soil erosion, and forest floor displacement.
- θ Where it is practical and economic, reduce the amount of permanent site degradation below 7% guideline.
- θ Rehabilitate cutblock areas that are not important for the road network and where the maximum allowable level of site degradation has been exceeded.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 21 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

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- θ Carry out internal and external audits to evaluate road building practices and stream management.

3.4.5 Water conservation

It is important to understand the type and extent of current, water-related problems in a watershed and to recognize the possible hydrologic impacts of proposed forestry-related development. Potential hydrologic impacts are of critical importance in community watersheds and in watersheds with high fisheries values. There are 14 community watersheds within the DFA boundary. The fishery resource value is generally high and protection of fish habitat and water quality ranks as a significant priority. Several watersheds have been assessed according to the Coastal Watershed Assessment Procedure (CWAP). The issues are:

- θ **Quality** — The quality of water is determined by drinking water standards in a community watershed and by aquatic standards in watersheds with high fisheries values. In both types of watersheds, sediment input and delivery and herbicide and fertilizer applications are the primary concerns.
- θ **Quantity** — The hydrologic impact on water quantity from forest development is primarily focused on the timing of flow and potential changes to peak flows.

West Island’s strategy for water conservation is:

- θ Develop operating guidelines in consultation with appropriate local, provincial or federal authorities, or follow the provisions of approved watershed development plans where a watershed supplies water for community use or where fish values are paramount.
- θ Locate, design, construct, and maintain roads, bridges, and culverts to preserve natural drainage patterns and to minimize impacts on water quality and quantity.
- θ Develop and implement road deactivation plans to minimize impacts on streams. Where necessary, dry seed, hydroseed, and/or plant to reduce erosion and sedimentation hazards.

4.0 Forest Contributions to Global Ecological Cycles

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

4.1 Recycling processes

The processes that are responsible for recycling water, carbon, nitrogen and other elements are maintained.

4.1.16 Ecological cycles

GOAL 19: Forest management activities are conducted in ways that maintain ecological cycles

Indicator 4: Number of units (as defined below) where inadequate old growth (as defined below) exists.

Definitions: A unit is: Variant within a landscape unit within the DFA that is greater than 250 hecatres.

Inadequate is defined as: the provincial guidelines

Objective: Do not increase the number of units where inadequate old growth exists

Acceptable Variance: - Two units increase

Forecast: Zero increase

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 22 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Indicator 31: Change in area of water bodies

Objective: Maintain current area of water bodies
Acceptable Variance: Zero change
Forecast: Stable

4.1.17 Carbon budget

GOAL 20: Enhance the long term uptake and storage of carbon

Indicator 32: Indicator to be determined based on advisory group education and information gathering

Objective: Increase the advisory group’s understanding of carbon budget factors
Acceptable Variance: Completed in 2004
Forecast: N/A

4.2 Utilization and rejuvenation

Utilization and rejuvenation are balanced and sustained. *(The Values and Goals related to this section are included in Element 5.1.)*

4.3 Deforestation and conversion

Forest lands are protected from sustained deforestation or conversion to other uses. *(The Values and Goals related to this section are included in Element 3.1.)*

4.4 Management strategy

West Island’s economic objective is to realize the highest net value of timber from the forest on a sustainable basis, while meeting the requirements for protection and/or conservation of other forest-based resources.

Variations in site conditions and requirements for different forest resources within the company’s three stewardship zones will ensure a diversity of stand conditions and hence a wide range of species, ages, and size of logs. Factors that contribute to this variability across the forest landscape include variations in site productivity and ecological type. They also include specific management requirements for different forest values.

4.4.1 Forest growth and yield plan

Growth and Yield work continues, subject to Forest Investment Account FIA funding. Partially funded FIA studies include:

- The establishment of several large scale (100 ha) and small scale (<20ha) experiments examining the effects of different amounts and patterns of variable retention on growth of the next crop. In addition, planted transects established during 1999 to 2001 with various species will be measured and used to examine the impacts of edge effects on growth of the next crop.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 23 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

- A small pilot project will be undertaken to monitor (through random samples) the effects of variable retention on growth.
- A core of treated and natural permanent sample plots will be measured on a 10-year cycle.
- Existing models (Y-XENO) will be supported in the near term with adjustments for the effects of variable retention. In the longer-term, alternative modeling endeavours will be undertaken.

4.4.2 Reforestation

Consistent with the silviculture management objectives, West Island will regenerate the forest at densities that ensure full site coverage and high yields of quality timber. West Island will bear the silviculture costs for basic silviculture in compliance with the Forest Act. Other treatments on crown land will be undertaken if FIA funding is available. The company expects to receive a share of the FIA fund proportionate to its contribution

- ∅ Species selection – West Island bases species selection first of all on the silvical characteristics of the individual species and their adaptability to the particular site, including forest health considerations. The second criterion for selection is species value ranking. This is based on the company view of the wood qualities and desirability at harvest. Currently, cypress and cedar rank highest. Species selection will be consistent with the stocking standards approved within the Forest Development Plans.
- ∅ Forest tree seed – West Island attempts to maintain a five-year supply of seed for the range of species and seed zones. The priority will be for seed from the orchards of Coastal Tree Improvement Cooperative members. Where seed orchard seed may be unavailable in sufficient quantity, wild seed will be collected under supervision to ensure best quality.
- ∅ Site Preparation – Anticipated site preparation necessary to renew the forest is prescribed post harvest. Site preparation methods that may be prescribed include mechanical piling or dispersal of slash, broadcast or accumulation burns, stumping, and mechanical or chemical control of brush or unwanted seed trees. Each method is considered in terms of economics, environment, and government regulation before the optimal solution is prescribed. Brush control by non-herbicide methods is favored where results and costs are comparable.
- ∅ Regeneration methods – Particularly in the Timber Zone and even if natural regeneration is feasible over time, most sites are planted in order to attain early green-up, thereby freeing adjacent areas for harvest. Immediate planting is normally prescribed on highly productive sites because of the likelihood of weed invasion. Where it is anticipated that natural regeneration will not reach at least the minimal acceptable level two years before the end of the regeneration delay period, planting will be prescribed. Planting will also become increasingly prevalent in advanced growth amabilis stands within the balsam woolly adelgid infestation zone.
- ∅ Free growing assessment – Before 1987, all stand establishment to the free growing stage on crown lands was funded by the MoF. With a change to the Forest Act that year, stand establishment (basic silviculture) became the financial responsibility of the licensee. The normal assessment regime for each site prior to claiming free growing status is:

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 24 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

1. A post-harvest survey confirms whether or not the treatments in the Site Plan (SP) regarding slash loading and disposal, site preparation, regeneration method, and timing still apply.
2. Where natural regeneration has 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.
3. A survival survey generally occurs about one year after planting. If necessary, a fill plant or a replant is scheduled.
4. 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.
5. A free growing assessment is made near the end of the early free growing period. Necessary weeding or spacing treatments are scheduled.
6. A final free growing survey is carried out near the end of the late free growing period.

5.0 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.

5.1 Extraction rates

Extraction rates are within the long-term productive capacity of the resource base.

5.1.18 Non-timber forest products

GOAL 21: Forest management practices continue to provide opportunities for NTFP harvesting

Indicator 33: An information session with Royal Rhodes University NTFP experts

Objective: WIWAG gets information on NTFP's and forest management practices.

Acceptable Variance: Meeting is held.

Forecast: n/a

GOAL 22: Variety of habitats support sustainable production of NTFPs (e.g., mushrooms, berries, floral products, medicinal plants, etc.)

Indicator 4: Number of units (as defined below) where inadequate old growth (as defined below) exists.

Definitions: A unit is: Variant within a landscape unit within the DFA that is greater than 250 hectares.

Inadequate is defined as: the provincial guidelines

Objective: Do not increase the number of units where inadequate old growth exists

Acceptable Variance: - Two units increase

Forecast: Zero increase

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 25 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

5.1.19 Timber harvest

GOAL 23: Maintain harvest at the LTHL as it applies to the harvestable land area

Indicator 34: Annual harvest (5 year average) as percent of LTHL

Objective: ± 10% of LTHL for 2003-2005

Acceptable Variance: ± 15% of LTHL

Forecast: LTHL

5.2 Investment and operating climate

Resource businesses exist within a fair and competitive investment and operating climate. (See *Element 6.1 for related goals and measures.*)

5.3 Goods and services

Forests provide a mix of market and non-market goods and services.

5.3.20 Parks and Ecological Reserves

GOAL 24: Management planning considers the location and characteristics of protected areas with respect to connectivity, fragmentation, representative ecosystems, etc.

Indicator 35: Percent of harvesting adjacent to protected areas that is VR

Objective: 80% in 2003 - 2005

Acceptable Variance: -10%

Forecast: 95%

Indicator 36: Percent of park perimeter harvested within previous 5 years.

Objective: 7% by 2005

Acceptable Variance: < 9.5% within three years

Forecast: 5%

5.3.21 Recreation and tourism

GOAL 25: Weyerhaeuser is respectful of the high value of tourism, recreation and other user activities within the DFA.

Indicator 37 Percent of roads from recreation road inventory that are maintained.

Objective: Maintain 90% access to major recreation areas as identified by the road inventory.

Acceptable Variance: -5%

Forecast: 100%

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 26 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Indicator 38: Percent of DFA covered by a recreational inventory

Objective: Maintain existing inventory of recreational values and incorporate into planning process.

Acceptable Variance: 95% of DFA inventory

Forecast: 100%

Indicator 39: Number of hectares in which visual condition fails to meet Visual Quality Objectives.

Objective: Reduce the number of hectares from previous reports.

Acceptable Variance: + 5%

Forecast: Zero

5.4 Management strategy

West Island will meet overall societal goals related to sustaining key social and ecological values, while harvesting the approved Annual Allowable Cut as required under the Forest Act.

West Island demonstrates its commitment to these goals through Management and Forest Development and through the conduct of logging and other activities in accordance with approved plans and prescriptions. Through implementation of the Forest Project strategy the company is committed to performance results of a higher standard than those required by law. The Forest Project strategy includes, among other aspects, a transition to ecologically-based silviculture systems, increased old growth conservation, and expanded public consultation such as that conducted in writing this SFM Plan.

5.4.1 Forest recreation

The objective is to:

- θ Periodically revise recreational value ratings or conduct new inventories to incorporate changes in value perceptions or management guidelines.

Consistent with MoF Recreation Management Guidelines and Standards, the West Island strategy is to:

- θ Identify new, significant recreational attractions in the course of inventory or development work and protect them.
- θ Cooperate with the MoF and authorized caving organizations to protect cave entrances and underground cave features and assist in the management of public access.
- θ A recreation analysis was completed in July 2002. The Coastal Group has, in consultation with appropriate MoF staff in region and district offices, completed an update of all recreation resource inventories, including available information on cave/karst features to the end of 1996.
- θ Account for recreation in operational harvest plans and timber supply analyses.
- θ The recreation resource inventory was updated in 2001.
- θ The Recreation Sector (WIWAG) produced a "Recreation Access Inventory". It is posted on the Advisory Group's website.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 27 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

5.4.2 Visual landscape management

Major visual landscape management issues in the DFA are associated with public travel corridors, settlements, parks and recreation use areas, and with addressing anomalies in the existing visual landscape database.

Forest harvesting and other operations will be managed to achieve established visual objectives. West Island will work with MoF specialists to manage visual landscapes more efficiently – that is, to minimize impacts on timber supply while retaining visual values. This will include:

- ∅ Incorporating principles of landscape design in the planning process in areas of high visual sensitivity.
- ∅ Recognizing demand as well as supply when assessing appropriate standards for managing visual landscapes.
- ∅ Applying silviculture strategies to reduce the time to achieve visually effective green-up.

6.0 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.

6.1 Social values

Forests are managed in ways that reflect social values and are responsive to changes in those values.

6.1.22 Community stability

GOAL 26: Contribute to and support local economic benefits

Indicator 40 \$ of WIT wages, salaries, contracts compared to previous years (revised)

Objective: Maintain or increase total \$ amount of WIT contracts, wages and salaries

Acceptable Variance: -10 %

Forecast: 2% increase per year

Indicator 41: The portion of employment spending in Indicator 41 that is within the Alberni Clayoquot Region

Objective: Benchmark total regional employment spending related to WIT

Acceptable Variance: n/a

Forecast: n/a

Indicator 42: Employee and contractor (to include small bus, logging and silviculture contractors) jobs/cubic meter of fibre logged within the DFA. (1FTE = 1,600 hrs/yr)

Objective: Benchmark the ratio of jobs to cubic meters harvested or processed.

Acceptable Variance: n/a

Forecast: n/a

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 28 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

- Indicator 43:** The portion of jobs in Indicator 42 that are within the Alberni Clayoquot Region
- Objective:** Benchmark the portion of all harvesting and processing jobs that are within the Alberni Clayoquot Region
- Acceptable Variance:** n/a
- Forecast:** n/a
- Indicator 44:** Number of local (Alberni Clayoquot Region) processing jobs (including Coulson and Norske) that are associated with fibre from the DFA (1 FTE = 1,600 hrs/yr)
- Objective:** Benchmark the processing jobs within the Alberni Clayoquot Region that result from DFA fibre.
- Acceptable Variance:** n/a
- Forecast:** n/a
- Indicator 45:** Total percent of Major Contractor non-wage spending within the Alberni Clayoquot Region as a % of total non-wage expenditures. (*Major contractors defined as Mars, McKay, Hayes, Newco? and Canadian Air Crane*)
- Objective:** Benchmark percent of Major Contractor non-wage spending within the region as a % of total non-wage expenditures (supplies, equipment, etc.)
- Acceptable Variance:** n/a
- Forecast:** n/a
- Indicator 46:** Total % of Weyerhaeuser non-wage spending that is within the Alberni Clayoquot Region.
- Objective:** To benchmark Weyerhaeuser non-wage spending within the Alberni Clayoquot Region
- Acceptable Variance:** n/a
- Forecast:** n/a
- GOAL 27:** Local Weyerhaeuser units and their major contractors have policies or procedures in place that give preference to local hiring and contracting.
- Indicator:** Weyerhaeuser is unable to respond to this goal.
- Acceptable Variance:** n/a
- Forecast:** n/a
- Indicator 47:** Number of all contracts let and their subcontractors and the portion of those that live in the Alberni Clayoquot Region.
- Objective:** To benchmark the portion of all contracts and their subcontractors that live in the Alberni Clayoquot Region.
- Acceptable Variance:** n/a
- Forecast:** n/a

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 29 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

GOAL 28: Community stability is enhanced by a balanced annual extraction rate.

Indicator 48: Annual harvest level compared to last 5 years.

Objective: Annual cut is within –15% / +25% of previous 5 years.

Acceptable Variance: - 20% / +30%

Forecast: ± 5%

GOAL 29: Local (within the Alberni Clayoquot Regional District), manufacturing capacity is increased.

Indicator 49: Conversations with the Advisory around conversion of 2nd growth fibre locally have taken place.

Objective: A strategy is developed to support 2nd growth mills by 2004.

Acceptable Variance: by 2005

Forecast: n/a

Indicator 50: Annual harvest compared to local log consumption that is provided by Weyerhaeuser.

Objective: Maintain or increase ratio of logs consumed locally by Weyerhaeuser operations vs. WIT harvest.

Acceptable Variance: - 10%

Forecast: Even flow

6.1.24 Timber Companies

GOAL 29: The company and its major contractors re-invests a portion of their profits into operation upgrades, etc.

Indicator 51: Total \$ spent on capitol improvements in Weyerhaeuser mill facilities.

Objective: Benchmark \$ spent on capitol improvements in Weyerhaeuser mill facilities.

Acceptable Variance: n/a

Forecast: n/a

6.2 Aboriginal and treaty rights

Duly established Aboriginal and treaty rights are respected.

6.2.25 Aboriginal rights

See section 6.1 for additional goals related to this value

GOAL 31: Support First Nations ability to fully exercise their aboriginal rights through the protection and provision of access to natural and cultural heritage resources. *(See also additional related values and goals below.)*

Indicator 52: Number of First Nations that have requested a Cultural Heritage Resource contract vs. the number who have one

Objective: 100% of First Nations that want one have a Cultural Heritage Resource contract with Weyerhaeuser.

Acceptable Variance: 20%

Forecast: 100%

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 30 of 44

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Indicator 53: % of surveys conducted out of the number requested

Objective: 90% of requested surveys are conducted

Acceptable Variance: 10 %

Forecast: 100%

Indicator 54: First Nations information sharing and referrals program

Objective: Maintain 5 programs and increase based on those who are willing.

Acceptable Variance: Zero

Forecast: 100%

Indicator 55: Percent of blocks where agreement is reached around the management of Cultural Heritage Resource contracts.

Objective: Achieve 100 First Nation consent on management and /or protection of identified Cultural Heritage Resources

Acceptable Variance: -15%

Forecast: 100%

GOAL 32: Provide opportunities for revenue sharing and joint ventures for First Nations.

Indicator: Weyerhaeuser is unable to respond to this goal.

GOAL 33: Provide opportunities for harvest and other forest management activities for First Nations.

Indicator 56: Number of First Nations signing contracts.

Objective: Maintain or increase the number of First Nations contracts.

Acceptable Variance: less 1

Forecast: ?

Indicator 57: Contract \$ paid to all First Nations contractors compared to previous years.

Objective: Maintain or increase total contract \$ paid to First Nations.

Acceptable Variance: - 10%

Forecast: 2% increase

6.4 Decision making process

The decision making process is developed with input from directly affected, local and interested parties. (See element 6.5 for related goals and measures)

6.5 Decision Making Process

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.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 31 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

6.5.26 Decision making process

GOAL 34: The input of interested and affected parties is valued and every effort is made to accommodate reasonable requests.

Indicator 58: Percent of changes to operational plans as a result of responding to public comments.

Objective: 100% commitment to incorporating reasonable concerns into the planning process.

Acceptable Variance:- 10%

Forecast: 100%

6.6 Knowledge

Collective understanding of forest ecosystems, values, and management is increased and used in the decision making process.

6.6.27 Education

GOAL 35: Weyerhaeuser supports an educational/communications program that promotes and explains local forest management and processing activities.

Indicator 59: The number of communication activities implemented compared to the communications plan list.

Objective: 2003 – 50% of activities implemented
2004 – 75% of activities implemented
2005 – 100% of activities implemented

Acceptable Variance: ± 10% of activities

Forecast: 100 %

Indicator 60: Percent of planners oriented to red/blue list species annually

Objective: All planners complete red/blue list species awareness and location orientation within previous 24 months.

Acceptable Variance:- 50%

Forecast: All

Indicator 61: Number of programs or presentations that target youth for forest awareness/information.

Objective: Two strategies that target youth awareness and participation in forest management are developed.

Acceptable Variance: Zero

Forecast: 100%

Indicator 62: Percent of workers that are trained/year in the First Nations Cultural Awareness Program.

Objective: Ensure that 70% of workers are trained each year.

Acceptable Variance:-10%

Forecast: 100% of workers

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 32 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

6.7 Management strategies

6.7.1 First Nations

First Nations groups, living in communities adjacent to West Island operations or having traditional territories that overlap areas of West Island operations, are provided opportunities for forest management involvement and economic benefits through:

- ∅ Information sharing in planning and in communication of forestry practices and planned activities.
- ∅ Employment opportunities in forest management activities subject to constraints of existing labour agreements.
- ∅ Involvement in BC Timber Sales proposals. West Island will assist with planning and training.

6.7.2 Public information and involvement

In keeping with the expressed interest of the public in all aspects of forest resource inventory, management, and use, West Island:

- ∅ Identifies and advises local and other involved public interest groups, local governments, First Nations, and interested individuals of opportunities for input to the various planning processes and solicits their feedback.
- ∅ Advertises and holds public information meetings to enable any member of the public to view and respond to Management Plan proposals and current performance.
- ∅ Financially supports and participates fully in activities of the West Island Woodlands Advisory Group. WIWAG is a facilitated, independent, broad-based community group formed with the express objectives of providing advice to West Island on appropriate goals for sustainable forest management and of assessing and commenting on West Island's performance with respect to those goals.

6.7.3 Forest research

The overall company objective in forest research is to obtain the knowledge to improve forest management and the conservation and protection of other forest resources and values. The strategy is to:

- ∅ Identify and recommend basic and applied research needs to the organizations that have the specific mandate to undertake the work.
- ∅ Prepare and submit research proposals for FIA funding for projects of particular or strategic concern to the TFL 44 license area.
- ∅ Cooperate with these organizations in conducting basic and applied research.
- ∅ Test and develop practicable applications and uses of published basic research that are relevant to Weyerhaeuser management goals and responsibilities.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 33 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Significant areas of research include:

- ∅ Forest Ecology – The objectives of the forest ecology research program are to determine the effects of management activities on forest ecosystems, to improve our ability to predict ecosystem response, and to develop biologically sound silviculture prescriptions. The program includes these continuing studies:
 - Vegetation Dynamics of Montane Forests: This project is studying natural regeneration and vegetation succession under alternative silviculture systems in montane forests at the cooperative Montane Alternative Silviculture Systems (MASS) study area in the North Island Timberlands area.
 - Bird Diversity: Breeding birds were surveyed at the MASS site before and after harvesting under several silviculture systems and compared to adjacent old growth populations. Winter resident birds were also assessed after harvesting. Results will help guide appropriate practices to maintain habitat for different species groups.
- ∅ Forest Renewal – The forest renewal research program focuses on providing seedling and planting solutions to the new silviculture challenges our foresters face. The research program will continue to place priority on cost efficiency and forest renewal solutions that address high cost problems. Continuing studies include:
 - A cooperative project seeks to understand western hemlock and amabilis fir growth and development under four harvest systems – clearcutting, green tree retention, shelterwood, and patch cutting.
 - Plantation performance of western red cedar and yellow cypress are being compared among a common set of seedlots over a range of sites from 50 m to 750 m elevation.
 - Seedlings and cuttings from similar source populations are being compared on high and low elevation planting sites.
- ∅ Forest Tree Nutrition – The aim of the nutrition research is to maintain or enhance the nutritional status of seedlings and trees to ensure optimum growth rates.

Other projects in which the Coastal Group is active include:

- ∅ The cooperative Salal-Cedar-Hemlock Integrated Research Program (SCHIRP). The objective of this multi-agency project is to determine the processes causing poorly performing plantations on salal-dominated cedar-hemlock sites and to develop silviculture treatments. A study site was established near Ucluelet in 1996. Field tours, a synthesis report, and a field guide have communicated results to foresters from northern Vancouver Island sites.
- ∅ A study of organic matter decomposition and nitrogen mineralization under alternative silviculture systems in montane forests.
- ∅ A study of soil nutrient leaching under alternative silviculture systems in montane forests.
- ∅ A study of snow accumulation and melt rates over two seasons under different canopy retention levels. A predictive model is being used to determine potential impacts on hydrology from the use of partial cutting techniques.

See also, Section 2: Summary of BC Coastal Group Forest Management Strategy.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 34 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

SECTION 2**Summary of BC Coastal Group Forest Management Strategy
(The Forest Project)**

Variable Retention Phase-In – Four Year Progress

Weyerhaeuser, BC Coastal Group, has adopted the Variable Retention (VR) approach to harvesting and silviculture for all of our public and private forest land. VR leaves long-term tree retention in every harvested area, similar to what nature would do during a natural disturbance such as fire, wind or disease. Various levels of retention can be used with different types, amounts and patterns of leave-trees, depending upon the objectives. Retained live and dead trees provide important wildlife habitat distributed throughout harvested areas. In addition to VR, protected areas and landscape-level reserves on public land provide conservation of larger forest areas for wildlife habitat and biological diversity.

Our goal is to phase-in variable retention over 5 years, increasing the amount by 20% per year (i.e., 100% VR in 2003). VR is being used for harvesting in both our second growth and old growth forests. We completed over 80% of our harvested area using variable retention in 2002—our 4th full year of implementation. We’ve met or exceeded our phase-in targets every year, and are on track for full phase-in during 2003 (Table 1). Most importantly, our Timberlands continue to lead the industry in coastal BC forest operations in safety performance.

Most of the variable retention cutblocks use the retention silviculture system, leaving trees in groups (over 0.25 ha in size), or as dispersed individual trees or small groups of a few trees. Most of the variable retention harvesting in 2002 was done as group retention (63%) or a combination of groups with some dispersed trees (32%). Few cutblocks were done exclusively as dispersed retention (4%). We used shelterwood and selection systems with reserves for a minor portion of our harvest. Variable retention is being implemented in both second-growth and old growth forests.

Multi-pass harvesting was used on 12% of all cutblocks completed in 2002. The most common usage of two or more harvest entries is where a cutblock has adjacency restrictions under the Forest Practices Code that require retention of at least 40% of the basal area of the stand—a rule designed to prevent progressive clearcutting. An initial harvest is possible in these circumstances, with a second entry after “green-up” height targets are reached on the

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 35 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

harvested portion. In other cases, windthrow or visual concerns were the rationale for a two-pass approach. We continued to develop a new harvesting technique called Standing Stem Harvesting, whereby a helicopter removes a cut and limbed tree without it falling to the ground. This technique has applications on very sensitive terrain, or as a first pass removal of high value stems prior to conventional yarding.

The average long-term retention level over the past 4 years was over 20%, which includes group and dispersed retention and other reserves (e.g., riparian, wildlife tree patches) within the cutblock boundaries. This is well above the 10% and 15% minimums required for our Timber and Habitat Zones, respectively. A range of retention levels, including both short- and long-term retention were used in our cutblocks. About 70% of the cutblocks left retention in the 11 to 30% range, with roughly 12% of blocks at 10% or less retention, and 15% in the 31 to 50% range. Only 3% of blocks were over 50% retention. Our practices show an intentional concentration of retention at the lower end of the range that is designed to maintain structural attributes while attempting to minimize a predicted reduction in growth and yield. We have a sufficient number of cutblocks throughout the 5% to 50% range to assess impacts in our monitoring program.

Implementation Monitoring

Symmetree Consulting Group completed an evaluation of 199 (5,554 ha) VR cutblocks from 1999 to 2002 to monitor performance and identify areas for improvement (Bancroft and Zielke 2002). This represents a random sample of 18% of all VR harvesting. Over two-thirds of the blocks were rated as good to excellent examples of VR in relation to company guidelines. Each year, assessments showed improvement in both prescriptions and implementation over the previous evaluation. Key areas for improvement included visual design, marking of potential danger trees and avoiding leave-tree damage.

Symmetree assessed the type of attributes retained in 1,217 groups. A range of group sizes were used with an average of about 1 ha. Snags occurred in 80% of the groups in 2002. When present, groups were “anchored” on special features such as bear dens, nest trees, culturally modified trees and large veteran trees. Riparian features (28%), rock outcrops (16%) and deciduous trees (7%) were also used frequently as anchors for retention patches. Retention along small streams that do not require treed buffers under BC regulations was assessed along 40 km of stream length within VR cutblocks in 2002. Some retention occurred along 48% of these streams. Overall choice of retention was judged subjectively by the inclusion of such features as snags, woody debris, riparian areas and diverse canopy structure within retention patches. Most of the retention was judged to be of good to optimal choice to provide a range of wildlife habitat, showing improvement each year. We will continue to monitor our performance in order to improve as we gain experience and knowledge.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 36 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Table 1. Progress on implementation of variable retention.

	1999	%	2000	%	2001	%	2002	%
Variable Retention	Hectares		Hectares		Hectares		Hectares	
Group Retention	2080	26	4933	59	5502	73	6318	77
Dispersed Retention	627	8	207	2	181	2	293	4
Shelterwood, Selection, Other	293	4	88	2	119	2	115	1
Subtotal	2999	38	5228	62	5802	77	6726	82
Conventional								
Clearcut	3410	43	1584	19	671	9	622	8
Clearcut with reserves	1540	19	1534	18	988	13	863	10
Seed tree, patch cut	17	<1	20	<1	113	1	0	0
Subtotal	4967	62	3138	38	1771	23	1485	18
TOTAL	7966		8366		7573		8212	

Note: 2002 figures do not include 419 ha of catastrophic windthrow salvage at NIT.

SECTION 3

Glossary

Acronyms used in this document

AAC	Allowable Annual Cut
BEC	Biogeoclimatic Ecosystem Classification
BEO	Biodiversity Emphasis Option
CHR	Cultural Heritage Resources
CMT	Culturally Modified Tree
CSA	Canadian Standards Association
CWAP	Coastal Watershed Assessment Procedure
EMS	Environmental Management System
ESA	Environmentally Sensitive Areas
DFA	Defined Forest Area
FIA	Forest Investment Account
FDP	Forest Development Plan
FPC	Forest Practices Code
FRBC	Forest Renewal British Columbia
HCV	High Conservation Value
ISO	International Organization for Standardization
LSRY	Long Run Sustained Yield
MELP	BC Ministry of Environment, Lands and Parks
MoF	BC Ministry of Forests
MP	Management Plan
NSR	Not Satisfactorily Restocked
NTFP	Non-Timber Forest Product
RIR	Recordable Incident Rate
SFM	Sustainable Forest Management
SP	Silviculture Prescription (pre Dec 17-02) Site Plan (post Dec 17-02)
TEK	Traditional Ecological Knowledge
TFL	Tree Farm License
VQO	Visual Quality Objective
VR	Variable Retention
WIWAG	West Island Woodlands Advisory Group

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 38 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Allowable Annual Cut (AAC): The allowable rate of timber harvest from a specified area of land. The Chief Forester of British Columbia sets AACs for timber supply areas (TSAs) and tree farm licenses (TFLs) in accordance with Section 8 of the Forest Act.

At-risk species: See Species at-risk

Biodiversity Emphasis Option (BEO): The provincial government assigns low, intermediate, or high BEOs to Landscape Units depending on a range of management priorities (i.e. timber production, wildlife habitat and biodiversity conservation). The main result is a designation of the area of old growth forest that should be maintained in the Landscape Unit.

Biogeoclimatic Ecosystem Classification (BEC): Developed in BC in 1965, the BEC System classifies areas of similar regional climate, expected climax plant communities and site factors such as soil moisture and soil nutrients. The subzone is the basic unit of this classification system. Within subzones, variants further identify more local climatic factors.

Biogeoclimatic zone: a geographic area having similar patterns of energy flow, vegetation and soils as a result of a broadly homogenous macroclimate.

Biogeoclimatic variant: A unit of ecosystem classification reflecting differences in regional climate resulting in differences in vegetation, soil and ecosystem productivity. (See Biogeoclimatic Ecosystem Classification.)

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.

Blue-listed: Refers to plants, animals, and plant communities assessed by the BC Conservation Data Centre to be vulnerable.

Carbon budget: Account of carbon concentrations in cycles and sinks.

Coastal Watershed Assessment Procedure (CWAP): Assesses the impacts of forest practices on the hydrologic regime of a watershed. In particular, the potential for changes to peak stream flows, accelerated landslide activity, accelerated surface erosion, channel bank erosion and changes to channel morphology as a result of logging the riparian vegetation, and changes to the stream channel interaction from all these processes are assessed.

Connectivity: A qualitative term describing the degree to which late successional ecosystems are linked to one another to form an interconnected network.

Criterion: Under the CSA standard for sustainable forest management, one of six distinguishable SFM characteristics (as defined by the Canadian Council of Forest Ministers: *Defining Sustainable Forest Management: A Canadian Approach to Criteria and Indicators*, Ottawa, 1995); also, a value that must be considered in setting objectives and in assessing performance.

Critical Element: Under the CSA standard for sustainable forest management, a subsidiary component of a criterion. (See criterion.)

Cultural heritage resource (CHR): An object, a site or the location of a traditional societal practice that is of historical, cultural or archaeological significance to the province, a community or an aboriginal people. Cultural heritage resources include archaeological sites, structural features, heritage landscape features and traditional use sites.

Culturally Modified Tree (CMT): Tree that has been altered by native people as part of their traditional use of the forest.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 39 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Cutblock: Defined in the Forest Practices Code of British Columbia Act as a specific area of land identified on a forest development plan, or in a license to cut, road permit, or Christmas tree permit, within which timber is to be or has been harvested. (Also see opening.)

Defined Forest Area (DFA): A specific area of forest, land, and water delineated for the purposes of registration of a Sustainable Forest Management system.

Ecosystem: A functional unit consisting of all the living organisms (plants, animals and microbes) in a given area, and all the non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow. An ecosystem can be of any size – a log, pond, field, forest, or the earth's biosphere – but it always functions as a whole unit.

Environmentally Sensitive Area (ESA): Area requiring special management attention to protect important scenic values, fish and wildlife resources, historical and cultural values, or other natural systems or processes. ESAs include unstable soils that may deteriorate unacceptably after harvesting, and areas of high value to non-timber resources such as fisheries, wildlife, water and recreation.

Environmental Management System (EMS): A structured system for identifying and ranking the environmental risk associated with management activities; creating and implementing control methods to manage that risk; monitoring and assessing performance; and taking corrective action to address deficiencies under a continual improvement program.

Forest Development Plan (FDP): These plans explain resource values present in a specified area, how the values will be protected or maintained, where roads will be built and what areas are proposed for harvest. They are revised annually, advertised and presented for public review and comment before presentation to the Ministry of Forests for approval.

Forest influence area: The area within an opening that is within one tree height of a timber edge.

Forest Investment Account (FIA): Successor program to Forest Renewal BC

Forest Practices Code (FPC): The Forest Practices Code of British Columbia Act, the regulations made by Cabinet under the act, and the standards established by the BC Chief Forester. The term is sometimes used to include guidebooks associated with the Code.

Fragmentation: The process of transforming large continuous forest patches into one or more smaller patches surrounded by disturbed areas. This occurs naturally through such agents as fire, landslides, windthrow and insect attack. In managed forests timber harvesting and related activities have contributed to fragmentation. (Also see Connectivity.)

Free Growing: A stand of healthy trees of commercially valuable species, the growth of which is not impeded by competition from plants, shrubs or other trees. Silviculture regulations further define the exact parameters that a stand of trees must meet (such as species, density and size) to be considered free growing.

Goal: A broad, general statement that describes a desired state or condition related to one or more forest values.

Green-up: A reforested cutblock with a stand of trees that has attained the height specified in a higher level plan for the area or that, in the absence of a higher level plan, has attained a height of at least 3 meters is said to have achieved green-up.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 40 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Guidebook: Guidebooks consist of guidelines and recommendations on how to best achieve the requirements of the Forest Practices Code. They are not legally enforceable. However, specifications and procedures recommended by the guidebooks may be incorporated into plans, prescriptions and contracts in which case those specifications and procedures may become legally enforceable.

High Conservation Value (HCV) area: An area in which the conservation of any of numerous social or ecological values is deemed to have an especially high priority. Harvesting in HCV areas is typically very restricted and depending on the nature of the identified value(s) may be precluded entirely. Identification of HCV areas may result from information supplied by First Nations, government agencies, company personnel or other stakeholders. (See Environmentally Sensitive Area.)

Indicator: A measurable variable used to report progress toward the achievement of a goal.

Inoperable lands: Lands that are unsuited for timber production by virtue of their: elevation; topography; inaccessible location; low value of timber; small size of timber stands; steep or unstable soils that cannot be harvested without serious and irreversible damage to soil or water resources; or designation as parks, wilderness areas, or other uses incompatible with timber production.

ISO standard: Refers to ISO 14001, a generic international standard approved by the International Organization for Standardization to provide any organization with the elements of an effective Environmental Management System to support environmental protection and prevention of pollution.

Landing: An area modified as a place to accumulate logs before they are transported.

Landscape level: A watershed, or series of interacting watersheds or other natural ecological units. This term is used for conservation planning and is not associated with visual landscape management.

Landscape unit: For the purpose of the forest practices code, landscape units are planning areas delineated on the basis of topographic or geographic features. Typically they cover a watershed or series of watersheds, and range in size from 5000 to 100 000 ha.

Localized populations: Typically exhibit a gene pool that is distinct from less isolated populations.

Long Run Sustained Yield (LRSY): Maximum harvest level that can be sustained in perpetuity, based on harvesting at the age of culmination of mean annual increment and considering management assumptions.

Mature forest: Stands of timber where the age of the leading species is greater than the specified cutting age. Cutting ages are established to meet forest management objectives.

Non-timber forest products (NTFPs): All forest products except timber, including other materials obtained from trees such as resins and leaves, as well as any other plant and animal products.

Not Satisfactorily Restocked (NSR): Productive forest land that has been denuded and has failed, partially or completely to regenerate either naturally or by planting or seeding to the specified or desired free growing standards for the site.

Objective: A clear, specific statement of expected quantifiable results to be achieved within a defined period of time related to one or more goal. An objective is commonly stated as a desired level of an indicator.

Opening: Usually used synonymously with cutblock (see above) to include all of an area that has been harvested or is designated for harvesting, including the trees retained singly or in groups within the area. Less often, used to describe the actual cleared area(s) within a cutblock.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 41 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Permanent access structure: A structure, including a road, bridge, landing, gravel pit or other similar structure, that provides access for timber harvesting. It is shown expressly or by necessary implication on a forest development plan, access management plan, logging plan, road permit or silviculture prescription as remaining operational after timber harvesting activities on the area are complete.

Productive forest: Forest land that is capable of producing a merchantable stand of timber within a defined period of time.

Provenance: The geographical area and environment to which the parent trees and other vegetation are native, and within which their genetic constitution has been developed through natural selection.

Recordable Incident Rate (RIR): Number of incidents per 100 workers that require a doctor's medical attention or result in lost work time.

Reforestation: Establishment of a new stand of trees after harvesting or natural disturbance by either planting or natural regeneration. Before receiving approval to harvest on crown lands, a forester must submit a Silviculture Prescription describing, among other things, the manner and time frame within which reforestation will be conducted.

Red-listed: Refers to plants, animals and plant communities assessed by the BC Conservation Data Centre to be extirpated, endangered or threatened.

Reserve zones: Zones where harvesting is not permitted.

Riparian: An area of land adjacent to a stream, river, lake or wetland that contains vegetation that, due to the presence of water, is distinctly different from the vegetation of adjacent upland areas.

S1-6 stream: Stream classification system for riparian management. S1 to S4 streams are fish streams or streams in a community watershed. S5 and S6 streams are not fish streams and are not in a community watershed. Each class also denotes a range of stream width: S1 is >20m, S2 is >5-20m, S3 is = 1.5-5m, and S4 is <1.5m; for streams that are non-fish bearing or not within a community watershed, S5 is >3m and S6 is <3m.

Second growth: Typically younger (i.e., less than 120 years on the BC Coast) forests that have been established by planting and/or natural regeneration after removal of a previous stand by fire, harvesting, insect attack or other cause. (See mature and old growth.)

Sensitive soils: Forest land areas that have a moderate to very high hazard for soil compaction, erosion, displacement, landslides or forest floor displacement.

Silvics: Study of the life history and general characteristics of forest trees and stands with particular reference to site factors and population genetics. It is also the study of how trees establish, grow and behave in relation to sites, each other and other organisms.

Silviculture: The art and science of controlling the establishment, growth, composition, health and quality of forests and woodlands. Silviculture entails the manipulation of forest and woodland vegetation in stands and on landscapes to meet the diverse needs and values of landowners and society on a sustainable basis.

Silviculture Plan (SP): A site-specific integrated operational plan to carry out one or a series of silviculture treatments.

Silviculture system: A planned program of treatments throughout the life of the stand to achieve defined objectives. A silviculture system includes harvesting, regeneration and stand-tending. It covers all activities for the entire length of a rotation or cutting cycle. In BC this includes seven major categories: clearcut, patch-cut, coppice, seed tree, shelterwood, retention and selection.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 42 of 44

CONSIDER PRINTED DOCUMENT UNCONTROLLED.

Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Site series: A unit of ecosystem site classification that represents climatically uniform groups of ecosystems regardless of the actual vegetation residing.

Snag: A large standing dead tree.

Species at-risk: Plant and animal species identified by the BC Conservation Data Centre as red- or blue-listed.

Soil cover: Layer(s) of organic matter under various degrees of decomposition, which covers the mineral soil.

Species of special interest: Species deemed not at-risk whose habitat needs nevertheless require particular attention. Identification of these species is normally facilitated by regulatory agencies in consultation with stakeholders.

Stand level: Level of forest management at which a relatively homogenous land unit can be managed under a single prescription, or a set of treatments, to meet well-defined objectives.

Stewardship Zones: Under the BC Coastal Group's Forest Project, all public and private forest lands have been (or will be) designated as a Timber, Habitat or Old Growth zone. Each zone has a distinct set of management priorities, targets for forest retention and allowable silviculture systems. Management practices in each zone meet or exceed legal requirements.

Structural diversity: Variety of canopy layers (vertical structure) and spatial patchiness (horizontal structure).

Sustainable Forest Management (SFM): 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.

Timber Supply Analysis: An assessment of future timber supplies over long planning horizons (more than 200 years) by using timber supply models for different scenarios identified in the planning process.

Traditional ecological knowledge (TEK): Knowledge that aboriginal people have accumulated over countless generations of intimate contact with all aspects of local ecosystems, including plants, animals and other natural phenomena.

Value: A principle, standard, or quality considered worthwhile, desirable or otherwise important for consideration in management planning.

Variable Retention (VR): A relatively new approach to harvesting and silviculture systems that follows nature's model by always retaining part of the forest after harvesting. Standing trees are left in dispersed and/or grouped patterns to meet objectives such as retaining old growth structure, habitat protection and visual quality. Variable retention retains structural features (snags, large woody debris, live trees of varying sizes and canopy levels) as habitat for a host of forest organisms and maintains forest and residual tree influences. There are two main types of variable retention: dispersed retention, which retains individual trees scattered throughout a cutblock, and aggregate (or group) retention, which retains trees in patches of intact forest.

Visual Quality Objective (VQO): An approved resource management objective that reflects a desired level of visual quality based on the physical and sociological characteristics of the area; refers to the degree of acceptable human alteration to the characteristic landscape.

Wildlife tree: A standing live or dead tree with special characteristics that provide valuable habitat for the conservation or enhancement of wildlife.

Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 43 of 44

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Check the Weyerhaeuser WIT Environmental Management System webpage for the most up to date version.

Windthrow: Trees uprooted as a result of wind events.

Yarding: In logging, the hauling of felled timber to the landing or temporary storage site from where trucks (usually) transport it to the mill site. Yarding methods include cable yarding, ground skidding, and aerial methods such as helicopter yarding.

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Location: Environmental Management System, SFM, 2003, sfm_plan_july16-03.doc	
Revised: July 16, 2003	Page 44 of 44

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West Island Woodlands Advisory Group Terms of Reference

January 9th, 2003

Version Dates: Mar 2000, October 2000, May 2001, January 2003

Mission Statement

The West Island Woodlands Advisory Group (WIWAG) is composed of a cross section of community representatives who work with Weyerhaeuser staff on behalf of all those who have an interest in, or are affected by, sustainable forest management in the defined forest area.

Guided by recognized certification criteria, the WIWAG will maintain an open and transparent process that facilitates and acknowledges the widest community input possible. Our goal is to advise on the development, monitoring and ongoing improvement of sustainable forest management practices in the area.

Purpose & Role

Provide ongoing public input into the development, implementation, monitoring and continual improvement of their SFM performance and system.

Responsibility of Members

Advisory Group members are responsible for:

- staying informed and up to date on the issues being discussed
- representing the views of their constituents, the public and their own views and identifying clearly which perspective they are speaking from
- to adhere to the code of conduct (see Group Guidelines section of this document)
- to inform their alternate and their organizations on the progress of the group and issues related to SFM and communicate responses back to the group
- following through on any commitments they undertake
- participating fully in each meeting

Responsibility of the Facilitator or Chair

The Facilitator is responsible for:

- keeping the group focused and on topic
- ensuring time is not wasted
- making sure the group accomplishes it's tasks
- tracking the gaps and priorities
- making sure everyone has a chance to speak
- assisting the group with difficult spots
- ensuring the agenda and minutes are circulated a week before each meeting (through the group recorder)

- ensuring that the facility is booked, food is ordered, supplies and resources are available as required for each meeting
- liaising with members as requested between meetings to review missed meetings or other issues or tasks
- acting as the spokesperson for the group and responding to inquiries
- other tasks as negotiated with the group or members from time to time that will expedite and/or move the group forward around issues and tasks
- educating oneself about the issues related to SFM and the work of the group
- ongoing analysis of tasks, timeframe and design of process that will meet members needs and accomplish the tasks at hand

Responsibility of WIT Support Staff

The WIT Support Staff are responsible for:

- providing technical information and professional support as requested
- providing funding
- coordinating field trips
- responding to members requests in a timely fashion

Responsibility of the Recorder

The Recorder is responsible for:

- taking minutes of all meetings or ensure that they are taken
- forwarding information to members and others on a regular basis
- maintaining up to date; member lists, "other interested" lists, binders and files
- responding to requests for information from members
- ensuring space, food, equipment etc, are organized for meetings
- organizing meetings, events or other tasks as requested by the facilitator

Conflict of Interest

Members must declare a possible perceived conflict of interest around any issue and should state which individual or collective "hat" they are wearing during any given discussion.

Confidentiality

Information should flow freely between all members of WIWAG. All information will be deemed to be public information unless it is marked CONFIDENTIAL, in which case any dissemination or use of the information by other than Advisory Members will be prohibited without the consent of the group or individual bringing it forward. Information will be provided in the most useable form that is possible.

Discussions must be declared "In Camera" in order to remain confidential. Any member may request that a portion of discussion be "In Camera".

Decision Making and Conflict Resolution

Members have agreed that 100% agreement on issues is not required. All perspectives will be documented however, with final recommendations going forward when the "opposition to them is limited." Effort will be made to listen, understand, and incorporate all views in the final recommendations.

Members agree to an open, frank, and respectful dialogue, and to operating from an interest-based perspective (as opposed to position based). Issues will be addressed in terms of how they relate to Sustainable Forest Management.

Conflict between members is expected to be handled by those involved, with the best interest of the group and its mission in mind. The Facilitator can mediate such conflicts if requested by the members involved.

Membership

Group Members

Membership currently reflects the following sectors for a total of 13 members:

Parks Canada	Regional Government
Forest-Related Contractors	Bamfield
Forest Recreation	Forest-Related Small Business
Watershed	Small Business
Environment	Hupacasath First Nations Forest
City Government	Sportsmen Woodlot Owners

In addition, seats exist for tourism, labour, non-timber-forest products, and the remaining First Nations in the area (Tseshaht, Uchucklesaht, Toquaht, Huu-ay-aht, Ucluelet, Ditidaht, Cowichan Lake First Nation) however at this time these seats are vacant.

Resource & Support Staff

Weyerhaeuser:	Steve Chambers / Dennis Fitzgerald
Group Facilitator:	Michelle Colussi
Group Recorder:	Ryan Dvorak
Other Resources:	Ministry of Forests Ministry of Sustainable Resource Management
Additional Resources:	Weyerhaeuser and otherwise; will be determined by the group as required

Membership Renewal/Replacement

Membership will be reviewed on an annual basis in order to ensure that full representation exists. WIWAG may also choose to fill a sector seat by approaching another group for a representative. This is at the discretion of the group based on a two-thirds majority vote.

There is not limit to the length of term for members. No more than one half of the group should be new members at any given time.

Members Attendance

The facilitator may ask for the resignation of any member or their alternate who misses three consecutive meetings. In other words - when there is no attendance by either the member or their alternate for three meetings in a row.

Resource People

The facilitator or the members can invite stakeholders or resource people to attend meetings as presenters or participants based on their information, expertise etc. All guest requests should go through the facilitator.

Observers

Any number of observers may attend meetings. This will be advertised on the web site. The Facilitator will involve them in discussion or take their questions as time allows, allowing at least one opportunity for comment at the close of the meeting. Observers are bound by the group guidelines for conduct. Their input will be included in the Minutes of that meeting.

Agenda

The agenda will be set by the facilitator based on the previous meeting, the workplan priorities and suggestions from members. Members are requested to call the facilitator prior to the meeting with any agenda items. Agendas will be sent to members one week in advance of each meeting by the recorder and will be posted on the website at that time as "DRAFT". The agenda will be reviewed and approved at the start of each meeting and will be negotiated as required during the meeting.

Minutes

The recorder will take minutes and distribute these to all members at least two weeks prior to the next meeting. The minutes will include an Action Page that summarizes the commitments of members from each meeting. Minutes will be approved at the beginning of the following meeting and will not be distributed more broadly until they are approved. Each member will be responsible for sharing approved minutes with their alternate and their organization. Each member will be responsible for ensuring that the recorder has their appropriate email or fax for these communications. Minutes will be posted on the web site as "DRAFT" in advance of each meeting and distributed more broadly on a request basis.

Procedures & Workplan

WIWAG will develop a workplan that includes a timeframe for addressing priority tasks. The timeline will be reviewed regularly. The group will review the effectiveness of their process and work together on a regular basis and make changes as required to strengthen the group.

Any member can provide written material as handouts at a meeting.

Although Weyerhaeuser is not bound to accept every recommendation, they will make every effort to accommodate reasonable requests and will identify in writing their rationale for not accepting recommendations.

Weyerhaeuser will fund Advisory group resources, provide out of town travel expenses, meeting places, food, etc..

Ad-Hoc Committees

As work is identified the Advisory can choose to assign tasks to committees.

Committees:

- can be composed of any number of members, resource people and non members with related interest or knowledge and will be open to any member of the Advisory
- will have a specific mandate and timeframe for their work approved by the Advisory
- will have a facilitator or chair identified
- will take and distribute to members, notes or minutes of their decisions.
- will present all recommendation back to the Advisory for information or decisions

Media & Public Relations

Members will identify an appropriate spokesperson(s) on a request by request basis depending on the nature of the topic. Otherwise, the facilitator is the spokesperson for the group and can appoint other spokespersons as required to respond to requests.

Approved minutes and membership lists will be made available by request. A mailing list of those who are not members but wish to receive regular minutes will be maintained.

The web site will include the following: Agendas, Minutes, Terms of Reference, Press Releases, the SFM Plan, Meeting Schedule, Links and contact information. Unless otherwise designated, the Recorder will respond to general inquiries from the website and the Facilitator will be the phone contact.

As the process proceeds WIWAG will develop additional public communication methods. See the "Integrated communications plan" section of this document.

Other

These Terms of Reference will be interpreted by the West Island Woodlands Advisory Group and reviewed by the group as necessary.

Code of Conduct

January 9th, 2003

Version Dates: March 23, 2000, October 4, 2000

Group Guidelines

1. The success of your group is based on the strength of the full participation of each member. Members will get involved and participate to the fullest extent they are able.
2. Although full participation is important, you will not be required to do anything that you don't want to do.
3. Group members are responsible for the outcomes or the content of their work. The facilitator is responsible for ensuring safe, full participation and keeping discussion on track.
4. An essential component of success is effective communication. This requires that you are open to others points of view, that you suspend your judgments and reactions, and that you approach the dialogue from a perspective of curiosity and learning about others thoughts and interests.
5. Solid dialogue is built on honesty, integrity, goodwill and respect. This requires you to tell the truth and assume that others will too. It also implies that the language you use, your tone of voice and your body language will demonstrate your integrity and respect for others.
6. Creativity and innovation are important aspects of planning. They do not thrive in environments where people are made to feel wrong or stupid. To this end, you are encouraged to resist the temptation to criticize others ideas.
7. Groups often have members with quite divergent opinions and ideas of what the solutions are. The strongest solutions or outcomes are found when you build on the best that each perspective offers. In order to do this, group members will work to express their interests around an issue as opposed to their positions.

Integrated Communications Plan for WIT and WIWAG

January 9th, 2003

Background

WIWAG, as specified in the SFM Plan, will work with Weyerhaeuser to create a joint communications and consultation plan. One of the drivers for this objective was the recent closure of the Forest Information Centre, and thus a greater need to work to raise awareness and knowledge about sustainable forest management in our communities. The goal related to communication is as follows:

"Weyerhaeuser supports an educational/communication program that promotes and explains local forest management and processing activities." The objective for this year is: "A communications plan is developed and implemented that identifies both Weyerhaeuser and Advisory Group education/awareness activities." The indicator is: "A joint public communications and consultation plan."

There continue to be a number of Weyerhaeuser activities ongoing, in spite of the Forest Information Centre closure, and the Advisory Group has also undertaken several activities this year. Of concern at this time is the staff reduction at West Island Timberlands and in particular, no formal Public Relations or education role for those who remain. How will the Weyerhaeuser commitments in the SFM Plan and the activities in this more detailed communication plan be implemented?

Desired, Long Term Outcomes/Goals

1. That residents and/or stakeholders surrounding the DFA are aware of the Advisory Group, the SFM Plan and the related SFM issues.
2. That there are genuine and timely mechanisms available for the public and stakeholder groups to feed into the WIWAG process.
3. That there are mechanisms in place to notify both the public, and affected stakeholders about the public involvement process.
4. That employees continue to get regular information about SFM, the Advisory and the SFM Plan itself.

Current and New Activities

Directed at Public and Stakeholder Groups

- Sector-based meetings or focus groups as required (WIWAG)
- Public Open House and Annual Report (WIWAG)
- WIWAG members share information between the Advisory and their respective interest groups (WIWAG)
- Seminar series (WIWAG) (3 in 2002)
- Website to include minutes, agendas, Terms of Reference, SFM Plan, Forest Development Plans, brochure, etc. (Weyerhaeuser staff have managed the site in the past)
- WIWAG Brochure - website promotion, SFM Plan/Certification information, contacts (WIWAG)
- TFL 44 Logging Road and Recreation Guide (Weyerhaeuser)
- Fact sheets - what is certification, DFA, stumpage for dummies (Weyerhaeuser)
- Distribution of WIWAG minutes (agenda etc.) to members, and other interested parties (WIWAG)
- Press releases and articles (AV Times, corporate newsletters) promotion of WIWAG events and certification accomplishments/milestones (Weyerhaeuser and WIWAG)
- Participate in community events, such as National Forest Week and Fall Fair (Weyerhaeuser)
- Promote Weyerhaeuser's public involvement processes, such as Forest Development Plan public review/comment (Weyerhaeuser)
- Utilize a 'feedback form' at all public events (WIWAG)
- Designate a WIWAG spokesperson and respond to media inquiries (WIWAG)
- Customer tours (Weyerhaeuser)
- Invite all First Nations with an interest in the TFL to host a WIWAG meeting and/or make presentation to us in 2003 (WIWAG)

Directed at WIWAG Members

- Distribution of corporate newsletters to WIWAG members (Weyerhaeuser)
- Tours, WIWAG members and press (Weyerhaeuser)

Directed at Employees and Contractors

- EMS training (Weyerhaeuser)
- WIWAG Minutes distributed (Weyerhaeuser)
- Attendance at WIWAG meetings is encouraged (Weyerhaeuser)

Directed at Youth

- Forestry Awareness Program with School District #70 for Grade 5 students (Gently Down the Creek, Tree Planting) (Weyerhaeuser)

Sub-Committee Terms of Reference
February 13, 2003

1. All sub-committees will be open to any member of WIWAG at any time and will have a representative of WY participating.
2. Notices of sub-committee meetings should go out to all members regularly.
3. Sub-Committees should recruit or access any other expertise or participation that will assist them in accomplishing their work effectively.
4. Each committee will identify a chair and a recorder.
5. Minutes of key issues, decisions and action items will be taken at each meeting and forwarded to the facilitator for distribution to WIWAG members at their regular meetings.
6. Sub-Committees make recommendations to the full Advisory group who will have the final approval.

Recreation Sub-Committee

This standing committee has been in place for several years and is mandated to consult with broader recreation interests in order to identify priority recreation access and use issues and concerns, which are then translated into specific goals and indicators for the SFM Plan. Members of this group also advise WY on the updating of the Forest Recreation Guide Map. Members of this committee currently are:

- Harold Carlson
- Rick Avis
- Ed Saunders
- WIT rep to be determined

Social & Economic Sub-Committee

This ad hoc committee was formed for the specific purpose of reviewing and recommending changes to the Social & Economic goals and indicators in the SFM Plan for 2003. This includes all of Criteria 5 and 6 in the plan. Members of this committee currently are:

- Gary Swann - Tawney Lem
- Chris Law - Steve Chambers for WIT
- Ken McRae

Ecological Sub-Committee

This ad hoc committee was formed for the specific purpose of reviewing and recommending changes to identified priority sections of the SFM Plan for 2003. Those sections must include (but are not limited to):

- S6 streams
- FENS (connectivity)
- Old Growth recruitment & protection
- Identification of a sustainable harvest level

Members of this committee currently are:

- Harold Carlson - Leo Tak
- Rick Avis - Steve Chambers for WIT
- Phil Edgell

WIWAG Red Flag Items:

1. Carbon budget is not specifically addressed in the plan due to a lack of understanding about its impacts on age classes, growth rates, blowdowns, fuel consumption and other factors. To what extent should we be contributing to global cycles? The Advisory will arrange a learning session as a way of preparing to address this in the next plan revision.
2. Likewise for the issue of genetic diversity and genetically modified organisms – we need to better understand these factors and their link to sustainable forest management. We know from previous data that corporate practice is for 100% of all seed to be certified or registered, so this factor has been removed as a goal this year.
3. While we have not included anything about managing for insect and disease attacks in the plan there is a recognition that this is important and that the company will continue its current management practices in this area.
4. There is some concern about the need to do more to stimulate NTFP diversification, however the Advisory needs more information about what is currently being done and what the issues are in this field before determining what (if anything) might further support NTFP harvestors.
5. Likewise, the specific issues of local value-added, small processors continue to elude us. While we have identified a goal of working towards a small diameter mill in the area, WIWAG would like to pursue questions related to the fibre needs of small mills and home based manufacturers through a formal survey in the future.
6. The group acknowledges a need to address conflict resolution mechanisms in future plans. There is some lack of clarity with changing regulations & responsibilities for communication and conflict management. The group also struggles with the subjective aspects of measuring this activity in a meaningful way. In particular the 2003/05 plan has eliminated the goal “Resolve land use conflicts” and the related indicator which was “incidence of non-compliance with treaty settlements and Interim Measures Agreements”. WY does not see a role in the resolution of land use conflicts.
7. Old Growth recruitment is a specific concern in the xm1 and 2 variants and several landscape units. As the landscape unit planning process unfolds, and the group gathers more information on recruitment targets, related objectives and indicators will be developed. This is a priority for 2003/2004.
8. Discussions about sustainable harvest levels are ongoing. There is a general dissatisfaction with that portion of the plan that deals with harvest levels. This is partially linked to our examination of zoning this year, and to the need for more information about species and age classes that currently make up the DFA – by landscape unit and biogeoclimatic variant. WIWAG has identified a specific learning and decision-making session dealing with harvest levels for 2003/2004.
9. WIWAG has agreed that they want the SFM Plan to be applied equally on all land within the DFA (private and crown).

10. Indicator X identifies a communications plan. This is an attempt to address the substantial gap that was created by the closure of the Alberni Forestry Visitor Information Centre due to WY budget cuts in 2002. The 2001 SFM Plan included a goal to maintain the Centre. Members of the WIWAG, and other groups and citizens, have expressed their concern about the negative impacts of this cost saving to the company.
11. For the first time in 2003, the indicator set is reaching beyond WIT data. In the social & economic sections of the plan we are asking for employment data from both the processing & harvesting side of local operations. In addition, we are asking contractors to provide us with information about their employment and investment. This year will test our data collection systems and the clarity of our indicators in that regard.
12. Also related to the social and economic issues we have discussed the idea that local spending by the company & contractors is a good thing. The other side of this coin however, is that we do not expect anyone to “shop local” if it means increased costs or poor service. Thus, we are tracking local, non-wage spending by WIT and the major contractors, but we hope in the end that this information will be a tool to begin a dialogue with the local business community around their role in meeting the demand, or the barriers they face in doing so.
13. There is a general concern about the degree to which provincial stumpage revenues are shared with the communities surrounding the resource. This is a provincial and legislative issue that goes beyond the scope of WIWAGs authority or mandate. It continues to be an issue of great concern & interest to members however.
14. There have also been considerable discussions around the re-allocation of tenure that is taking place over the next year. While there remains much uncertainty about the process, the specific allocations and whether or not the licenses will be land based (thus pulling land out of the TFL) or volume based, there is some desire to have WIWAG play a role in linking with future tenure holders, with the Small Business Program (MoF) and others who may have access to logs from the current DFA. Some are keen on keeping these new licenses within the DFA (& therefore certified) while others are more interested in finding ways to keep the fibre in the community. Either way – as this process unfolds, the Advisory should think through what their role might be related to increasing local ownership, local control & local capacity for manufacturing.
15. With regard to the Education value & goal, we have agreed to monitor participation in the FN Cultural Awareness Program this year, but hope in the future we can also find the means of measuring impacts and effectiveness of the program on workers, the organizations, etc.
16. Definitions:
 - Local refers to the Alberni-Clayoquot Regional District with a focus on Port Alberni, Bamfield & Ucluelet as the communities surrounding the DFA.
 - Major Contractors refers to Hayes, Mars, McKay, Canadian Air crane & the new Coulson/FN joint venture
 - Contractors refers to all contractors & in some cases their sub-contractors
 - FTE has been defined at 1,600 hours/year worked for the purpose of gathering employment information

Hishuk-ish-t sawalk

(everything is one)

Towards Sustainable Forest Management



West Island Timberlands
BC Coastal Group
Weyerhaeuser Company

SFM Plan 2002 Data Set

July 2003

Table of Contents

Executive Summary

- Indicator 1:** Percent of timber species by DFA compared to historic baseline
- Indicator 2:** Percent of 0-20 year age class by landscape level
- Indicator 3:** Percent area of old growth within landscape units and biogeoclimatic subzones
- Indicator 4:** Percent of planners oriented
- Indicator 5:** Percent of area harvested using Variable Retention (VR)
- Indicator 6:** Forest Ecosystem Network [FEN]
- Indicator 7:** Stand level retention in all cutblocks as percent of total cutblock area
- Indicator 8:** Species and Programs mentioned in the Forest Development Plan
- Indicator 9:** Number of identified species at-risk in the DFA
- Indicator 10:** Existence of a habitat management program for identified species of special interest (includes a list)
- Indicator 11:** Annual percent of opening areas in permanent access structures
- Indicator 12:** Operationally-caused fire damage by area
- Indicator 13:** Annual area harvested as percent of total productive forest area
- Indicator 14:** Area of operationally-related windthrow
- Indicator 15:** Area of slides originating in harvested areas or roads
- Indicator 16:** Area out of compliance with Free Growing objectives
- Indicator 17:** Area out of compliance with regeneration delay obligations
- Indicator 18:** Total productive forest area in DFA
- Indicator 19:** Equivalent years of Not Sufficiently Reforested (NSR) as 5-year rolling average
- Indicator 20:** Inventory of all known sites requiring preservation or protection within the DFA
- Indicator 21:** Openings harvested in which soil disturbance exceeds level specified on Silviculture Prescription
- Indicator 22:** Water quality measurements for selected streams in areas of concern
- Indicator 23:** Percent of stream length of S4, S5 streams buffered ≥ 15 metres in areas harvest annually
- Indicator 24:** Percent of S6 streams with a > 15 metre buffer in areas harvested annually

Table of Contents

- Indicator 25:** Forest Practices Code reserve zones for wetlands, lakes and streams.
- Indicator 26:** Coastal Watershed Assessment Procedure (CWAP) programs completed for watersheds of identified concern and results are incorporated into FDP
- Indicator 27:** Change in area of water bodies
- Indicator 28:** *Indicator pending on advisory group education and information gathering*
[carbon budget]
- Indicator 29:** Number of complaints annually [Non-timber forest products]
- Indicator 30:** Annual harvest (5 year average) as percent of [Long Term Harvest Level] LTHL]
- Indicator 31:** Percent of protected area perimeter harvested with previous 5 years
- Indicator 32:** Percent of harvesting adjacent to protected areas that is VR
- Indicator 33:** Area of identified recreational areas with the DFA
- Indicator 34:** Percent of identified roads that have been maintained
- Indicator 35:** Number of recreation sites maintained
- Indicator 36:** Number of polygons in which visual condition fail to meet Visual Quality Objectives [VQ0]
- Indicator 37:** Total WIT [West Island Timberlands] wages and salaries
- Indicator 38:** Total paid to contractors
- Indicator 39:** Contract total paid to FN First Nations
- Indicator 40:** Total paid in property taxes by each WY division or operation in DFA area over last five years
- Indicator 41:** Annual harvest level compared to last 5 years
- Indicator 42:** Distribution of WY expenditures locally
- Indicator 43:** Annual harvest compared to local log consumption that is provided by WY
- Indicator 44:** A meeting of value-added stakeholders is held
- Indicator 45:** Stumpage paid
- Indicator 46:** Number of FN contracts signed
- Indicator 47:** Degree of satisfaction with contract development process
- Indicator 48:** Profit/loss statement
- Indicator 49:** Number of [Cultural Heritage] surveys conducted vs. number requested

Table of Contents

- Indicator 50:** Number of First Nations who have requested a Cultural Heritage Resource [CHR] contract vs. the number who have one
- Indicator 51:** First Nations information sharing and referrals programs
- Indicator 52:** Archaeological and Culturally Modified Tree (CMT) sites inventory
- Indicator 53:** Percent of blocks by band where agreement is reached around the management
- Indicator 54:** Number of public comments to WY and percent of those that result in changes to operational plans
- Indicator 55:** Incidence of non-compliance with treaty settlements and Interim Measures Agreements
- Indicator 56:** A joint communications and public consultation plan
- Indicator 57:** [FN] Education and training program

Executive Summary

INTRODUCTION

The West Island Timberlands unit was certified for both ISO 14001 & CSA Z809 standards in November of 2000. The certified area consists of 311,388 hectares of public and private lands surrounding the communities of Port Alberni and Bamfield on the West Coast of Vancouver Island. There are 10 First Nations with territories touching on the DFA as well. The area approximates TFL #44 with the exception of small parcels of leased licenses and private property.

As part of the certification process for CSA the company facilitated the development of an arms length Advisory Group (West Island Woodlands Advisory Group or WIWAG) whose primary role is to provide input into the Sustainable Forest Management Plan. WIWAG continues to be actively involved in reviewing data and revising the plan with a view to ongoing learning and increased effectiveness in the area of sustainable forest management.

The data set, and in particular the summary, is intended to meet several objectives:

- A tool for thinking about relationships between factors, the need for changes in our goals or objectives and the usefulness of the indicators themselves.
- A short, concise way of highlighting key areas of progress towards the goals, the need for improvement and identification of trends over time.
- A means of communicating these issues to the public that is informative and easily understood.

There is a large body of work across North America in the area of public reporting on indicators in the areas of health, community quality of life and the environment. In all of these efforts however are similar challenges:

- There are problems with access to data for small scale or local information gathering. While Weyerhaeuser has committed resources for data collection related to work in the DFA, there are cases where data also needs to come from other sources such as the Small Business Forest Enterprise Program. Coordinating the timing and criteria for data collection from a range of sources is more complex than single source collection. In other situations, particularly around the social and economic values, the best type of data is simply not available.
- Related to the issues of data access and reliability is the notion of scale. On what basis does one think about sustainability? Across the DFA, by Landscape Unit, or by Watershed, etc.? Of the 29 LUs in the DFA many are shared with other tenure holders over whom this plan has no authority.

- Most efforts have focused on hard data, or quantitative data, when in some cases the best measure of progress is qualitative. This year a satisfaction survey of FN contract negotiation processes has proven informative, however this type of data collection is costly, time consuming, and not always as easily shared as a hard number.
- Finally, the process is an iterative one, and if the Advisory Group are to commit to the development of better goals, and better measures of progress on those goals, this means changing indicators for a time at least. The question: “to what extent does this data tell us about progress, or lack of progress towards the goal” sometimes leads to new or slightly revised goals, objectives and indicators. The movement towards sustainability is often slow and not perfect.

The following data represents a summary of some of the key indicators of sustainable forest management from the SFM Plan and the progress, or lack of, over time. The arrows are used to indicate movement toward the objectives/goals. This means that in some cases an actual number has gone up, but the arrow will show down, meaning that the data reflects movement away from the objective. The implications of the data and the plans to improve are represented in the revisions and improvements to the 2003 SFM Plan.

THE ECONOMIC VALUES

- ↑ Harvest levels were close to both the AAC and the LTHL in 2002 and were higher than they have been since 1997. Harvest within the TFL was 1,688,584 cubic meters, and 96% of the AAC compared to 90% in 2000.
- ↑ Wages (\$39.3 million) and contractor payments (\$57.2 million) were up. Contracts with 7 First Nations totaled \$3.6 million. While contractor payments have increased steadily since 1997, wages in 2002 were lower than they had been in 2000, but slightly higher than 1998 (\$31.4 million).
- WY non-wage spending within the Regional District of AC was \$33.9 million in 2002 (includes taxes, donations, supplies & all contractor payments – which include contractor wages as well as overhead & supply costs). This is baseline data.
- ↑ WIT profits were up over past years.
- ↑ Local log consumption was up this year to 1,562,992 m³ logs consumed locally as opposed to 1,523,435 m³ sold logs from local operations. Local company operations were a net importer of logs this year.
- ↑ Local log sales outside of company operations was also up in 2002. 315,975 m³ were sold locally as opposed to 292,275 m³ in 2001. Log sales to local non-company operations have gradually increased each year.

External Events with regards to provincial policy and free trade have had an impact on this trend and 2002 performance is not necessarily an indication of near future trends.

THE ENVIRONMENTAL VALUES

- ↔ Old Growth (250 years plus) as a portion of the total productive forest remained steady at 35%. Thirteen units show inadequate old growth (particularly in the xm1 and xm2 biogeoclimatic variants) and the LUs where recruitment may be required have been identified.
- ↔ Connectivity is addressed through the maintenance of the Forest Ecosystem Network (FEN).
- ↔ Harvesting as a portion of the productive forest increased to .89% from .74% in 2000, this remains under the stated objective of less than 1%.
- ↔ Area of operationally related windthrow (as a measure of harvest disturbance) was at 3.7% of the area, an increase from previous years, but still below the maximum 5% objective.
- ↓ Slides in operational areas were up this year over the last 2 years.
- ↑ Variable retention use was up this year to 78% of area harvested from 67% last year however it is still not at the objective levels of 80% by area. VR use adjacent to protected areas was at 100%, also up from 80% last year.
- ↓ Harvesting of protected area perimeters within previous five years was higher this year at 11.64%, up from 10.2% in 2001. The protection of perimeters has declined and we are further away from the objective of less than 5% of protected perimeters being harvested in a given five year period.
- ↓ Stand level retention was at 23% in 2002. While exceeding the objective range of no less than 15%, this is a decrease in retention from 2000 and 2001 (38%).
- ↑ Free to grow non-compliance has been reduced to 60 hectares or 2 units, from 288 hectares in 2001. The improvement brings this within the objective of less than 150 hectares.
- Non-compliance with regeneration delay objectives occurred over 2 hectares of 1 unit this year. There were issues related to stock availability and the area will be planted in September 2003. This was baseline data for 2002.
- Progress was also made in 2002 with regard to: baseline data gathering for stream buffers on S4, S5 and S6 streams and initiation of a Sensitive Ecosystem Inventory in the DFA.

THE SOCIAL VALUES

- ↑ Units outside the Visual Quality Objective are down to 22,199 hectares in 2002 from 25,124 hectares in 2000. The objective targets ongoing efforts to reduce this.
- ↑ Support for recreation has increased as a result of the work of this sector of the Advisory in developing and updating a road inventory. Ninety seven percent of road access was maintained last year.
- ↑ Education of both workers and the public improved this year with the Advisory organizing three public seminars and the completion and delivery of both the FN Cultural Awareness Program (517 workers) and the Red/Blue Listed Species orientation for planners (23 planners). A joint Advisory/WY communications plan has been developed.
- FN indicators were all baseline for 2002. Of the 10 affected First Nations, all have protocol agreements with WY and 6 of those are formal. All CH surveys requested were conducted and 83% of First Nations that requested a CHR contract have one in place. A CMT survey and special features survey have been completed. A survey of Band satisfaction with the contract development process indicated overall satisfaction with the process but specific concerns for 4 out of 6 First Nations who negotiated contracts around timing and the knowledge/authority of those sent to negotiate for WY.
- Responsiveness to public input has been benchmarked this year with WY staff making changes in 13 out of 13 comments on either an SP or FDP amendment.

CONCLUSION

Is the DFA more sustainable? Based on the 2002 data and the three years of collective experience with sustainable forest management planning, there is progress. Some WIWAG members would say that it is not enough, or that it is not in the right place.

The information presented here certainly speaks to advances made in a number of areas – both socially and environmentally. The members of WIWAG continue to wrestle with these values and their significance to sustainable forest management. Both WIWAG and Weyerhaeuser welcome your questions and comments.

Indicator 1: Percent of timber species by DFA compared to historic baseline

Discussion: Diversity of tree species may be an indicator of broader biodiversity attributes

Objective: Maintain historic baseline for all commercial tree species within $\pm 15\%$ [of the total].

Acceptable Variance: Zero

Forecast: 10 %

Previous (2001) SFM Plan: Reported previously as Indicator # 2

Performance:

Species	2002 Inventory (includes Park Trade and FDP updates)				1955 Base Line		Variance %
	Mature (1) (hectares)	Second Growth (hectares)	Productive forest area (hectares)	% of PF	MMBF (2)	%	
Fir	10,974	64,843	75,817	28.8	3,292,242	25	15.2
Pine	95	710	805	0.3	0.3129,669	1	(70)
Cedar	18,214	18,600	36,814	14.0	2,1641,818	20	(30)
Cypress	4,815	2,082	6,897	2.6	75,097	1	160
Spruce	217	670	887	0.3	155,899	1	(70)
Hemlock	39,807	58,757	98,564	37.5	4,938,837	37	1.4
Balsam	17,891	12,324	30,215	11.5	2,131,869	16	(28.1)
Alder	39	4,529	4,568	1.7			1.7
Maple	0	420	420	0.2			0.2
no major species indicated (nulls)			5,037	1.9			1.9
area where % species breakdown does not account for 100% of stand			3,060	1.2			1.2
	92,052	162,935	263,084	100.0	13,365,431	100%	0.00

(1) Mature age is 250+ for all species, except for pine, alder and maple where a mature age of 140+ years was used.

(2) MMBF, 1955 Inventory reported in board feet

Indicator 1: Percent of timber species by DFA compared to historic baseline **cont.**

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: Pacific GIS Consulting

Source: All data is from GIS in the form of ArcInfo coverages, with the exception of logging updates which came from Genus.

Notes: No stand level re-inventory took place in 2002. Species distribution, at stand level, was not updated in the inventory in 2002. Changes that resulted in differences between 2001 and 2002 dataset/reporting were;

- the DFA boundary changed (smaller), species distribution only
- roaded area (the 13m buffer on roads) is now excluded from the productive forest land base
- areas logged in 2002 were given a stand age of zero (0). In other words, logged areas moved from older age classes to an age class of zero in the data set.

Forest Inventories have been maintained for more than 40 years for the DFA. The inventory is maintained and updated by the Inventory Analyst, Nanaimo Woodlands.

The inventory estimate of mature volumes in 1955 (when TFLs 20 and 21, the predecessors to TFL 44, were combined) is the baseline for the indicator.

Mature (old growth, 250+) stands are 250 years plus for all species, except pine, alder and maple where 140 years plus was used. The Inventory includes a description of primary, secondary, tertiary, and quaternary species and for a portion of these records there is a percent of basal area listed for each species. Species distribution was calculated two ways:

- If a value exists for species percent then the species area equals the total stand area times the species percent from the inventory.
- If no value exists for species percent then the following species distributions were used: where MS, SS, and TS exist 50%, 30%, and 20% were used; where MS and SS exist 60%, and 40% were used.

Calculations for when the species breakdown did not add up to 100% of the stand area, were as follows:

- The missing % for each record was determined and multiplied by the stand area.
- Deciduous stands, and areas with no species listed (nulls), were added to the matrix to allow for reconciliation with total DFA Gross Productive Forest (GPF).

Indicator 2: Percent of 0-20 year age class by landscape level

Discussion: This indicator provides a measure of habitat diversity by Landscape Unit [LU]. Different species are adapted to different forest habitats as represented by age class.

Parking Lot Item: From Appendix 2, 2002 SFM Plan

We [WIWAG] have elected to focus on old growth age classes as measures of goal #1 – maintaining a representative ecosystem across the landscape – however we have an interest in looking at all age classes within landscape units and biogeoclimatic sub zones in the future.

Objective: Less than 30% of any given landscape unit [LU].

Acceptable Variance: ±10% [of the total number of units, expressed in area]

Forecast: ±30%

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicators # 20 and 27

Performance:

Year	Productive forest (hectares)	0-20 age class, total area (hectares)	LU outside objective total area (hectares)	LU outside objective (number)	LU outside objective as % of productive (%)
2002	263,084	53,114	3,986	4 of 27	1.7
2001	272,059	52,483	4,467	4 of 27	1.6
2000	268,562	51,377	4,474		

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: Pacific GIS Consulting

Source: All data is from GIS in the form of ArcInfo coverages, with the exception of logging updates which came from Genus.

Notes: Small areas (slivers) exist within DFA which have no landscape unit designation, this amounts to 229 ha of the DFA productive forest.

No stand level reinventory took place in 2002. Species distribution, at stand level, was not updated in the inventory in 2002. Changes that resulted in differences between 2001 and 2002 dataset/reporting were;

- the DFA boundary changed (smaller), species distribution only
- roaded area (the 13m buffer on roads) is now excluded from the productive forest land base
- areas logged in 2002 were given a stand age of zero (0). In other words, logged areas moved from older age classes to an age class of zero in the data set.

**Indicator 2: Percent of 0-20 year age class by landscape level cont.
Performance cont.:**

Distribution of 0-20 Age Class by Landscape Unit

Landscape Unit (LU)	LU gross productive (hectare)	DFA productive area (hectare)	2001 (hectare)	2001 (%)	2002 (hectare)	2002 (%)	Variance from Objective (%)
Ash	18,982	21,846	3,580	16	3,806	17	0
Barkley Sound Is.	3,585	160	0	0	0	0	0
Cameron	7,472	7,167	1,315	18	1,317	18	0
Caycuse	18,251	5,408	1,829	33	1,761	33	10.0
China	8,502	8,078	1,138	14	1,172	15	0
Corrigan	24,021	22,609	1,835	8	2,215	10	0
Cous	15,355	13,579	3,440	24	3,332	24	0
Cowichan	7,995	893	143	15	179	20	0
Effingham	15,538	2,025	631	30	595	29	0
Great Central	22,924	20,582	3,637	17	3,620	18	0
Henderson	23,537	15,330	4,348	28	4,309	28	0
Kennedy Flats		87	1	0	1	0	0
Klanawa	24,622	23,333	6,489	27	6,496	28	0
Little Qualicum	2,259	460	172	36	162	35	16.7
Maggie	10,903	8,929	1,643	18	1,551	17	0
Nahmint	15,563	14,969	3,155	21	3,061	20	0
Nanaimo	4,542	9	0	0	0	0	0
Nitinat	40,503	26,256	6,185	23	6,089	23	0
Puntledge		502	36	7	33	7	0
Qualicum		764	0	0	0	0	0
Rosewall	9,567	2	0	0	0	0	0
Sarita	35,550	33,425	7,719	22	7,533	23	0
Somass	9,150	7,373	1,062	14	1,232	17	0
Sproat Lake	24,469	23,720	2,209	9	2,508	11	0
Toquart	11,076	395	84	20	79	20	0
Upper Kennedy		12	5	34	4	33	10.0
Walbran	16,675	4,752	1,830	37	2,059	43	43.3
total		263,084	52,483	19	53,114	20	0

Small areas (slivers) exist with the DFA which have no biogeoclimatic or landscape unit designation. This amounts to 321 ha. for BEC and 228 ha. for landscape.

Indicator 3: Percent area of old growth within landscape units and biogeoclimatic subzones

Discussion:

Parking Lot Item: From Appendix 2, 2002 SFM Plan

We [WIWAG] have elected to focus on old growth age classes as measures of goal #1 – maintaining a representative ecosystem across the landscape – however we have an interest in looking at all age classes within landscape units and biogeoclimatic sub zones in the future.

Objective: Do not increase the number of units where inadequate old growth exists

Acceptable Variance: Two units increase [2002 data is baseline, variance will apply to future reports]

Forecast: Zero increase

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicators # 1 and 20

Performance:

Year	Productive Area (hectare)	Old growth (hectare)	Old growth (%)	Inadequate Old growth (units)
2002	262,765	92,584	35%	13
2001	272,059	95,804	35	
2000	268,562	93,861	35	
1999	268,562	87,668	33	

BEC Unit	Productive forest area (hectares)	Old Growth (hectares)	Old Growth (%)
CWH mm1	20,030	6,135	31
CWH MM2	25,433	10,420	41
CWH vh1	7,165	3,128	44
CWH vm1	117,112	42,217	36
CWH vm2	26,658	17,690	66
CWH xm1	4,367	278	6
CWH xm2	52,267	5,607	11
MH mm1	9,689	7,068	73
AT p (1)	43	43	n/a
total	262,765	92,584	35%

(1) Alpine Tundra, usually non-productive

Indicator 3: Percent area of **old growth** within landscape units and biogeoclimatic subzones, cont.

Landscape Unit, Biogeoclimatic Unit	BEO / % target	Total Area (ha)	Total Old (ha)	Percent of Unit
Ash, AT p		1	1	100
Ash, CWH mm 1	Inter. > 9	3792	817	22
Ash, CWH mm 2	Inter. > 9	4867	2145	44
Ash, CWH xm 2	Inter. > 9	11430	368	3
Ash, MH mm 1	Inter. > 19	1756	1292	74
Barkley Sound Islands, CWH vh 1	Low, > 4.3	132	132	100
Cameron, AT p		4	4	100
Cameron, CWH mm 2	Inter. > 9	3879	876	23
Cameron, CWH xm 2	Inter. > 9	1736	387	22
Cameron, MH mm 1	Inter. > 19	1547	780	50
Caycuse, CWH mm 1	Inter. > 9	206	0	0
Caycuse, CWH mm 2	Inter. > 9	158	0	0
Caycuse, CWH vm 1	Inter. > 13	4141	1908	46
Caycuse, CWH vm 2	Inter. > 13	867	545	63
Caycuse, MH mm 1	Inter. > 19	36	36	100
China, AT p		12	12	100
China, CWH mm 2	Inter. > 9	2339	713	30
China, CWH xm 2	Inter. > 9	4634	614	13
China, MH mm 1	Inter. > 19	1092	529	48
Corrigan, AT p		20	20	100
Corrigan, CWH mm 2	Inter. > 9	3682	1105	30
Corrigan, CWH vm 1	Inter. > 13	9445	1413	15
Corrigan, CWH vm 2	Inter. > 13	1984	1406	71
Corrigan, CWH xm 2	Inter. > 9	6667	878	13
Corrigan, MH mm 1	Inter. > 19	771	564	73
Cous, CWH mm 1	Low >3	5730	923	16
Cous, CWH mm 2	Low >3	1481	410	28
Cous, CWH vm 2	Low >4.3	2539	1256	49
Cous, CWH xm 2	Low >3	3709	432	12
Cous, MH mm 1	Low > 6.3	287	236	82
Cowichan, CWH mm 1	Low >3	16	0	0
Cowichan, CWH vm 2	Low >4.3	251	117	47
Cowichan, CWH xm 2	Low >3	611	48	8
Cowichan, MH mm 1	Low > 6.3	14	8	58
Effingham, CWH vm 1	Inter. > 13	1585	776	49
Effingham, CWH vm 2	Inter. > 13	438	248	57
Englishman, MH mm 1		0	0	100
Gordon, CWH vm 1	Inter. > 13	3	3	100
Gordon, CWH vm 2	Inter. > 13	7	7	100
Gordon, MH mm 1	Inter. > 19	2	2	100

Indicator 3: Percent area of old growth within landscape units and biogeoclimatic subzones, cont.

Landscape Unit, Biogeoclimatic Unit	BEO / % target	Total Area (ha)	Total Old (ha)	Percent of Unit
Great Central, AT p		2	2	100
Great Central, CWH mm 1	Inter. > 9	3218	1566	49
Great Central, CWH mm 2	Inter. > 9	5015	3450	69
Great Central, CWH xm 1	Inter. > 9	1219	145	12
Great Central, CWH xm 2	Inter. > 9	10104	1457	14
Great Central, MH mm 1	Inter. > 19	1025	991	97
Henderson, CWH vm 1	Low > 4.3	12482	5946	48
Henderson, CWH vm 2	Low > 4.3	2691	1905	71
Henderson, MH mm 1	Low > 6.3	99	99	100
Kennedy Flats CWH vh1		48	0	0
Kennedy Flats CWH vm 1		30	1	4
Kennedy Flats CWH vm 2		9	0	0
Klanawa, CWH vh 1	Inter. > 13	98	92	94
Klanawa, CWH vm 1	Inter. > 13	21819	10509	48
Klanawa, CWH vm 2	Inter. > 13	1416	1058	75
Little Qualicum, CWH mm 2	Inter. > 9	73	67	92
Little Qualicum, CWH xm 2	Inter. > 9	2	2	100
Little Qualicum, MH mm 1	Inter. > 19	385	185	48
Maggie, CWH vh 1	Low > 4.3	3109	1634	53
Maggie, CWH vm 1	Low > 4.3	5638	1280	23
Maggie, CWH vm 2	Low > 4.3	154	11	7
Nahmint, AT p		0	0	100
Nahmint, CWH mm 1	High > 13	8	7	81
Nahmint, CWH vm 1	High > 19	9576	5085	53
Nahmint, CWH vm 2	High > 19	4566	3810	83
Nahmint, CWH xm 2	High > 13	46	4	9
Nahmint, MH mm 1	High > 28	771	757	98
Nanaimo, MH mm 1	n/a	9	9	100
Nitinat, AT p	n/a	3	3	100%
Nitinat, CWH mm 1	Inter. > 9	215	8	4%
Nitinat, CWH mm 2	Inter. > 9	1524	671	44%
Nitinat, CWH vh 1	Inter. > 13	491	365	74%
Nitinat, CWH vm 1	Inter. > 13	20259	5310	26%
Nitinat, CWH vm 2	Inter. > 13	3228	1760	55%
Nitinat, CWH xm 2	Inter. > 9	0	0	0%
Nitinat, MH mm 1	Inter. > 19	536	442	82%

Indicator 3: Percent area of old growth within landscape units and biogeoclimatic subzones, cont.

Landscape Unit, Biogeoclimatic Unit	BEO / % target	Total Area (ha)	Total Old (ha)	Percent of Unit
Puntledge, CWH mm 2		42	17	39%
Puntledge, CWH xm 2		459	71	15%
Qualicum, CWH xm 2		764	162	21%
Rosewall, MH mm 1	Inter. > 9	2	2	100%
Sarita, CWH vh 1	Low > 4.3	3097	804	26%
Sarita, CWH vm 1	Low > 4.3	28035	8134	29%
Sarita, CWH vm 2	Low > 4.3	2267	1251	55%
Somass, CWH mm 2	Low > 3	264	46	17%
Somass, CWH xm 1	Low > 3	625	1	0%
Somass, CWH xm 2	Low > 3	6404	486	8%
Somass, MH mm 1	Low > 6.3	74	25	34%
Sproat Lake, AT p	n/a	0	0	100%
Sproat Lake, CWH mm 1	Inter. > 9	6839	2809	41%
Sproat Lake, CWH mm 2	Inter. > 9	2109	922	44%
Sproat Lake, CWH vm 1	Inter. > 13	446	267	60%
Sproat Lake, CWH vm 2	Inter. > 13	4911	3420	70%
Sproat Lake, CWH xm 1	Inter. > 9	2523	131	5%
Sproat Lake, CWH xm 2	Inter. > 9	5686	696	12%
Sproat Lake, MH mm 1	Inter. > 19	1207	1035	86%
Toquart, CWH vh 1	Inter. > 13	130	71	54%
Toquart, CWH vm 1	Inter. > 13	162	21	13%
Toquart, CWH vm 2	Inter. > 13	102	4	4%
Upper Kennedy, CWH mm 1		5	5	100%
Upper Kennedy, CWH vm 1		0	0	100%
Upper Kennedy, CWH vm 2		7	3	38%
Walbran, CWH vm 1	Inter. > 13	3456	1537	44%
Walbran, CWH vm 2	Inter. > 13	1220	890	73%
Walbran, MH mm 1	Inter. > 19	76	75	98%

Indicator 3: Percent area of **old growth** within landscape units and biogeoclimatic subzones, cont.

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: Pacific GIS Consulting

Source: All data is from GIS in the form of ArcInfo coverages, with the exception of logging updates which came from Genus.

Notes: No stand level re-inventory took place in 2002. Species distribution, at stand level, was not updated in the inventory in 2002. Changes that resulted in differences between 2001 and 2002 dataset/reporting were;

- the DFA boundary changed (smaller), species distribution only
- roaded area (the 13m buffer on roads) is now excluded from the productive forest land base
- areas logged in 2002 were given a stand age of zero (0). In other words, logged areas moved from older age classes to an age class of zero in the data set.

Old growth (mature, 250+, old seral) is defined by the MoF in the Biodiversity Guidebook as forests 250 years of age and older. Forest ages are determined from the forest inventory. For productive second-growth forest areas, age is determined by considering the difference between the current (or reference) year and the establishment year. For mature stands (established prior to 1873 but younger than 250 years), age is determined by considering the current year, the year of cruise and the age class assigned at the time of cruise.

Old-growth targets (percent) are from the MoF Regional Landscape Unit Database (v2.01). Areas with a Low biodiversity emphasis option (BEO), are subject to an initial drawdown of the old-seral requirements to one-third of the target as allowed in the base case.

Projections of areas of old growth by landscape unit will be provided in future strategic timber supply analyses.

Small areas (slivers) exist with the DFA which have no biogeoclimatic or landscape unit designation. This amounts to 321 ha. for BEC and 228 ha. for landscape.

Caycuse, Walbran and Nitinat LUs are shared with TFL 46. Others (within TFL 44) with TSA land include; Ash, China, Corrigan, Effingham, Gt. Central, Henderson, Little Qualicum, Maggie, Nahmint, Rosewall, Sarita, Somass, Sproat and Toquart.

Indicator 4: Percent of planners oriented**Discussion:**

Objective: All planners complete red/blue listed species awareness and location orientation

Acceptable Variance: -50%

Forecast: All planners oriented

Previous (2001) SFM Plan: This is a new indicator

Performance:

Year	Planners (number)	Planners oriented (number)	Planners oriented (percent)
2002	45	23	51%
2001		0	0%

Data Protocol:

Responsibility: Planning Engineers

Reporting:

Source:

Notes:

Indicator 5: Percent of area harvested using Variable Retention (VR)

Discussion:

Objective: 80% VR by area

Acceptable Variance: -15%

Forecast: 90 %

Previous (2001) SFM Plan: Reported previously as Indicator # 7

Performance:

Year	Operation	Variable Retention (hectares)	Area harvested (hectares)	Variable Retention (percent)
2002	Total	1503	1920	78%
	Franklin (1)	1003	1343	75%
	Sproat	500	577	87%
	SBFEP	no data		
2001		993	1483	67%
2000		1157	1780	65%
1999		534	1788	30%

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Action Plan: Increase VR

Data Protocol:

Responsibility: Planning Engineers

Reporting: Administrative Coordinator - Franklin, Administration Assistant - Sproat

CC: TM Pearson & Co

Source: Variable Retention Tracking Spreadsheet

Notes: Small Business or roads not included. VR hectares are calculated by adding up the total hectares logged (within the year) of each block considered to be a Variable Retention block. The retention system is defined under the Forest Practices Code as “a silvicultural system that is designed to (a) retain individual trees or groups of trees to maintain structural diversity over the area of the cutblock for at least one rotation, and (b) leave more than half the total area of the cutblock within one tree height from the base of a tree or group of trees, whether or not the tree or group of trees is inside the cutblock.”

Indicator 6: Forest Ecosystem Network (FEN)**Discussion:****Objective:** Maintain the Forest Ecosystem Network**Acceptable Variance:** Zero**Forecast:** Connectivity is maintained through some form of scientifically defensible strategy**Previous (2001) SFM Plan:** This is a new indicator**Performance:**

Year	Connectivity (y/n)
2002	yes

Data Protocol:**Responsibility:** Forest Development Planner**Reporting:** EMS / Planning Forester**Source:****Notes:** Data for this indicator does not include the Park Trade or other minor private land holdings.

Indicator 7: Stand level retention in all cutblocks as percent of total cutblock area

Discussion:

Objective: \geq 15% in 2002 (focusing on riparian areas, structure, wind firmness, distribution and key ecological values)

Acceptable Variance: 10% for a lower limit

Forecast: 30%

Previous (2001) SFM Plan: Reported previously as Indicator # 6

Performance:

Year	Operation	(long term) Stand Retention (hectares)	Total Area under Prescription (TAUP) (hectares)	(long term) Stand retention as % of TAUP (percent)
2002	Total	906	3975	23%
	Franklin (1)	593	2707	22%
	Sproat	313	1268	25%
	SBFEP	no data		
2001		561	1467	38%
2000		474	1749	27%
1999		438	2507	18%

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Data Protocol:

Responsibility: Planning Engineers

Reporting: Administrative Coordinator - Franklin, Administration Assistant - Sproat

CC: TM Pearson & Co

Source: Variable Retention Tracking Spreadsheet

Notes: Data for this indicator does not include the Park Trade, other minor private land holdings, Small Business, or roads.

Stand level retention consists of all timber leave components designated to a block, such as timber leave areas, riparian areas and wildlife tree patches. This total retention may consist of more than 10% of the total area under prescription. However, a block may not be considered VR due to its slash areas not being under edge influence (more than 2 tree lengths from a timber edge).

This indicator reflects the amount of retention areas which are linked to the SP. Target VR is 15%.

Indicator 8: Species and programs mentioned in the Forest Development Plan [FDP]

Discussion:

Objective: Increase the number of management programs by six when the FDPs are revised

Acceptable Variance: - 2

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 8

Performance:

Year	Management Programs	Increase
2002	6 (1)	n/a (2)
2001	6	2
2000	4	n/a

(1) Identified Species of Special interest that are currently managed for include;

- Red-legged Frog
- Great Blue Heron
- Northern (Queen Charlotte) Goshawk
- Marbled Murrelet
- Vancouver Island Marmot
- Roosevelt Elk

(2) There were no new FDP's for 2002. Amendments were made, but are not generally designed to introduce new management strategies.

Data Protocol:

Responsibility: Forest Development Planner

Reporting:

Source:

Notes: The Conservation Data Centre identifies species at risk. The Forest Development Planner reviews the list annually and ensures that the Interim Measures to Protect Identified Wildlife are being incorporated into the Forest Development Plans. Where Wildlife Habitat Areas have been defined and measures determined, the FDP Team leader will ensure that the information is included in the MWP and FDP's.

Data for this indicator does not include the Park Trade or other minor private land holdings.

Indicator 9: Number of identified species at-risk in the DFA

Discussion: At time of this report Weyerhaeuser is not aware of any species added to the list as a result of our management activities.

Objective: Zero increase in at-risk status attributable to management activities

Acceptable Variance: Zero increase

Forecast: Zero increase

Previous (2001) SFM Plan: Reported previously as Indicator # 9

Performance:

Year	Increase
2002	0 (1)
2001	0
2000	0
1999	0

(1) The FDP for Alberni East and Alberni West were revised in 2002, however amendments do not change management strategies.

Data Protocol:

Responsibility: Forest Development Planner

Reporting:

Source: British Columbia Conservation Data Centre (CDC): Vascular and Vertebrates Tracking Lists, South Island Forest District, April 2001. The lists, which are updated in April and available by June, can be accessed at <http://srmwww.gov.bc.ca/cdc/>.

Indicator 9: Number of identified species at-risk in the DFA cont.

Data Protocol:

Notes:

Currently Managed for		
Red-legged Frog		Marbled Murrelet
Great Blue Heron		Vancouver Island Marmot
Northern (Queen Charlotte) Goshawk		Roosevelt Elk
no active management plan		
Leatherback		Tufted Puffin
Painted Turtle		Barn Owl
Sharptail Snake		Western Screech-Owl
Double-Crested Cormorant		Northern Pygmy-Owl
Brandt's Cormorant		Short-Eared Owl
American Bittern		Purple Martin
Green Heron		Vesper Sparrow
Canada Goose		Pine Grosbeak
Surf Scooter		Vancouver Island Water Shrew
Peregrine Falcon (anatum)		Keen's Long-Eared Myotis
Peregrine Falcon (pealei)		Townsend's Big-Eared Bat
Cassin's Auklet		Ermine
Common Murre		Wolverine
Cutthroat Trout		Western Bluebird (Georgia Dep.)
White-Tailed Ptarmigan		Western Meadowlark (Georgia Dep.)
Cassin's Auklet		Killer Whale (Resident)
Band-tailed Pigeon		Killer Whale (Offshore)
Lewis's Woodpecker		Killer Whale (Transient)
Lewis's Woodpecker (Georgia Depression)		Grey Whale
Sea Otter		Humpback Whale
		Northern Sea Lion
not in DFA		
Lake Lamprey		Enos Lake Limnetic Stickleback
Yellow-billed Cuckoo		Enos Lake Benthic Stickleback

Indicator 10: Existence of a habitat management program for identified species of special interest (includes a list)

Discussion:

Objective: Support habitat programs in cooperation with regulatory agencies and others

Acceptable Variance: Zero increase

Forecast: N/A

Previous (2001) SFM Plan: Reported previously as Indicator # 10

Performance:

Identified Species of Special interest that are currently managed for in the DFA include:

- Columbia Black-tailed Deer
- Black Bear
- Bald Eagle

Year	Currently Managed (number)
2002	3 (1)
2001	3
2000	4
1999	4

(1) No FDP's were revised.

Data Protocol:

Responsibility: Forest Development Planner

Reporting:

Source: Species of Special Interest are those species identified by the MoF, MWLAP, or the public as requiring special consideration in operational plans. These species of special interest are not considered at risk. The Forest Development Planner annually reviews the correspondence from the agencies, and ensures that measures to protect these species are incorporated into the Forest Development Plans.

Notes:

Indicator 11: Annual percent of opening areas in permanent access structures

Discussion:

Objective: $\leq 7\%$ of opening areas in permanent access structures

Acceptable Variance: $\pm 1\%$

Forecast: 5%

Previous (2001) SFM Plan: Reported previously as Indicator # 15

Performance:

Year	Operation	TAUP (gross area) (hectares)	Measured access (hectares)	Measured Access as percent of gross area
2002	total	3328.7	195.0	5.9%
	WIT (1)	3036.1	181.0	6.0
	SBFEP	292.6	14.0	4.9
2001		1770	106	6.0
2000		2501	155	6.2
1999		1626	109	6.7
1998		1376	91	6.6
1997		1702	90	6.6
1996		1770	101	5.7

(1) Contract operations located at Great Central and Uchucklesit included. Includes two Park Trade blocks.

Indicator 11: Annual percent of opening areas in permanent access structures
cont.

Data Protocol:

Responsibility: Planning Engineers

Reporting: TM Pearson & Co

Compilation:

Source: Measured Access - Genus Stocking Status (NP UNN), TAUP – Genus
Silviculture Prescription Table

Notes: If measured access was unavailable then SP Permanent access was used. A
harvest of start of 2002 was used, and includes blocks where harvest complete is still
planned.

Data includes SBFEP and R/W, does not include salvage operations, Sproat Park
Trade, or other minor private land holdings.

This objective (indicator) reflects standards/regulations found in the Forest Practices
Code of BC.

Indicator 12: Operationally-caused fire damage by area

Objective: Zero hectares

Acceptable Variance: +10 hectares

Forecast: 5 hectares

Previous (2001) SFM Plan: Reported previously as Indicator # 16

Performance:

Year	Operation	Fires	Area (ha.)	Cause	Timber Class
2002	Total	3	5.1		
	Franklin	1	0.1	no data	no data
	Sproat	2	5.0 fringe	escaped slash fire escaped slash fire	regen. old growth
	SBFEP	no data			
2001		0			
2000		0			
1999		3	9.8	escaped slash fire	NSR
1998		0			

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

A post fire analysis with the Fire Warden, Silviculture Forester and General Foreman completed in October, identified a number of actions designed to prevent escaped slash fires. They are as follows; better assessment of conditions before lighting of piles, and more aggressive mop-up.

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: Silviculture Forester (Sproat), Environmental Coordinator (Franklin)

Source:

Notes:

Indicator 13: Annual area harvested as percent of total productive forest area

Objective: < 1%

Acceptable Variance: ± 0.5%

Forecast: 1%

Previous (2001) SFM Plan: Reported previously as Indicator # 17

Performance:

Year	Operation	Area Harvested (hectares)	Productive Forest (hectares)	Area Harvested as % of productive
2002	total	2418.5	271,443	0.89%
	Franklin (1)	1426.4		
	Sproat	567.3		
	SBFEP	424.8		
2001		1,530	272,059	0.56
2000		1,981	268,562	0.74
1999		1,831	268,562,	0.68
1998		1,304	268,562	0.49
1997		1,519	268,562	0.57
1996		1,724	268,562	0.64

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Indicator 13: Annual area harvested as percent of total productive forest area cont.

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: TM Pearson & Co (area harvested), Pacific GIS Consulting (productive forest)

Source: Genus (area harvested). All data is from GIS in the form of ArcInfo coverages.

Notes: Data includes SBFEP and R/W, does not include salvage operations, Sproat Park Trade, or other minor private land holdings.

The total productive area is determined from the current (1997) forest inventory. The forest inventory is updated periodically (usually every one or two years) for areas harvested, and stand assessments. The Inventory Analyst, Nanaimo Woodlands, produces reports on the current inventory. No changes were made to the inventory in 2002.

There were two changes which resulted in less productive forest area being reported for 2002;

- (1) The DFA boundary changed.
- (2) Road area is now excluded from the productive forest land base. The road area is calculated by applying a buffer of 6.5 metres on each side of the road centerline. This buffer was applied to roads with the status of maintained, non-maintained, permanent, semi-permanent and temporary.

Indicator 14: Area of operationally-related windthrow

Discussion: This indicator measures the relative area impact of disturbance of harvesting activities on an annual basis.

Objective: < 5% harvest area

Acceptable Variance: + 5%

Forecast: 2 %

Previous (2001) SFM Plan: Reported previously as Indicator # 18

Performance:

Year	Operation	Area Harvested (hectares)	Windfall (hectares)	Harvested Windfall (hectares)	Harvested Windfall as % of Windfall	Windfall as % of Area Harvested
2002	Total	2418.5	79.2	43.6	55%	3.7%
	Franklin (1)	1426.4	74.0	43.5	59%	5.2%
	Sproat	567.3	5.2	0.1	2%	0.9%
	SBFEP	424.8				
2001		1,530	10	61	610	0.6
2000		1,981	46 (1)	75	175	2.3
1999		1,831	no data			

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Indicator 14: Area of operationally-related windthrow cont.

Data Protocol:

Responsibility: Forest Development Planner

Reporting:

Source:

Notes: Data includes SBFEP and R/W, does not include salvage operations, Sproat Park Trade, or other minor private land holdings.

The potential for operational windthrow is assessed at the engineering and Silviculture Prescription phases. Openings are developed with the intent of little to no windthrow in and along the block boundary. In some cases, windthrow specialists are used to assess openings and help design wind firm openings. Information of significant windthrow is passed on to the FDP Team and the Salvage team to develop a recovery plan. Harvested windthrow areas will be incorporated into adjacent SP's where reforestation prescriptions will be developed.

In order to identify windthrow or disease outbreaks, WIT will utilize various sources of information. In 2001, new aerial photos of the DFA were acquired. Areas of windthrow not previously recorded were identified on these photos.

In addition to the photos, areas of windthrow or dying trees are reported to the Forest Management Group from a variety of sources:

- Salvagers reporting dead and down trees in hopes of salvage opportunities,
- helicopter tours and reconnaissance flights

all of which add to the opportunities for identification.

Areas identified as operationally induced windthrow, adjacent to areas harvested pre 1995, are not included in this data set.

The area of windthrow harvested in a year, that is adjacent to existing harvest areas less than 5 years old is divided by the total area harvested in that year.

Reconnaissance in April 2002, identified approximately 10 ha. of additional operationally induced windthrow adjacent to areas harvest in the DFA within the past 5 years. This total area does not include the previously reported area or windthrow known to have occurred in 2002.

There were no windfall areas in the Contract (Estevan) or Sproat Areas.

Indicator 15: Area of slides originating in harvested areas or roads

Discussion:

Objective: Zero (post 1995 development)

Acceptable Variance: 5 hectares

Forecast: 2 hectares

Previous (2001) SFM Plan: Reported previously as Indicator # 19

Performance:

Year	Operation	Slides (number / hectares)
2002	Total	
	WIT	23 / 6.1
	SBFEP	
2001		3.8
2000		0.6
1999		5.2
1998		1.0

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Action Plan: Review each slide for preventative actions

Data Protocol:

Responsibility: Planning Engineers

Reporting:

Source:

Notes: See Environmental Occurrence reports are completed for all slides that have occurred and are kept on file in the Planning Department. Copies are sent to Ministry of Forests, Ministry of Environment and the Department of Fisheries & Oceans.

When two or more slides are reported in a drainage area, a recce flight will be carried out as soon as possible. At a minimum, a recce flight of the DFA will be done after the winter months.

Slides of significant size in harvested areas or initiated on roads will have a terrain assessment completed by a professional and any remedial action will be scheduled.

Indicator 16: Area out of compliance with Free Growing objectives

Discussion: This indicator measures the success at achieving free to grow targets defined in the Silviculture Prescriptions. These targets are derived from the MoF “ Establishment to free Growing Guidebook for the Vancouver Forest Region” The Silviculture Prescription provides indications of regeneration success, utilization of the productive area and maintaining forest ecosystems. The objective reflects requirements of the Forest Practices Code of BC.

Objective: Identify and reduce the non-compliance area to below 150 hectares [per year]

Acceptable Variance: 150 hectares

Forecast: Zero

Previous (2001) SFM Plan: Reported previously as Indicator # 29

Performance:

Operation	Standards Units due 2002 (hectares / number)	Standards Units met 2002 (hectare / number)	Standard Units not met 2002 (hectare / units)
total	1922 / 75	1862 / 73	60 / 2 (1)
Franklin	1308 / 43	1279 / 42	29 / 1
Sproat	265 / 10	234 / 9	31 / 1
contract (2)	349 / 22	349 / 22	0
SBFEP	no data		

Data based on year (2002) of compliance.

(1) Amendments have been submitted to extend, the FTG date, and are awaiting approval.

(2) Contract operations are located at Great Central and Uchucklesit

Previous:

Year	Area in compliance (hectares)	Openings in compliance (number)	Area out of compliance (hectares)	Openings out of compliance (number)
2001 (3)	2,216	47	288	9
2000	832	23	743	21
1999				18

(3) Approximately 90 % of the openings have Free Growing dates that are not reflective of the current standards of the “Establishment to Free Growing Guidebook.”

Indicator 16: Area out of compliance with Free Growing objectives cont.

Data Protocol:

Responsibility: Planning Foresters

Reporting: TM Pearson & Co

Source: Genus

Notes: Compliance for regeneration and free growing status, both for EMS and MoF, are tracked by Standard Units (SU) through the use of Genus an integrated resource management system. Previous years' (2001 and earlier) tracking was done by block. A Standard Unit is an area of a Silviculture Prescription that is managed through the uniform application of Silviculture system, stocking standards and soil conservation standards.

Data does not include SBFEP, R/W, salvage operations, Sproat Park Trade, or other minor private land holdings.

Hectares displayed are Net Area to be Reforested (NAR).

This objective (indicator) reflects standards/regulations found in the Forest Practices Code of BC.

Indicator 17: Area out of compliance with regeneration delay obligations

Discussion:

Objective: Zero

Acceptable Variance: Zero

Forecast: Zero

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 30

Performance:

Operation	Standards Units due 2002 (hectare / number)	Standards Units met 2002 (hectare / number)	Standard Units not met 2002 (hectare / units)
total	1653 / 242	1651 / 241	2 / 1
Franklin	953 / 116	953 / 116	0 / 0
Sproat	428 / 81	426 / 80	2 / 1
contract (1)	272 / 45	272 / 45	0 / 0
SBFEP	no data		

(1) Contract operations are located at Great Central and Uchucklesit

Sproat comments

Block: 161305 – 1610, Road: Nahmint Main (Big Creek), NAR: 9.6 ha (one SU)

This block has a commencement date of April 1999. 2.9 hectares (conventional portion along Nahmint Main) were planted September 2001. A stocking survey was completed on 9.6 ha May 2002. The stocking survey noted the two helicopter portions of the block required fill planting (some natural seed-in of Hw and Cw had occurred) to meet stocking requirements of the SP. A further 4.1 ha were planted (one of the two helicopter portions) September 2002. Due to stock availability problems, the remaining 2.2 ha (remaining helicopter portion) were not planted September 2002 as planned. Access to the remaining helicopter portion involves a long walk-in from Nahmint Main. Presently, the remaining helicopter portion is planned for planting September 2003.

Corrective action: Recommend submitting a section 36 (FPC Act) letter stating what happened and a major SP Amendment to extend regeneration delay and early and late free growing periods by two years.

Indicator 17: Area out of compliance with regeneration delay obligations
cont.

Data Protocol:

Responsibility: Planning Foresters

Reporting: TM Pearson & Co

Source: Genus

Notes: Compliance for regeneration and free growing status, both for EMS and MoF, are tracked by Standard Units (SU) through the use of Genus an integrated resource management system. Previous years' (2001 and earlier) tracking was done by block. A Standard Unit is an area of a Silviculture Prescription that is managed through the uniform application of silviculture system, stocking standards and soil conservation standards. Data based on year (2002) of compliance.

Data does not include SBFEP, R/W, salvage operations, Sproat Park Trade, or other minor private land holdings.

Hectares displayed are Net Area to be Reforested (NAR).

This objective (indicator) reflects standards/regulations found in the Forest Practices Code of BC.

Indicator 18: Total productive forest area in DFA

Discussion: This indicator provides a measure of sustainability of the forest land base

Objective: Limit conversion to non-forest use to 0.001% per year [n/a for 2002]

Acceptable Variance: <0.0027%

Forecast: Stable

Previous (2001) SFM Plan: Reported previously (in part) as Indicator # 34

Performance:

Year	Productive Area excluding roads (hectares)	Conversion (percent)
2002	263,083	baseline

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: Pacific GIS Consulting

Source: All data is from GIS in the form of ArcInfo coverages, with the exception of logging updates which came from Genus.

Notes: The total productive area is determined from the current (1997) forest inventory. The forest inventory is updated periodically (usually every one or two years) for areas harvested, and stand assessments. The Inventory Analyst, Nanaimo Woodlands, produces reports on the current inventory. No changes were made to the inventory in 2002.

There were two changes which resulted in less productive forest area being reported for 2002;

- The DFA boundary changed.
- Exclusion of roaded area (13m buffer for roads), due to a change in the definition of Productive Forest

Indicator 19: Equivalent years of Not Sufficiently Reforested (**NSR**) as 5-year rolling average

Discussion:

Objective: Maintain NSR equivalency at <3years harvest area

Acceptable Variance: Zero

Forecast: 1.5 years

Previous (2001) SFM Plan: Reported previously as Indicator # 40

Performance:

Year	Operation	NSR area (hectares)	Area Harvested (hectares)	Area harvested 5 year average (hectares)	NSR equivalency (years)
2002	total	3179.4	2252.0	1780	1.8
	Franklin (1)	1938.6	1426.4	n/a	n/a
	Sproat	926.4	567.3	n/a	n/a
	SBFEP	314.4	258.3	n/a	n/a
2001		2761	1530	1633	1.7
2000		2066	1981	1672	1.2
1999		2339	1831	1621	1.4
1998		2638	1304	1681	1.6

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Indicator 19: Equivalent years of Not Sufficiently Reforested (**NSR**) as 5-year rolling average **cont.**

Data Protocol:

Responsibility: Planning Foresters

Reporting: TM Pearson & Co

Source: Genus

Notes: Data includes SBFEP and R/W. Data includes salvage operations, Sproat Park Trade, or other minor private land holdings. Blocks which were started and not completed (no stocking status) then logged hectares were used for NSR, which includes R/W.

Blocks which are not complete and/or released for Waste and Residue or Post Harvest have no recorded stocking status.

This objective (indicator) reflects standards/regulations found in the Forest Practices Code of BC.

Indicator 20: Inventory of all known sites requiring preservation or protection within the DFA

Discussion:

Objective: Maintain inventory of sites that require preservation or protection with the DFA

Acceptable Variance: Zero

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator

Performance:

Data has been obtained regarding known locations of rare and endangered species from the Conservation Data Center (CDC). A “shapefile” of known cave locations, based on information supplied by the Vancouver Island Cave Exploration Group (VICEG), has also been created.

Funded by FIA, a Sensitive Ecosystem Inventory was begun in 2002, with completion planned for 2003.

Weyerhaeuser is currently developing procedures, so as to incorporate the data sets into their business systems and processes.

Data Protocol:

Responsibility: Forest Development Planner

Reporting:

Source:

Notes:

Indicator 21: Openings harvested in which soil disturbance exceeds level specified on Silviculture Prescription (Note: this indicator does not apply to private land outside the DFA)

Discussion:

Objective: Zero

Acceptable Variance: 1 opening

Forecast: Zero

Previous (2001) SFM Plan: Reported previously as Indicator # 35

Performance:

Year	Operation	Openings exceeding allowable soil disturbance (number)	Openings exceeding allowable soil disturbance (percent)
2002	Total	0	0%
	Franklin (1)	0	0
	Sproat	0	0
	SBFEP	no data	no data
2001		0	0%
2000		0	0%
1999		0	0%
1998		0	0%

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Data Protocol:

Responsibility: Planning Foresters

Reporting:

Source: Genus 2002 completed Post Harvest Assessments (PHA's).

Notes: Data for this indicator does not include the Park Trade or other minor private land holdings.

This objective (indicator) reflects standards/regulations found in the Forest Practices Code of BC.

Indicator 22: Water quality measurements for selected streams in areas of concern

Discussion: This indicator was revised January 2003

Objective: Collect water quality data (turbidity, conductivity, water temperature, pH and dissolved oxygen (DO), from streams suggested in the June 2002 Water Quality Report by Higman, and identified at the January 9, 2003 WIWAG meeting. Document, last five years, water quality data from streams suggested in the June 2002 Water Quality Report by Higman, and identified at the January 9, 2003 WIWAG meeting.

Acceptable Variance: N/A

Forecast: To be determined

Previous (2001) SFM Plan: This is a **new** indicator, reported previously (in part) as Indicator # 37

Performance: [the following is from the *Weyerhaeuser West Island Timberlands Sustainable Forest Management Plan Goal 17 Water Quality Report* prepared by Streamline Environmental Consulting June 5, 2003, some editing has taken place]

4. Discussion

As part of an integrated long-term management planning process, water quality monitoring programs can be useful for assessing ecosystem responses to forestry-related activities. Long-term water quality studies can be used to detect trends in ecosystem conditions related to climate change. Increasing pressure and focus on water resources related to population increases and changing societal values mean that reliable water quality information will be increasingly important to resource managers in the future. The WIT - SFM process is a good framework within which to establish a water quality monitoring program that anticipates future management information needs.

4.1 Re-draft Goal No. 17

Management programs require clear, long-term goals supported by realistic objectives that can be evaluated using measurable indicators. Re-drafting Goal No. 17 to adopt as its objective the attainment of the criteria specified by the British Columbia Approved Water Quality Guidelines (BCWQG) will streamline the planning and Implementation of the SFM Plan and will incorporate a high level of credibility. The approach will eliminate the efforts and costs needed to define unique water quality objectives and criteria, and will place WIT in a clearer position to defend the objective if the numerical criteria for water quality parameters are challenged. Finally, the modified approach offers a simple and widely applicable framework that enables WIT managers to quickly evaluate new water quality data in a cost effective matter.

Indicator 22: Water quality measurements for selected streams in areas of concern
cont.

4.2 Evaluation and Discussion of the Available Water Quality Monitoring Datasets

Should the WIT-SFM process continue to move forward on a water quality monitoring objective, the data presented in this report can be incorporated into a future WIT water quality database. However, there are some limitations to each dataset that should be considered. A brief discussion of the limitations specific to each dataset followed by a brief summary of the main conclusions that can be drawn from the work is provided below.

4.2.1 City of Port Alberni Drinking Water Monitoring Program – Somass River and China Creek

Public scrutiny of public drinking water sources has intensified recently. As such, it follows that the quality assurance of the city of Port Alberni Drinking Water Monitoring Program should be high. However, differing program objectives and other aspects limit the utility of the data for WIT-SFM process. Specifically:

- The frequency of sampling for all parameters (except turbidity and fecal coliforms) is low (twice per year). As water quality typically varies seasonally and in response to storm events, the low sampling frequency is unlikely to accurately characterize the range of water quality conditions.
- The data is biased, as high turbidity readings are not recorded due to the fact that the water supply is switched to the Bainbridge Lake intake when turbidity levels are greater than 5NTU.
- Water quality readings do not accurately reflect stream or watershed conditions, as sampling is done within a pipe after initial chlorination treatment in China Creek and Somass River water quality readings are taken after filtration treatment.
- Similarly, residual turbidity, pH, conductivity, and temperature are monitored at the main distribution centre in town. The water quality will be affected by transport through the pipes.
- Water quality is not available in monthly format.

Overall the results presented in this report indicate that water quality in both China Creek and the Somass River appear to be within acceptable BCWQC standards for the parameters reviewed. However there is limited utility in comparing annual data based on low sampling frequency to water criteria that specify maximum allowable instantaneous concentrations. Due to the data limitations described above, this source of water quality data is not considered useful for WIT to measure the attainment of water quality objectives.

Indicator 22: Water quality measurements for selected streams in areas of concern
cont.**4.2.2 Sabrina Creek Assessment**

The data from Sabrina Creek water quality study should be incorporated into a future water quality database fro TFL 44. There are a few limitations of the data that should be considered.

- The data was collected by several parties, and the level and consistency of quality assurance measures that were included is unknown.
- The sampling frequency is low and the interval is variable. Water quality conditions associated with high flow during storm events is not represented. Such events need to be sampled to accurately characterize the range of water quality conditions.
- Un-summarized water temperature measurements, from the data loggers, were not available.

With the exception of temperature, the recordable levels of water quality variable in the Sabrina Creek study were within the acceptable limits of the BCWQC criteria. Using drinking water criteria, the exceeding of the temperature criterion (15 C) in Reach 37 is of minor importance, as the criterion is based on aesthetics (MELP, 1998). However, the elevated temperatures are of concern to aquatic life. Average weekly temperatures in excess of 18 to 19 C can be detrimental to salmonoids.

4.3 Recommendations**4.3.1 Initiate a Water Quality Monitoring Program for the WIT Area**

Considering the paucity of water quality information specific to DFA, the increasing public scrutiny of water resources, and the value of moving the SFM process forward, WIT should consider initiating a water quality monitoring program. The program should be designed to adequately capture information that can be related to a variety of forest management practices, and should provide data suitable for measuring the achievement of the BCWQC criteria. Useful information for consideration in the design and implementation of such a program is provided in, Proposal For A Water Quality Monitoring Program for South Island Timberlands (Higman 2002).

4.3.2 Other Recommendations

- Re-drafting Goal No. 17 based on meeting criteria outlined in the BCWQC will streamline the planning and implementation of both the SFM Plan and a future water quality monitoring program while maintaining a high level of credibility. WIWAG will have to select the appropriate water quality objectives (based on water uses) and variables. The criteria specific to maintaining water quality suitable for human consumption or, alternatively, aquatic life are likely candidates. If drinking water criteria are used, it is recommended that the monitoring program include dissolved oxygen due to its importance to aquatic life.

Indicator 22: Water quality measurements for selected streams in areas of concern
cont.

- Create a working partnership with the City of Port Alberni to share water quality information. The City of Port Alberni will be initiating a more comprehensive water quality monitoring program in partnership with MWLAP as part of the new drinking water guidelines. Maintain communications with these agencies for the purposes of sharing data and reducing duplicity of monitoring efforts.
- Integrate the Upper Nahmint data into the SFM water quality objectives when the data has been verified and collated.

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: P. Eng./P. Geo (Nanaimo)

Source: *Weyerhaeuser West Island Timberlands Sustainable Forest Management Plan Goal 17 Water Quality Report* prepared by Streamline Environmental Consulting June 5, 2003.

Notes:

Indicator 23: Percent of stream length of **S4, S5 streams** buffered ≥ 15 metres in areas harvest annually

Discussion:

Objective: S4 $\geq 85\%$, S5 $\geq 60\%$ [72.5% weighted average]

Acceptable Variance: $\pm 15\%$

Forecast: S4 $\geq 85\%$, S5 $\geq 60\%$

Previous (2001) SFM Plan: This is a **new** indicator, reported previously (in part) as Indicator # 21

Performance:

Weighted average of S4 and S5 streams is **65.3%**

Year	S4 streams	Total	Non-buffered	Buffered	Buffered
		(km)	(km)	(km)	(%)
2002	Total	18.91	8.73	10.18	54
	Franklin (1)	9.27	2.27	7.00	75
	Sproat SBFEP	9.64 no data	6.46	3.18	33

Year	S5 streams	Total	Non-buffered	Buffered	Buffered
		(km)	(km)	(km)	(%)
2002	Total	9.76	1.22	8.54	87
	Franklin (1)	7.32	1.22	6.10	83
	Sproat SBFEP	2.44 no data	0.00	2.44	100

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

A S4 non-fish stream is a stream in a community watershed less than 0 to 1.5 meters wide. (Anything greater than 1.5 meters in a community watershed is buffered). S5 streams are non-fish streams, outside a community watershed and wider than 3 meters.

An objective of 85% buffered, is far in excess of Code requirements and comes with a significant logging cost impact.

Indicator 23: Percent of stream length of S4, S5 streams buffered ≥ 15 metres in areas harvest annually cont.

Data protocol:

Responsibility: Planning Engineers

Reporting: TM Pearson & Co

Source: Logged hectares register. S4 and S5 streams manually measured.

Notes: Indefinite or intermittent streams were not measured. Only streams within logged areas (not buffered) or within leave areas adjacent to logged areas (buffered) were measured. Buffers such as retention, WTP, and leave areas are indicated on 1:5000 maps. With regards to Total Area Under Prescription (TAUP), block boundaries adjacent to (one side of) creeks were included in the calculations.

Blocks with S4 streams within 50m of a blocky boundary were included.

Approximately 175 blocks were examined, which included blocks where harvesting started prior to 2002.

Salvage areas and the Small Business Forest Enterprise Program (SBFEP) were not examined.

This objective (indicator) reflects standards/regulations found in the Forest Practices Code of BC.

Indicator 24: Percent of **S6 streams** with a > 15 metre buffer in areas harvested annually

Discussion:

Objective: Determine the % of S6 streams with a > 15 metre buffer in areas harvested annually

Acceptable Variance: N/A

Forecast: To be determined

Previous (2001) SFM Plan: This is a **new** indicator, reported previously (in part) as Indicator # 21

Performance:

S6 streams are non-fish streams outside community watersheds and equal to or less than 3 meters wide. There is no legal requirement for a buffer.

Year	S6 streams	Total (km)	Non-buffered (km)	Buffered (km)	Buffered (%)
2002	total	120.45	73.49	46.97	39.0
	Franklin (1)	102.38	61.58	40.8	39.9
	Sproat	18.07	11.905	6.165	34.1
	SBFEP	no data			

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Data protocol:

Responsibility: Planning Engineers

Reporting: TM Pearson & Co

Source: Logged hectares register. S6 streams manually measured.

Notes: Indefinite or intermittent streams were not measured. Only streams within logged areas (not buffered) or within leave areas adjacent to logged areas (buffered) were measured. Buffers such as retention, WTP, and leave areas are indicated on 1:5000 maps. With regards to Total Area Under Prescription (TAUP), block boundaries adjacent to (one side of) a creek were included in the calculations.

Salvage areas and the Small Business Forest Enterprise Program (SBFEP) were not examined.

Approximately 175 blocks were examined.

This objective (indicator) reflects standards/regulations found in the Forest Practices Code of BC.

Indicator 25: Forest Practices Code reserve zones for wetlands, lakes and streams.

Discussion: This indicator does not apply to private lands outside the TFL

Objective: Full reserve zones as Per FPC; zero non-compliance related to harvesting on TFL

Acceptable Variance: Zero

Forecast: Zero

Previous (2001) SFM Plan: Reported previously as Indicator # 32

Performance:

Year	Operation	FS 107 write-up
2002	total	0
	Franklin (1)	0
	Sproat	0
	SBFEP	no data
2001		0
2000		0
1999		0

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Data Protocol:

Responsibility: Planning Engineers

Reporting:

Source: Incident Tracking System (ITS)

Notes: Reserve zones are established for wetlands, lakes and streams using the following guidebooks; Riparian Management Area, Gully Assessment Procedures, Fish Stream Identification, Channel Assessment Procedure, and Community Watershed.

Reserve Zone requirements are audited by the prescribing Silviculture Forester for compliance. Silviculture prescriptions are not approved by the District Manager with reserve zones that do not meet the Forest Practices Code of BC.

Data for this indicator does not include the Park Trade or other minor private land holdings.

This objective (indicator) reflects standards/regulations found in the Forest Practices Code of BC.

Indicator 26: Coastal Watershed Assessment Procedure (CWAP) programs completed for watersheds of identified concern and results are incorporated into FDP

Discussion: CWAPs are required for community watersheds, and for watersheds as directed by the MoF.

Objective: Carry out CWAPs on watershed not previously examined and where proposed development or past activities may constitute a risk to key value; incorporate results into FDP

Acceptable Variance: One late CWAP

Forecast: All watersheds assessed and results reflected in FDP

Previous (2001) SFM Plan: Reported previously as Indicator # 38

Performance:

Year	Completed CWAPs (number)	Late CWAPs (number)
2002	1 (1)	0
2001	3	0
2000	3	0
1999	1	0
1998	7	0

(1) Klanawa update

Data Protocol:

Responsibility: Forest Development Planner

Reporting:

Source:

Notes: Weyerhaeuser has requested exemptions from completing CWAPs in some community watersheds where only road maintenance and timber salvage was occurring. WY has completed CWAPs for some watersheds to address rate of cut concerns. These are not directed CWAPs.

Data for this indicator does not include the Park Trade or other minor private land holdings outside the TFL.

On February 6, 2001, the SIFD District Manager issued a letter with regards to expectations on hydrological impacts of the Vancouver Island Higher Level Plan (HLP). The letter also instructed Licensees to meet with MoF, MWLAP, and DFO representatives to determine if CWAPs are required in certain watersheds potentially affected by the HLP. Licensees were instructed to meet with agencies regarding the need for CWAPs in certain watersheds. A meeting for TFL 44 was held on July 3, 2002, the minutes are as follows;

Indicator 26: Coastal Watershed Assessment Procedure (CWAP) programs completed for watersheds of identified concern and results are incorporated into FDP **cont.**

Data Protocol:

Notes: Alberni FDP/CWAPs Meeting Minutes – July 03, 2002

Listed below are the agreed to actions for each watershed discussed at the July 03, 2002 meeting at the MOF office in PA. Note that the discussion was based on the February 6, 2001 letter from the District Manager, DSI to All Licensees, DSI re: HLP and pertained to the upcoming amendment submission for the Alberni East FDP by WY. Our understanding from the district manager is that with the changes to the FPC we should look at the level of development proposed, sensitivity of the watershed and the use of HLP Sections 7& 8 to determine if a CWAP is needed.

In attendance : Mike Davis (WY); Glynnis Horel (Consultant for WY); Brad Rushton (DFO); Dan Biggs (MOF); Bob Cerenzia (MWLAP) and Madeline Maley (MOF).

Corrigan Watershed

- * Significant development anticipated - concentrated in the second growth area of the watershed
- * Glynnis will provide a summary (approx. 1 page) noting:
- * Key concerns including:
- * landslides
- * deactivation
- * channel sensitivity
- * cumulative effects over the area under development
- * hydrological review of proposed development
- * ECA over the entire watershed should include some sense of the threshold to trigger a CWAP

Sarita River Watershed

- * Not much development proposed
- * Mike to note if using Sections 7 and 8 of the HLP and provide rationale
- * Glynnis to reference the amount of development to the rate of recovery using the 1996 CWAP as a baseline

Pacheena River Watershed

- * Not much development proposed - no actions
- * Mike to note if using Sections 7 and 8 of the HLP and provide rationale

Indicator 26: Coastal Watershed Assessment Procedure (CWAP) programs completed for watersheds of identified concern and results are incorporated into FDP **cont.**

Data Protocol:

Notes: Alberni FDP/CWAPs Meeting Minutes – July 03, 2002

Klanawa River Watershed

- * CWAP has expired and Glynnis will be completing a CWAP focusing on the following
- * Summary of work to date - deactivation, instream and any positive indicators (ex: riparian vegetation)
- * ECA Update
- * Sediment Source Survey
- * Report on the new terrain mapping and it's use at the SP stage
- * Assess the proposed development
- * Review and comment on previous recommendations/results
- * Review key channels using orthophotos - no new aerial photography available so the smaller channels cannot be reviewed
- * Note that Bob has a windthrow concern that Mike will be addressing in the amendment

Nahmint River Watershed

- * DM directed CWAP and will be completed in the fall - no development proposed until the CWAP is completed
- * Glynnis will be doing a CWAP similar to the Hatton
- * Updating the original results/recommendations
- * Mapping channel profiles
- * Sediment Source Survey
- * Reviewing any proposed development
- * Look at any water (weather ?) station data

Ash River Watershed

- * No proposed development in the Alberni East FDP Amendment - no actions

Caycuse Creek Watershed

- * Madeline to check if a CWAP has been completed for the Caycuse
- * Not much development proposed - no actions
- * Note a concern from the agencies re: Looper Creek - significant development would trigger a CWAP
- * Any development in Hatton must be consistent with the current CWAP

Indicator 26: Coastal Watershed Assessment Procedure (CWAP) programs completed for watersheds of identified concern and results are incorporated into FDP **cont.**

Data Protocol:

Notes: Alberni FDP/CWAPs Meeting Minutes – July 03, 2002

China Creek - below the community watershed

- Not much development proposed - no actions

Walbran Creek Watershed

- Glynnis will report on the percentage development within the TFL 44 area in the watershed and check the rate of recovery
- Note that a CWAP would be useful to monitor the impact of the SMZ and the Park on the development of the watershed
- Significant development will require both tenure holders (TFL 44 and TFL 46) to complete a CWAP
- Note that Bob has a concern in the Roy Creek area

Upper Nitinat River Watershed

- Area defined as north of the falls
- Not much development proposed - no actions

Indicator 27: Change in area of water bodies

Discussion: This indicator measures the area of lakes, wetlands and large streams in the DFA. It provides an indication of the impact of forest management on water resources.

Objective: Maintain current area of water bodies

Acceptable Variance: Zero

Forecast: Stable

Previous (2001) SFM Plan: Reported previously as Indicator # 39

Performance:

Year	Area of water bodies (1) (hectares)	Area of water bodies, w/o swamps (2) (hectares)
2002 (3)	15,959	15,200
2001	15,976	15,214
2000	15,983	15,222
1999	15,983	15,222
1998	no data	15,222

(1) includes large rivers, lakes, and swamp

(2) reported previously as area of water bodies

(3) DFA boundary changed in 2002, resulting in the removal of 14 ha. of water bodies

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: Pacific GIS Consulting

Compilation:

Source: All data is from GIS in the form of ArcInfo coverages, with the exception of logging updates which came from Genus.

Inventory Section reports (1:20 000 scale) on the area of lakes, wetlands and large streams at each inventory update. This includes the inventory summaries in TFL Management Plans. No re-inventory of water bodies took place in 2002.

Care needs to be taken in interpreting historical records of the area of water because of changes in map standards and boundaries.

Base line data is the 1997 Inventory area of 15,222 ha.

Indicator 28: *Indicator pending on advisory group education and information gathering [carbon budget]*

Discussion: This indicator has till 2003 to be completed

Parking Lot Item: From Appendix 2, 2002 SFM Plan

Carbon budget is not specifically addressed in the plan due to a lack of understanding about its impacts on age classes, growth rates, blowdowns, fuel consumption and other factors. To what extent should we be contributing to global cycles? The Advisory will arrange a learning session as a way of preparing to address this in the next plan revision.

Objective: Increase the advisory group's understanding of carbon budget factors

Acceptable Variance: Completed in 2003

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator

Performance:

Year	Learning Sessions (number)
2002	0

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting:

Source:

Notes:

Indicator 29: Number of complaints annually [Non-timber forest products]

Discussion:

Parking Lot Item: From Appendix 2, 2002 SFM Plan

There is some concern about the need to do more to stimulate NTFP diversification, however the Advisory needs more information about what is currently being done in this field before determining what (if anything) they should focus on in this area.

Objective: No complaints related to NTFP

Acceptable Variance: One complaint

Forecast: Zero

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicators # 52 and 56

Performance:

Year	NTFP complaints	Other Complaints / Comments	FDP Comments (3)	FDP Responses (4)
2002	1 (1)	72 (2)	n/a	n/a
2001	no data	1	93	30
2000	no data	5	31	28
1999	no data	no data	no data	no data

(1) FDP comment

(2) 69 comments were as a result of a “Stop logging the Walbran” email campaign

(3) action items and/or changes to FDP by cutblock/area, no FDP’s in 2002

(4) may include multiple cutblocks, no FDP’s in 2002

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: EMS Clerk

Source: Incident Tracking System (ITS)

Notes: All “significant public concerns” generated through comments, questionnaires or complaints through reviews of Forest Development Plans or Management Plans, Sustainable Forest Management Plans or other higher levels plans are documented. “Significant public concerns” are sent to the EMS Clerk for record keeping by Forest Development Plans – FDP Leader Management Plans Sustainable forest Management Plan–EMS Forester A Management Plan – TFL Forests. Complaints are also received by Office receptionists.

Indicator 30: Annual harvest (5 year average) as percent of [Long Term Harvest Level LTHL]

Discussion: This indicator combines recent rates of timber harvest with the projected long-term harvest rate for the forest. Previously referred to as Long Run Sustained Yield (LRSY) in the 2002 SFM Plan.

Parking Lot Item: From Appendix 2, 2002 SFM Plan

Discussions about sustainable harvest levels are ongoing. There is a general dissatisfaction with that portion of the plan that deals with harvest levels. This is partially linked to our examination of zoning this year, and to the need for more information about species and age classes that currently make up the DFA – by landscape unit and biogeoclimatic variant.

Objective: 2002: \pm 10% of LTHL

Acceptable Variance: \pm 15% of LTHL

Forecast: LTHL

Previous (2001) SFM Plan: Reported previously as Indicator # 36

Performance:

5 year harvest period	Average harvest (m3)	LTHL (m3)	Average Harvest as % of LTHL
1998-2002	1,531,031	1,661,000 (2)	92%
1997-2001	1,474,989	1,604,000 (1)	92
1996-2000	1,570,413	1,583,000	99
1995-1999	1,657,304	1,583,000	105

- (1) The addition of park trade area in 2001 increased the harvesting land base and hence increased LTHL.
- (2) The TFL 44 MP#4 Timber Supply Analysis completed in 2002 included different assumptions than the MP#3 analysis. The result is a change in LTHL.

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: Nanaimo Timberlands Planning Forester

Source: Annual harvest volumes are based on official MoF scale volumes. For more detail refer to Indicator 41.

Notes: LTHL, the long term harvest level is dependent on area, the productivity of the forestland, level of silviculture (e.g. numbers of trees established per ha, control of competing vegetation, fertilization etc.) and harvest constraints (e.g. restrictions on the rate of harvest). All of these factors are defined in the strategic analysis.

Indicator 31: Percent of protected area perimeter harvested within previous 5 years

Discussion: Current performance reflects a disproportionate amount of mature forests adjacent to protected areas. This performance level will improve slowly over time

Objective: < 5%

Acceptable Variance: <9.5%

Forecast: < 5%

Previous (2001) SFM Plan: Reported previously as Indicator # 41

Performance:

Year	Park perimeter (km)	Harvested perimeter (km)	% of protected area harvested in previous 5 yrs.
2002	72	8.3	11.64
2001	74	8	10.2
2000	89	9	10.1
1999 (1)			2.7

The 2003 plan will be reviewed to ensure the performance is within variance.

(1) 1997 inventory

Data Protocol:

Responsibility: Forest Development Planner

Reporting: Pacific GIS Consulting

Source: All data is from GIS in the form of ArcInfo coverages, with the exception of logging updates which came from Genus.

Notes: The percent of protected area perimeter harvested within the previous 5 years, will be calculated annually, utilizing the productive forest only. The measurement procedure is to use the GIS to buffer the park perimeters by 100 meters, then intersect the buffered coverage with the forest cover. (1997 forest inventory).

Select only those stands that are less than 5 years old and recalculate to compute the percentage of protected area perimeter harvested within the previous 5 years.

No stand level reinventory took place in 2002. Changes that resulted in differences between 2001 and 2002 dataset/reporting include;

- Exclusion of roaded area (13m buffer for roads), due to a change in the definition of Productive Forest
- Areas within 100m of the park perimeter were logged in 2002.

Indicator 32: Percent of harvesting adjacent to protected areas that is VR

Discussion:

Objective: 80% in 2002

Acceptable Variance: 10%

Forecast: 95% in 2002

Previous (2001) SFM Plan: Reported previously as Indicator # 46

Performance:

Year	Operation	Openings adjacent to protected areas (number)	VR openings (number)	% adjacent
2002	Total	4	4	100%
	Franklin (1)	2	2	
	Sproat	2	2	
	SBFEP	no data	no data	
2001		5	4	80%
2000		9	7	77%

(1) Franklin includes Alberni East and contract operations, located at Great Central and Uchucklesit

Data Protocol:

Responsibility: Planning Engineers

Reporting: Administrative Coordinator - Franklin

Source:

Notes: When choosing the type of Variable Retention, Weyerhaeuser takes into consideration such elements as proximity to parkland, fishing resources, and other resource values in the block.

Cutblocks within 100 metres of the park perimeter are considered adjacent.

Indicator 33: Area of identified recreational areas with the DFA

Discussion:

Objective: Maintain inventory of recreational areas

Acceptable Variance: 95% of DFA inventoried

Forecast: 100% of DFA inventoried

Previous (2001) SFM Plan: Reported previously as Indicator # 47

Performance:

Year	DFA (hectares)	Recreational inventory area (hectares)	Inventoried (percent)
2002 (1)	315,443	306,869	97.3%
2001	316,150	309,589	97
2000	311,388	309,589	99
1999	311,388	309,589	99

(1). DFA boundary changed in 2002

Data Protocol:

Responsibility: Forest Development Planner

Reporting: Pacific GIS Consulting

Source: All data is from GIS in the form of ArcInfo coverages, with the exception of logging updates which came from Genus.

Notes: A Recreation Inventory was completed for TFL 44 in June 1995, with additional information added in 1997. The Recreation Analysis and Management Strategy Report (Juan De Fuca Consulting,) including the remaining portion of the DFA (Park Trade), was completed in 2002. However, as of December 31, 2002 it had not been entered into GIS format.

Large lakes are not included in the area covered by the Recreation Inventory dataset. This indicator compares the gross DFA area with the gross Recreation Inventory area. Inventory lakes were added to the Recreation Inventory area for the 2002 calculation.

The data is used for the Management Plan as well as the FDP.

Data for this indicator does not include the Park Trade or other minor private land holdings.

Indicator 34: Percent of identified roads that have been maintained

Discussion:

Objective: Access to X% (percent to be confirmed) of identified major recreation areas (as per sector priority list) is maintained

Acceptable Variance: 50%

Forecast: 100 %

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicators # 31 and 52

Performance:

Year	Identified roads (number)	Identified roads with access (number)	Identified roads with access (%)
2002	73	71 (1)	97%
2001	73		

(1) Two roads were identified as not having access, N600 (log pile) and Katlum Creek (slides).

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: WIWAG Recreation Sub-Committee

Source: Recreation Access Inventory (April 2002)

Notes: The Recreation Access Inventory (sector priority) was produced by the West Island Woodlands Advisory Group's Recreation Sub-committee, and is located on the WIWAG's website <http://www.wiwag.org>.

Access, for purpose of this indicator, is defined as 4-wheel drive, within 500 metres of the identified feature.

'Major' recreation areas will need to be reviewed for 2003.

Indicator 35: Number of recreation sites maintained

Discussion: Weyerhaeuser does not maintain recreation sites. Access to the sites is made available through maintained roads. Weyerhaeuser's harvesting activities are designed and conducted so as to result in minimal or no impact on recreation sites. The MoF has a small maintenance budget for formal campsites.

Objective: Maintain existing recreation sites and site access, in cooperation with Ministry of Forests [MoF]

Acceptable Variance: Review with MoF and determine funding needs

Forecast: Develop one new site every 5 years

Previous (2001) SFM Plan: Reported previously as Indicator # 43

Performance:

Year	Formal site (number)	Informal site (number)
2002	9	34
2001	9	34
2000	9	34
1999	9	34

Data Protocol:

Responsibility: Forest Development Planner

Reporting:

Source: 2002 Recreation Analysis and Management Strategy Report (Juan De Fuca Consulting)

Notes: A Recreation Inventory was completed for TFL 44 in June 1995, with additional information added in 1997. An inventory for the remaining portion of the DFA (Park Trade) was completed in 2002. However, as of December 31, 2002 it had not been entered into GIS format.

Weyerhaeuser maintains a recreation inventory. Formal sites are not specifically identified in the inventory. However, areas are identified as requiring special management for their recreation values.

In March 2002 the MoF announced that it would gradually withdraw from the management of recreation sites and trails. In October, the ministry issued requests for proposals for the non-commercial management and maintenance of recreation sites and trails.

Indicator 36: Number of polygons in which visual condition fail to meet Visual Quality Objectives [VQO] (Benchmark for 2002)

Discussion: The purpose of a Visual Landscape Inventory is to provide information about the visual condition, characteristics and sensitivity to alteration of areas and travel corridors. A Visually Sensitive Area (VSA) may include views visible from communities, public use areas, travel corridors, including roadways and waterways, and any other viewpoint so identified through a referral or planning process.

Objective: Reduce the number [of polygons] from previous reports

Acceptable Variance: +5% [2002 data is baseline, variance will apply to future reports]

Forecast: Zero

Previous (2001) SFM Plan: This is a new indicator reported previously (in part) as Indicator # 53

Performance:

Year	VQO polygons (number)	VQO polygons with failed existing visual condition (EVC) (number)	Area of VQO failure (hectares)
2002	1621 (1)	479 [baseline]	22,199
2001		n/a	not reported (2)
2000		n/a	25,124

(1) 890 polygons are less than five hectares

(2) no updates

Data Protocol:

Responsibility: Forest Development Planner

Reporting: Pacific GIS Consulting

Source: All data is from GIS in the form of ArcInfo coverages, with the exception of logging updates which came from Genus.

Notes: Data for this indicator does not include the Park Trade or other minor private land holdings. The visual inventory area within the DFA only was used.

Existing Visual Condition (EVC) is a measure of the present level of landscape alteration caused by human activities. EVC values are taken from Form 15 (EVC, Final Values) of the VQO inventory.

The official inventory is updated periodically, not annually. Visual Impact Assessments (VIA's) for cutblocks, may influence a polygon's EVC.

Indicator 37: Total WIT [West Island Timberlands] wages and salaries**Discussion:**

Objective: Maintain or increase total WIT wages and salaries as compared to previous years

Acceptable Variance: -10%

Forecast: 2% increase

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 49

Performance:

Year	Salary (million)	Hourly wages (million)	Total (million)
2002	\$5.1	\$34.2	\$39.3
2001	5.7	32.8	38.5
2000	5.7	37.3	43.1
1999	5.6	37.2	42.8
1998	5.4	26.0	31.4,

Data Protocol:

Responsibility: Decision Support Leader

Reporting:

Source:

Notes:

Indicator 38: Total paid to contractors**Discussion:****Objective:** Maintain or increase total paid as compared to previous years**Acceptable Variance:** -10%**Forecast:** 2% increase**Previous (2001) SFM Plan:** This is a new indicator, reported previously (in part) as Indicator # 49**Performance:**

Year	Fixed rate (million)	Other (million)	Total (million)
2002	\$36.0	\$21.2	\$57.2
2001	19.1	22.8	41.9
2000	23.6	31.2	54.9
1999	23.3	22.6	45.9
1998	19.3	16.4	35.3

Data Protocol:**Responsibility:** Decision Support Leader**Reporting:****Source:****Notes:** Fixed rate is defined as full phase (stump to dump) contractors, while other is defined as single phase contractors. Includes all monies paid to contractors, such as salaries, supplies, etc.

Indicator 39: Contract total paid to FN First Nations.

Discussion:

Objective: Maintain or increase contract total paid through WIT to First Nations.

Acceptable Variance: -10%

Forecast: 2 % increase

Previous (2001) SFM Plan: This is a new indicator

Performance:

Year	Contracts (million)
2002	\$3.6

Data Protocol:

Responsibility: Decision Support Leader

Reporting: Accountant

Source:

Notes: Due to the amount of work involved, only 2002 was reported. Includes all monies paid to contractors, such as salaries, supplies, etc..

Indicator 40: Total paid in property taxes by each WY division or operation in DFA area over last five years

Discussion:

Objective: Determine the extent of property taxes paid by Weyerhaeuser

Acceptable Variance: N/A

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 49

Performance:

Year	Property tax (million)	Tax rate / \$1,000
2002	\$1.6	75.33
2001	1.7	75.84
2000	1.4	72.70
1999	1.4	
1998	1.3	

Data Protocol:

Responsibility: Decision Support Leader

Reporting:

Source:

Notes: Almost all of WIT property taxes are paid to the Provincial Government as the assessable land and operations are located in rural lands i.e. not in municipalities.

Most of the forest land is in the Managed Forestland Assessment/Tax class - the all inclusive tax rate is about 1% (this includes school tax, government general tax, regional district tax, regional hospital tax, etc.). Industrial operations such as camps, dryland sorts, foreshore leases are in the Light Industry Assessment/Tax class - the all inclusive tax rate is about 2.5%.

Indicator 41: Annual harvest level compared to last 5 years

Discussion: This indicator compares actual timber harvest with harvest targets. It provides an indication of sustainability and of contribution to the local and provincial economies.

Parking Lot Item: From Appendix 2, 2002 SFM Plan

Discussions about sustainable harvest levels are ongoing. There is a general dissatisfaction with that portion of the plan that deals with harvest levels. This is partially linked to our examination of zoning this year, and to the need for more information about species and age classes that currently make up the DFA – by landscape unit and biogeoclimatic variant.

Objective: Annual cut is within 15% of previous 5 year average

Acceptable Variance: $\pm 25\%$

Forecast: $\pm 5\%$

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 45

Performance:

Year	TFL 44 (excluding Clayoquot, including Small Business and residue)			Outside TFL 44	DFA
	AAC (million m3)	Harvest (million m3)	%	Harvest (m3)	Harvest (million m3 / % of avg.)
2002 (1)	1,760,000	1,688,584	96%	85,861 (2)	1,774,445 / 120%
2001 (3)	1,760,000	1,292,568	73	128,854	1,421,423
2000 (3)	1,760,000	1,575,386	90	23,063	1,589,862
1999	1,760,000	1,578,862	90	19,108	1,597,970
1998	1,760,000	1,247,911	71	43,736	1,291,647
1997	1,823,000	1,408,861	77	85,375	1,494,236
1997 to 2001	8,863,000				7,374,947
5 yr. Average	1,772,600		100		1,474,989

- (1) includes 95,141 m3 of SBFEP
- (2) all of the harvest is from the Park Trade area
- (3) AAC incorrectly reported as 1,766,200 m3

Indicator 41: Annual harvest level compared to last 5 years cont.

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting: Nanaimo Timberlands Planning Forester

Source:

Notes: The Chief Forester determines the Allowable Annual Cut (AAC) every five years for TFL 44 as part of the Management Plan process. The current AAC for TFL 44 is 1,766,200 m³. Of this 1,760,000 m³ is in the DFA and 6,200 m³ is in the Clayoquot Sound. The 1,760,000 m³ includes allocations of 1,635,598 m³ to Weyerhaeuser, 81,698 m³ for Small Business, and 48,994 m³ for Small Business/other.

The Chief Forester is expected to announce a new AAC determination for TFL 44 in mid 2003, at which time an adjustment for the Ucluelet Working Circle is expected.

Scaled harvest volumes are accumulated in the MoF harvest database. The TFL 44 harvest is from the MoF 2002 'cut control' letter. The Nanaimo Woodlands Statistician reports these harvest volumes (by operation and tenure) in the TFL 44 Annual Report.

Indicator 42: Distribution of WY expenditures locally**Discussion:**

Objective: Determine the extent and nature of local spending by the company. Benchmark in 2002.

Parking Lot Item: From Appendix 2, 2002 SFM Plan

Some of the economic indicators that measure local economic activity (goal 27) include both salaried and contract wages that go outside of the Regional District, and are therefore not reliable measures of local activity. In other places the WIWAG has defined "local" as within the AC Region. We [WIWAG] have asked that the company look at how they can break out the local vs. non-local information on these indicators for 2003.

Acceptable Variance: N/A

Forecast: To be determined

Previous (2001) SFM Plan: This is a new indicator

Performance:

Year	Local Expenditures (million)
2002	\$33.9

Data Protocol:

Responsibility: Decision Support Leader

Reporting: Accountant

Source:

Notes: Local is defined as all suppliers with an address in Port Alberni, Bamfield and Ucluelet. Expenditures include; taxes, donations, first nations, full phase and single phase contractors. Contract invoices, or payments paid to them, include salaries, supplies, etc..

Due to the amount of work involved, only 2002 is reported.

Indicator 43: Annual harvest compared to local log consumption that is provided by WY

Discussion:

Objective: Maintain or increase ratio of logs consumed locally by WY operations vs. WIT harvest

Acceptable Variance: -2%

Forecast: Even flow

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicators # 45 and 64.

Performance:

Year	Sales, Company Operations (m3)	Converted Locally (m3)	Brought in (sent out) (m3)	Harvest, DFA (m3)	Converted locally as % of harvest
2002	1,523,435	1,562,992	39,557	1,774,445	88.1%
2001	1,258,858	1,117,046	(141,812)	1,421,423	78.6
2000	1,354,186	1,336,028	(18,158)	1,589,862	84.0
1999	1,372,009	1,533,122	161,113	1,597,970	95.6

Data Protocol:

Responsibility: Log Supply Accountant

Reporting: Financial Manager, Timberlands Business

Source:

Notes:

Indicator 43: Annual harvest compared to local log consumption that is provided by WY cont.

ALBERNI FIBRE FLOWS		<i>(revised)</i>		
	1999	2000	2001	2002
Log Sales from Company Operations				
Alberni Company Facilities	527,908	496,020	365,246	512,977
Alberni Custom Cut Facilities	45,867	59,893	38,290	52,667
Other Alberni Customers	246,539	219,975	233,166	285,658
Other Customers	551,695	578,298	622,156	672,133
Total Sales from Company Operations	1,372,009	1,354,186	1,258,858	1,523,435
Logs Acquired for Other Alberni Customers	40,947	76,311	59,109	30,317
LOGS CONSUMED IN ALBERNI				
Company Facilities				
From Alberni Operations	527,908	496,020	365,246	512,977
Logs brought in	541,753	404,607	269,065	558,437
Total	1,069,661	900,627	634,311	1,071,414
Company Custom Cut Facilities				
From Alberni Operations	45,867	59,893	38,290	52,667
Logs brought in	130,108	79,222	152,170	122,936
Total	175,975	139,115	190,460	175,063
Logs Sold to Other Alberni Customers				
From Alberni Operations	246,539	219,975	233,166	285,658
Logs brought in	40,947	76,311	59,109	30,317
Total	287,486	296,286	292,275	315,975
Total Logs Consumed in Alberni	1,533,122	1,336,028	1,117,046	1,562,992

Indicator 44: A meeting of value-added stakeholders is held

Discussion:

Objective: To determine the local fiber needs of value-added manufacturers and cottage industries

Acceptable Variance: By 2003

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator

Performance:

This indicator and objective is shared by both WIWAG and Weyerhaeuser.

A presentation by Dan Garland (Vice President) of the **Vancouver Island Association of Wood Processors** was given at the West Island Woodlands Advisory Group's January 9, 2003 regular meeting.

WIWAG has identified a number of questions and issues with regards to value-added:

- There is a need to identify and define local value-added manufactures and cottage industries, are they sawmills and/or secondary wood manufacturers/processors, and are there others that should be included?
- What are the specific fibre issues among regional processors?
- While there is a commitment to create clear direction and focus for determining local fibre needs, the task seems more complex than originally anticipated.

Other priorities for WIWAG, such as the public lectures (Indicator 56), combined with uncertainty on how to proceed contributed in failure to meet the objective.

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting:

Source:

Notes:

Indicator 45: Stumpage paid

Discussion:

Objective: Increase stumpage revenues to the Crown.

Acceptable Variance: -5% [of previous year]

Forecast: Even flow

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 49

Performance:

Year	Stumpage & Royalty (million)
2002	\$32.5
2001	27.3
2000	35.1
1999	22.8
1998	36.5

Data Protocol:

Responsibility: Decision Support Leader

Reporting:

Source:

Notes:

Indicator 46: Number of FN contracts signed

Discussion:

Objective: Identify the number of contracts (benchmark)

Acceptable Variance: N/A

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator

Performance:

Year	Contracts (number)
2002	7

Data Protocol:

Responsibility: First Nations Liaison

Reporting:

Source:

Notes:

Indicator 47: Degree of satisfaction with contract development process (FN sector to gather the data)

Discussion:

Objective: To establish the benchmark for future satisfaction ratings (FN to complete)

Acceptable Variance: N/A

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator

Performance:

Indicator Background

Under Goal 31 (provide opportunities for revenue sharing, joint ventures and/or First Nations access to harvesting or tenure opportunities) there are indicators to measure both the number of contracts signed as well as the dollar value of the contracts. While these indicators are a progressive statement about First Nations' increasing involvement in the forest industry, alone they do not provide information about negotiations that may have not been completed. Nor, do they provide more fundamental information about the relationship between the company and First Nations. The intent of indicator 47 (satisfaction with contract development process) was to provide this additional information. Note that this indicator only refers to First Nation satisfaction with the contract development process.

Methodology

Indicator 47 is the only indicator in the SFM plan that is not written with objective language. However, the intent in monitoring this indicator was not to subjectively ask First Nations if they were satisfied with the contract development process. This is not quantifiably measurable, and is not an equitable way to judge performance. The intent was to define the components of contract development and evaluate how each component was handled. The following questions were developed as the criteria for measuring performance on this indicator:

1. What types of contracts did you negotiate in 2002? (e.g. cultural heritage, salvage, logging, planting)
2. Were all negotiations concluded with a signed contract?
3. Agenda

Were all the issues you wanted to negotiate included in the agenda? Was there a willingness to talk about all issues raised? Or, were certain issues closed for discussion?

Indicator 47: Degree of satisfaction with contract development process (FN sector to gather the data) **cont.**

4. Timing

If a schedule was made and deadlines set, were they met?
Did those negotiating make themselves available to meet on a timely basis?

5. Negotiators

Did the negotiators have the right level of authority and mandate to negotiate the issues on the table?

6. Breakdown

Did the negotiations breakdown at any point resulting in a party leaving the table?
Was there any attempt at mediation, and if so, was it successful?

7. Rating

On a scale of 1-5, with 1 being poor and 5 being all expectations met, what number summarizes your experience with contract development in 2002.

There are 10 First Nations whose territory is affected by the SFM plan. The following First Nations and representatives were contacted and asked the same set of questions.

Cowichan Lake – Georgina Livingston	Ditidaht – Bryan Coffsky
Huu-ay-aht – Larry Johnson	Hupacasath – Trevor Jones
Uchucklesaht – Charlie Cootes Jr.	Tseshaht – David Watts
Toquaht – Rick Schaeffer	Pacheedaht – Jeff Jones
Qualicum – Kim Recalma-Clutesi	Ucluelet – Al McCarthy

Representatives were selected based on their involvement in senior level negotiations for their First Nations.

The Toquaht representative reported that there has been no TFL 44 related harvesting by Weyerhaeuser in their territory for the past few years due to an ongoing process where by the Barkley Block is being taken out of the TFL and transferred to the Arrowsmith TSA. Therefore, the list of First Nations surveyed for this indicator was reduced to 9.

Of the 9 First Nations, complete responses were gathered from 8. 1 First Nation's representative was not available to provide a response within the data collection timeframe.

Indicator 47: Degree of satisfaction with contract development process (FN sector to gather the data) **cont.**

Survey Responses

1. Types of Negotiations

Out of the 8 First Nations that data was gathered for, the following summarizes how many First Nations entered into each type of negotiation:

- Salvage 5
- Cultural Heritage / CMT Reconnaissance 5 *
- Logging 4 **
- Silviculture 3
- Private land exchange 1
- Engineering 2
- Old growth / cedar access 1
- Wood supply to mill 1
- Planting 1

Notes:

*	This number does not include one First Nation that had a multi-year contract signed in 2001 and did not require negotiations in 2002
**	This number does not include one First Nation that had informal discussions on accessing a harvest

Two First Nations did not enter into any contract negotiations with Weyerhaeuser. The first reported that there was no communication from either party in this area. This First Nation now appears to be in the early stages of getting involved with forestry and will report salvage negotiations for 2003. The other First Nation reported that they had no existing relationship with the company. They had not approached the company to negotiate because they felt discriminated against as a small First Nation, and believed that it was the company's responsibility to initiate negotiations as a way of respecting the First Nation's aboriginal rights.

Indicator 47: Degree of satisfaction with contract development process (FN sector to gather the data) **cont.**

2. Contracts Resulting From Negotiations

The number of contracts signed compared to sets of negotiations held is as follows:

- Salvage 5 of 5
- Cultural Heritage / CMT Reconnaissance 5 of 5 *
- Logging 2 of 4 **
- Silviculture 3 of 3
- Private land exchange 0 of 1 ***
- Engineering 2 of 2
- Old growth / cedar access 1 of 1
- Wood supply to mill 0 of 1
- Planting 1 of 1

Notes:

*	Six First Nations in total have a cultural heritage contract. The above number does not include one First Nation that had a multi-year contract signed in 2001 and did not require contract signing in 2002
**	One contract was not signed was due to the negotiations being rolled into the larger Coulson/First Nations Sproat Unit negotiations. The other contract was not completed because the parties could not agree on a price.
***	The First Nation acknowledged that this was a unique area of negotiation, and that it was not unreasonable that a contract wasn't signed in 2002.

3. Agenda

Of those Six First Nations with direct contract development experience, Five reported unconditionally that the company was willing and flexible in to discuss any issue the First Nation proposed for the agenda. One First Nation noted that the company had improved in this area over the past year. Another stated that issues were not always successfully negotiated into a final contract, but this didn't diminish the First Nations' appreciation that the agenda was open.

The Sixth First Nation in this group reported that the issue of revenue sharing was not accepted for negotiation because the company said that this was a provincial government issue. Aside from this though, the First Nation provided a positive report.

Indicator 47: Degree of satisfaction with contract development process (FN sector to gather the data) **cont.**

One First Nation that was just entering into negotiations for the first time in 2003 made an early observation that the agenda seemed set and closed because contract templates were used. It was their preference that templates not be used, especially in the area of price.

4. Timing

Of the six First Nations that negotiated contracts in 2002, four reported that performance in this area was unsatisfactory and needing improvement. Negotiations were characterized as “slow and dragging” with deadlines “often” being missed. These First Nations stated that they were in competition for the negotiators’ time, that the negotiators sometimes didn’t share the First Nations’ priority for an issue, and that if meetings were postponed they were difficult to reschedule. Despite this, one First Nation expressed that the timing issues seemed to be rooted in there not being enough people and time, not a question of whether the company was acting in good faith or not

The other two First Nations reported a different experience for different reasons. 1 First Nation’s contract development process was expedited because they had adopted guidelines from a First Nation that already had a contract. The other First Nation said that they met with the company so frequently that timing wasn’t an issue.

5. Negotiators

The same four First Nations reporting dissatisfaction in the Timing section also reported dissatisfaction with the level of authority and mandate that company representatives brought to the negotiation table. These First Nations said that numerous meetings were held before the “right” people were brought in, leading to delays. It was summarized that there was disconnect between First Nations and decision-making authorities, which has improved since a recent reorganization of key positions.

The First Nation that reported meeting frequently with the company in the Timing section reported positively about access to the right level of negotiators. The representative said that access has always been adequate, but has improved in the last year. As higher level negotiations have started, the company responded by bringing more senior people, and that negotiators always had the authority to sign contracts.

The final First Nation in this group could not provide an answer since the negotiations were conducted by a previous chief.

Indicator 47: Degree of satisfaction with contract development process (FN sector to gather the data) **cont.**

6. Breakdown

None of the First Nations had experienced a negotiation breakdown where either party left the table. One First Nation summarized the importance of this accomplishment by saying in the past the First Nation would have taken the hard line and walked from the table because they didn't think the company was there in good faith. Now the First Nation says there is a "really good relationship that has come a long way."

7. Rating

Of the 6 First Nations that negotiated contracts in 2002, the following summary ratings (on a scale of 1-5) were given:

- Three First Nations provided a score of 3
- One First Nation provided a score of 3.5
- One First Nation provided a score of 4
- One First Nation provided a score of 5

Data Protocol:

Responsibility: First Nations Liaison

Reporting: Tawney Lem (June 12, 2003)

Source:

Notes:

Indicator 49: Number of surveys [Cultural Heritage Surveys] conducted vs. number requested

Discussion:

Objective: Conduct Cultural Heritage Surveys as requested by FN

Acceptable Variance: -5%

Forecast: 100 %

Previous (2001) SFM Plan: This is a new indicator

Performance:

Year	Surveys requested (number)	Surveys conducted (number)	Surveys conducted (percent)
2002	159	159	100%

Data Protocol:

Responsibility: First Nations Liaison

Reporting:

Source:

Notes:

Indicator 50: Number of First Nations who have requested a Cultural Heritage Resource [CHR] contract vs the number who have one

Discussion:

Objective: 100% of First Nations that want one have a CHR contract with WY

Acceptable Variance: -20%

Forecast: 100%

Previous (2001) SFM Plan: This is a new indicator

Performance:

Year	Contracts requested (number)	Contracts (number)	Contracts (percent)
2002	6	5	83%

Data Protocol:

Responsibility: First Nations Liaison

Reporting:

Source:

Notes:

Indicator 51: First Nations information sharing and referrals program**Discussion:**

Objective: Respecting governmental obligations develop and implement protocols for mutually acceptable information sharing and referrals programs with all First Nations having traditional territories within the DFA

Acceptable Variance: 100% of First Nations are sent a proposed information sharing protocol and 75% of First Nations have a protocol in place by December 2002.

Forecast: 100%

Previous (2001) SFM Plan: Reported previously as Indicator # 60

Performance:

Six First Nations' have formal agreements with Weyerhaeuser, with four having referral letters. Four First Nation's, whose traditional territories are minor in area, have not expressed a desire to participate at a level beyond those previously established. The Ucluelet First Nation, whose traditional territory includes the Nahmint, also has not indicated a desire to participate beyond previously established levels.

Year	First Nations	Total Protocol Agreements	First Nations with Protocol Agreements %
2002	10	10	100
2001	10	10	100
2000	10	10	100
1999	10	10	100

Data Protocol:

Responsibility: First Nations Liaison

Reporting:

Source:

Notes:

Indicator 52: Archaeological and Culturally Modified Tree (CMT) sites inventory

Discussion: An inventory of areas where an Archaeological Impact Assessment (AIA) or a Culturally Modified Tree (CMT) survey is completed is maintained in the GIS. The inventory is updated regularly and shows both where surveys have identified archaeological sites, and where surveys have identified that no archaeological resources are present. This information is used during the FDP review to assist in determining archaeological potential of proposed cutblocks, and the type of cultural heritage resource survey required, if any.

Objective: Maintain up-to-date inventory of CMTs

Acceptable Variance: Annual update

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 58

Performance:

The Inventory was updated for the 2002 Forest Development Plan Amendments.

Data Protocol:

Responsibility: First Nations Liaison

Reporting:

Source:

Notes:

Indicator 53: Percent of blocks by band where agreement is reached around the management

Discussion: Weyerhaeuser pursues agreements from all First Nation(s) that have traditional territory covering archaeological sites that may be impacted by proposed forestry related activities. This includes the harvesting and/or the management of non-harvested cultural heritage resources. Consent on the management of significant features (as defined in the Heritage Conservation Act) is sought from First Nation(s) claiming the area where modifications are proposed.

Objective: Achieve FN consent on management and/or protection of identified CHR [Cultural Heritage Resource].

Acceptable Variance: -20%

Forecast: 100%

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 58

Performance:

Year	Consent of Implementation Plans (percent)
2002	100%
2001	100%
2000	100%
1999	100%

Data Protocol:

Responsibility: First Nations Liaison

Reporting:

Source:

Notes:

Indicator 54: Number of public comments to WY and percent of those that result in changes to operational plans

Discussion:

Objective: The company demonstrates a commitment to incorporating reasonable concerns in its planning process (Benchmark in 2002)

Acceptable Variance: N/A

Forecast: 100%

Previous (2001) SFM Plan: This is a new indicator, reported previously (in part) as Indicator # 56

Performance:

Year	NTPF complaints	Other complaints / comments	FDP comments (2)	FDP responses (3)
2002	0	72 (1)	n/a	n/a
2001	no data	1	93	30
2000	no data	5	31	28
1999	no data	no data	no data	no data

(1) 69 comments were as a result of a “Stop logging the Walbran” email campaign

(2) action items and/or changes to FDP by cutblock/area, no FDP’s in 2002

(3) may include multiple cutblocks, no FDP’s in 2002

Year		Comments (block / area)	Changes (block / area)	Changes in Operational plans (percent)
2002	SP	4	4	100% (1)
	FDP Amendment	9	0	n/a (2)

Data does not include discussion or correspondence with First Nations.

(1) Local residents’ design ideas and concerns for four cutblocks (2626 – West Bay, 263204 – Stirling Arm, 273207 – Alberni Valley Memorial Park, 362202 – McLean Mill) were incorporated into the harvest area design.

(2) Five individuals/organizations commented on the Alberni East and Alberni West Forest Development Plan (FDP) Amendment Review. Concerns were, and can be, addressed without changes to the FDP.

Indicator 54: Number of **public comments** to WY and percent of those that result in changes to operational plans **cont.**

Performance:

Previous:

Year	FDP comments (1) (number)	FDP responses (2) (number)	Complaints (number)	Average Response Time Complaints
2001	93	30	1	n/a
2000	31	28	5	1 day
1999	no data			

- (1) action items and/or changes to FDP by cutblock / area
- (2) may include multiple cutblocks

Data Protocol:

Responsibility: Forest Development Planner

Reporting:

Source: 2001-2005 TFL 44 Forest Development Plan Amendment, Alberni East & West, and Opening Files.

Notes: All “significant public concerns” generated through comments, questionnaires or complaints through reviews of Forest Development Plans, Management Plans, and Silviculture Prescriptions.

Indicator 55: Incidence of non-compliance with treaty settlements and Interim Measures Agreements [IMA]**Discussion:****Objective:** Achieve 100% compliance**Acceptable Variance:** 90%**Forecast:** 100%**Previous (2001) SFM Plan:** Reported previously as Indicator # 57**Performance:**

Year	IMA compliance (percent)
2002	100%
2001	100%
2000	100%
1999	100%

Data Protocol:**Responsibility:** First Nations Liaison**Reporting:****Source:****Notes:** The Ditidaht / Pacheedaht Interim Measures Agreement (IMA) expired at the end of 2002. There has been no communication from the First Nations or the Government with regards to renewal.

Indicator 56: A joint communications and public consultation plan

Discussion:

Parking Lot Item: From Appendix 2, 2002 SFM Plan

Indicator 56 identifies a communications plan. This is an attempt to address the substantial gap that was created by the closure of the Alberni Forestry Visitor Information Centre due to WY budget cuts in 2002. The 2001 SFM Plan included a goal to maintain the Centre. Members of the WIWAG, and other groups and citizens, have expressed their concern about the negative impacts of this relatively minor and shortsighted cost saving to the company.

Objective: A communications plan is developed and implemented that identifies both WY and advisory group education / awareness activities

Acceptable Variance: 2003

Forecast: N/A

Previous (2001) SFM Plan: This is a new indicator

Performance:

The Integrated Communication Plan for WIT and WIWAG was developed, and is now posted onto the WIWAG website; <http://www.wiwag.org>

As of the February 2003 meeting, Weyerhaeuser committed to the TFL 44 Recreation & Logging Road Guide and community events, but was not sure about representation on community organizations or a school program.

Three public lectures were held during 2002, they are as follows;

- Biodiversity: Beauty and the Beast in Forestry – June 5
- Non-timber Forest Products and Sustainable Forest Management – June 19
- Log Exports – November 26

The implementation of the Communications Plan is ongoing.

Data Protocol:

Responsibility: EMS / Planning Forester

Reporting:

Source:

Notes:

Indicator 57: [FN] Education and training program

Discussion:

Objective: In conjunction with First Nations, design, implement, and monitor a training program to familiarize employees with cultural and other issues and company policies and obligations related to First Nations.

Acceptable Variance: 2003

Forecast: All employees

Previous (2001) SFM Plan: This is a new indicator, previously reported (in part) as Indicator # 54

Performance:

Year	Newsletter Articles)	Information emails (2)	Training Programs
2002	0 (1)	22	1 (3)
2001	3	8	0
2000	no data		
1999	no data		

- (1) newsletter cancelled
- (2) hourly, staff and contractors are kept informed of topical information
- (3) First Nations training was incorporated into EMS training, 517 Weyerhaeuser employees and contractors participated.

Data Protocol:

Responsibility: First Nations Liaison

Reporting:

Source:

Notes:

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
1. Conservation of biological diversity						
1.1 Ecosystem Diversity 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.	V 1. Variety & patterns of ecosystem types at landscape level	G 1. Maintain representative ecosystems across the landscape	I 1: Percent of commercial tree species in the Defined Forest Area (DFA) compared to historic baseline	Move toward historic baseline for all commercial tree species, within $\pm 8\%$ of the total	$\pm 15\%$	$\pm 10\%$
			I 2: Percent of the productive DFA that has >30% of area in 0-20 year age class in a given landscape unit	Less than 2% of the total productive area	$\pm 4\%$	Zero
			I 3: Aspatial modeling of old seral stages [old growth] at the landscape and variant level.	Provide aspatial modeling of old seral stages at the landscape and variant level, for 300 years in 10 year increments (benchmark).	Identification of spatial modeling software	Complete in 2003
			I 4: Number of units (as defined below) where inadequate old growth (as defined below) exists: A unit is: Variant within a landscape unit within the DFA that is greater than 250 Hectares Inadequate is defined as: the provincial guidelines	Do not increase the number of units where inadequate old growth exists	Two units increase	Zero increase
			I 5: Number of opportunities for WIWAG to participate in the West Island Timberlands (WIT) Old Growth Management Area (OGMA) planning process	Invitations are extended to WIWAG for 100% of Landscape Unit planning meetings.	25%	
		G 2. Harvest activities reflect natural landscape patterns	I 6: Percent of area harvested using Variable Retention (VR)	Year 2003-2005: 80% VR by area	$\pm 15\%$	90%

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
			I 4: Number of units (as defined below) where inadequate old growth (as defined below) exists: A unit is: Variant within a landscape unit within the DFA that is greater than 250 Hectares Inadequate is defined as: the provincial guidelines	Do not increase the number of units where inadequate old growth exists		
	V 2. Connectivity & fragmentation	G 3. Forest connectivity is maintained (in order to protect genetic & species migration & relationships throughout the landscape unit)	I 7: FENs	Maintain the FEN in each LU until such time as the LU planning process has identified OGMA's	Zero	
	V 3. Stand level diversity	G 4. Structural diversity is maintained at the stand level	I 8: Stand level retention in all cutblocks as percent of total cutblock area	≥ 15% in 2003-2005	10% lower limit	30%
1.2 Species Diversity Species diversity is conserved if all native species found on the DFA prosper through time.	V 4. At-risk species	G 5. At-risk species are identified and their habitat needs are maintained	I 9: Number of at-risk species in the DFA for which management programs exist as identified in the FDP	Support habitat management programs in co-operation with regulatory agencies and others	-Two	N/A
		G 6. Populations of species are not put at risk as a result of forest management activities	I 10: Number of identified species at-risk in the DFA	Zero increase in at-risk status attributable to management activities.	Zero	Zero
			I 11: Sensitive Ecosystem Inventory (SEI)	Incorporate the SEI into the planning process	Zero	N/A

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
	V 5. Identified species of special interest	G 7. Identified species of special interest & localized populations are inventoried and strategies for their habitat needs are in effect	I 12: Existence of a habitat management program for identified species of special interest (includes a list)	Support habitat management programs in co-operation with regulatory agencies and others	Zero	N/A
1.3 Genetic Diversity Genetic diversity is conserved if the variation of genes within species is maintained.	THIS IS MANAGED THROUGH 1.2 AND 1.1 VALUES & GOALS.					
2. Maintenance & enhancement of forest ecosystem condition & productivity						
2.1 Incidence of Disturbance and Stress (Biotic and Abiotic) 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.	V 6. Human-induced disturbance & stress	G 8. Minimize impacts on forest health due to human-induced disturbance & stress	I 13: Annual percent of opening areas in access structures	≤ 7% of opening areas in access structures	+1%	5%
			I 14: Operationally-caused fire damage by area	Zero	+10 hectares	5 hectares
			I 15: Area harvested as percent of the total productive forest area	< 1% with an upper limit of 1.5%	± 0.5%	1%
			I 16: Area harvested as % of total productive forest area in each Landscape Unit for last 5 years for those areas greater than 10,000 Hectares	Establish baseline and trends in order to identify areas of high impact.		
			I 17: Area of operationally-induced windthrow	< 5% harvest area	+5%	2%
			I 18: Area of slides originating in harvested areas or roads	< 10 Hectares	< 20 Hectares	2.0 hectares

Location: Environmental Management System, SFM, 2003, [sfm_plan_2003-05_appIV_goals_indicators_objectives_table.doc](#)

Revised: July 11, 2003

Page 3 of 15

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Check the Weyerhaeuser, WIT Environmental Management System webpage for the most up to date version.

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
		G 9 Human-induced disturbance & stress is rehabilitated promptly	I 19: Area out of conformance with Free-to-Grow objectives	Identify and reduce the non-conformance area to below 50 hectares	100 hectares	Zero
2.2 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	V 7. Ecosystem recovery from disturbance & stress	G 10. Forest management activities do not compromise the ability of the ecosystem to recover SEE goals 12 & 13 also	I 19: Area out of conformance with Free-to-Grow objectives	Identify and reduce the non-conformance area to below 50 hectares	100 hectares	Zero
			I 20: Equivalent years of Not Sufficiently Reforested (NSR) (as 5-year rolling average)	Maintain NSR equivalency at < 3 years harvest area	Zero	1.5 years
			I 21: Area out of conformance with regeneration delay obligations	Less than 20 Hectares non-conformance annually with regeneration delay in the DFA	< 40 Hectares non-conformance annually	Zero
			I 8: Stand level retention in all cutblocks as percent of total cutblock area	Average ≥ 15% in-stand retention in 2000 (focusing on riparian areas, structure, windfirmness, distribution and key ecological attributes)	10% lower limit	30%

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
3. Conservation of soil & water resources						
3.1 Physical Environments Physical environments are conserved if permanent loss of forest area to other uses or factors is minimized & rare physical environments are protected	V 8. Forested Land	G 11. There is no significant conversion of forested land to other uses without due public process	I 22: % productive forest area in the DFA converted to non-forest use	Limit conversion to non-forest use to < .001% per year	< .0027 per year	Stable
	V 9. Permanent access structures	G 12. Access structures are built and maintained for long term uses to support forest maintenance/silviculture, fire protection, recreation while also protecting the soil resource	I 15: Annual percent of opening areas in access structures	≤ 7% of opening areas in access structures	+1%	5%
	V 10. Rare, endangered or under represented features	G 13. Rare, endangered or otherwise significant features are identified and their important qualities are protected	I 23: The number of rare endangered or otherwise significant features destroyed by harvest activity	Zero rare endangered or otherwise significant features destroyed by harvest activity	Zero	Zero

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
3.2 Soil Resources Soil resources are conserved if the ability of soils to sustain forest productivity is maintained within characteristic ranges of variation	V 11. Soil quality	G 14. Natural levels of soil productivity and stability are sustained	I 24: Openings harvested in which soil disturbance exceeds pre-harvest level as determined by a post-harvest assessment	No more than 5% of any opening OR No more than 1 opening???	1 opening	Zero
	V 12. Soil cover	G 15. Erosion & loss of soil cover are minimized	I 18: Area of slides originating in harvested areas or roads	Zero slides originating in harvested areas or roads (post 1995 development)	5 hectares	2 hectares
			I 15: Annual percent of opening areas in access structures	≤ 7% of opening areas in access structures	+1%	5%
3.3 Water Resources Water resources are conserved if water quality and quantity is maintained	V 13. Stream water quality	G 16. Natural historic levels of water quality are maintained (Calcium chloride is concern)	To Be Determined	Bring in Shelley Higman to speak to this and develop indicator.		
	V 14. Riparian areas (fresh and marine)	G 17. Riparian areas are managed to protect water quality, water flow & the habitat needs of land & aquatic species	I 25: Percent of stream length of S4 fish streams buffered ≥ 15 meters in areas harvested annually	S4 fish ≥ 85%		S4 fish ≥ 85%
			I 26: Percent of stream length of S4 non-fish streams buffered ≥ 15 meters in areas harvested annually	S4 non-fish ≥ 39%	S4 non-fish ≥ 10%	S4 non-fish ≥ 39%
			I 27: Percent of stream length of S5 streams buffered ≥ 15 meters in areas harvested annually	S5 ≥ 60%	S5 ≥ 15%	S5 ≥ 60%
			I 28: Percent of S6 streams with a >15 meter buffer in areas harvested annually	S6 ≥ 39%	-10%	S6 ≥ 39%

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
			I 29: Percent of openings harvested where reserve zones (as per table attached) are not maintained (stream crossings are excluded)	Full reserve zones as per table attached %	2%	100%
	V 15. Forest hydrologic regimes (including water quantity)	G 18. Natural hydrological regimes are perpetuated, & damaged watersheds (water quality or riparian values) are restored	I 30: WY will provide ranking and trend line for watersheds in the DFA.	To develop a new indicator that measures watershed health	N/A	N/A
4. Forest ecosystem contributions to global ecological cycles						
4.1 Recycling Processes The processes that are responsible for recycling water, carbon, nitrogen and other elements are maintained	V16. Ecological cycles	G19. Forest management activities are conducted in ways that maintain ecological cycles	I 31: Change in area of water bodies	Maintain current area of water bodies	Zero change	Stable
			I 4: Number of units (as defined below) where inadequate old growth (as defined below) exists: A unit is: Variant within a landscape unit within the DFA that is greater than 250 Hectares Inadequate is defined as: the provincial guidelines	Do not increase the number of units where inadequate old growth exists	2 units increase	Zero increase
	V17. Carbon budget	G20. Enhance the long term uptake & storage of carbon	I 32: Indicator To Be Determined based on Advisory education/information gathering	Increase the Advisory understanding of carbon budget factors	Completed in 2004	N/A

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
4.2 Utilization and Rejuvenation Utilization and rejuvenation are balanced and sustained	THE VALUES & GOALS OF THIS SECTION ARE IN 5.1					
4.3 Deforestation and Conversion Forest lands are protected from sustained deforestation or conversion to other uses	THE VALUES & GOALS OF THIS SECTION ARE IN 3.1					
5. Multiple benefits to society						
5.1 Extraction Rates Extraction rates are within the long term productive capacity of the resource base	V 18. Non-timber forest products (NTFP)	G 21. Forest management practices continue to provide opportunities for NTFP harvesting	I 33: WY completes an information session with Royal Rhodes University NTFP experts	WIWAG gets information on NTFP's and forest management practices.	Meeting is held	N/A
		G 22. Variety of habitats support sustainable production of NTFPs (e.g., mushrooms, berries, floral products, medicinal plants, etc)	I 4: Number of units (as defined below) where inadequate old growth (as defined below) exists: A unit is: Variant within a landscape unit within the DFA that is greater than 250 Hectares Inadequate is defined as: the provincial guidelines	Do not increase the number of units where inadequate old growth exists.	2 unit increase	Zero increase

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
	V 19. Timber harvest	G 23. Maintain harvest at LTHL as it applies to the harvestable land area	I 34: Annual harvest (5 year average) as percent of LTHL	+ 10% of LTHL for 2003-2005	±15% of LTHL	LTHL
5.2 Investment and Operating Climate Resource businesses exist within a fair & competitive investment & operating climate	SEE ELEMENT 6.1 FOR RELATED GOALS & MEASURES					
5.3 Goods and Services Forests provide a mix of market & non-market goods & services	V 20. Parks & Ecological Reserves	G 24. Management planning considers the location and characteristics of protected areas with respect to connectivity, fragmentation, representative ecosystems, etc	I 35: Percent of harvesting adjacent to parks that is VR	80% in 2003 - 2005	-10%	95%
			I 36: Percent of park perimeter harvested within previous 5 years	7% by 2005	< 9.5% within three years	<5%
	V 21. Recreation & tourism	G 25. Weyerhaeuser is respectful of the high value of tourism and recreation and other user activities within the DFA	I 37: Percent of roads from recreation road inventory that are maintained.	Maintain 90% access to major recreation areas as identified by the road inventory.	- 5%	100%
			I 38: Percent of DFA covered by a recreational inventory	Maintain existing inventory of recreational values and incorporate into planning process	95% of DFA inventory	100%
			I 39: Number of hectares in which visual condition fails to meet Visual Quality Objectives	Reduce the number of hectares from previous reports	+5%	Zero

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variations	Forecast
6. Accepting society's responsibility for sustainable development						
6.1 Social Values Forests are managed in ways that reflect social values & are responsive to changes in those values	V22. Community Stability	G 26. Contribute to and support local economic benefits	I 40: \$ of WIT wages, salaries, contracts compared to previous years (revised)	Maintain or increase total \$ amount of WIT contracts, wages & salaries	-10%	2% increase per year
			I 41: The portion of employment spending in I41 above that is within the AC Region	Benchmark total regional employment spending related to WIT	N/A	N/A
			I 42: Employee & contractor (to include small bus, logging & silviculture contractors) jobs/cubic meter of fibre logged within the DFA 1 FTE = 1,600 hrs/yr	Benchmark the ratio of jobs to cubic meters harvested or processed.	N/A	N/A
			I 43: The portion of jobs in I42 that are within the AC Region	Benchmark the portion of all harvesting & processing jobs that are within the AC Region	N/A	N/A
			I 44: Number of local (AC Region) processing jobs (including Coulson & Norske) that are associated with fibre from the DFA 1 FTE = 1,600 hrs/yr	Benchmark the processing jobs within the AC Region that result from DFA fibre	N/A	N/A
			I 45: Total percent of Major Contractor non-wage spending within the AC Region as a % of total non-wage expenditures Major Contractors defined as Mars, McKay, Hayes, Newco & Can. Aircrane	Benchmark percent of Major Contractor non-wage spending within the region as a % of total non-wage expenditures (supplies, equipment, etc.)	N/A	N/A

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
			I 46: Total % of WY non-wage spending that is within the AC Region.	To benchmark WY non-wage spending within the AC Region.	N/A	N/A
		G 27. Local WY Divisions and their major contractors have policies or procedures in place that give preference to local hiring and contracting.	Weyerhaeuser is unable to respond to this goal.		N/A	N/A
			I 47: Number of all contracts let & their subcontractors & the portion of those that live in the AC Region	To benchmark the portion of all contracts & their subcontractors that live in the AC Region.	N/A	N/A
		G28. Community stability is enhanced by a balanced annual extraction rate	I 48: Annual harvest level compared to last 5 years	Annual cut is within -15%/+25% of previous 5 years	-20%/+30%	± 5%
		G29. Local (within the A-C Regional District), manufacturing capacity is increased.	I 49: Conversations with the Advisory around conversion of 2 nd growth fibre locally have taken place	A strategy is developed to support 2 nd growth mills by 2004.	By 2005	N/A
			I 50: Annual harvest compared to local log consumption that is provided by WY	Maintain or increase ratio of logs consumed locally by WY operations VS. WIT harvest	-10%	Even Flow
	V 24. Timber companies	G 30. The company and its major contractors re-invests a portion of their profits into operation upgrades, etc.	I 51: Total \$ spent on capitol improvements in WY mill facilities	Benchmark \$ spent on capitol improvements in WY mill facilities	N/A	N/A

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
6.2 Aboriginal and Treaty Rights- Duly established Aboriginal & treaty rights are respected	V 25. Aboriginal Rights See section 6.1 for additional goals related to this value	G 31. Support First Nations' ability to fully exercise their aboriginal rights through the protection and provision of access to natural and cultural heritage resources	I 52: Number of bands who have requested a CHR contract versus the number who have one.	100% of Bands who want one have a Cultural Heritage Resource contract with WY.	20%	100%
			I 53: Percent of surveys conducted out of the number requested	90% of requested surveys are conducted	-10%	100%
			I 54: First Nations information sharing and referral programs	Maintain 5 programs and increase based on those who are willing.	Zero	100%
			I 55: Percent of blocks where agreement is reached around the management of CHR	Achieve 100% FN consent on management and/or protection of identified CHR	-15%	100%
		G 32. Provide opportunities for revenue sharing & joint ventures for First Nations.	WY is unable to respond to this goal.		N/A	N/A
		G 33. Provide opportunities for harvest and other forest management activities for First Nations.	I 56: Number of FN signing contracts	NEW: Maintain or increase the number of FN contracts	Less one	???
			I 57: Contract \$ paid to all FN Contractors compared to previous years	Maintain or increase total contract \$ paid to FN	-10%	2% increase

Appendix IV
Goals, Indicators & Objectives Table

Critical Elements	Values	Goals	Indicators	Objectives	Variances	Forecast
6.4 The decision making process is developed with input from directly affected, local, interested parties	SEE ELEMENT 6.5 FOR RELATED GOALS & MEASURES					
6.5 Decisions are made as a result of informed, inclusive & fair consultation with people who have an interest in forest management or are affected by forest management decisions	V 26. Decision-making process	G 34. The input of interested and affected parties is valued and every effort is made to accommodate reasonable requests	I 58: Percent of changes to operational plans as a result of responding to public comments	100% commitment to incorporating reasonable concerns into the planning process	-10%	100%
6.6 Collective understanding of forest ecosystems, values & management is increased & used in the decision-making process.	V 27. Education	G 35. Weyerhaeuser supports an educational/communications program that promotes and explains ecosystem values and management and processing activities	I 59: The number of communications activities implemented compared to the communications plan list	2003 50% of activities implemented 2004 75% “ “ 2005 100% “ “	± 10% of activities	100%
			I 60: Percent of planners oriented to red/blue list species annually	All planners complete red/blue list species awareness and location orientation within previous 24 months.	- 50%	All
			I 61: Number of programs or presentations that target youth for forest awareness/information	Two strategies that target youth awareness & participation in forest management are developed.	Zero	100%
			I 62: Percent of workers that are trained/year in the FN Cultural Awareness Program	Ensure that 70% of workers are trained each year	-10%	100% of workers

	2003-05	2002	2001-1999
Percent of commercial tree species in the Defined Forest Area (DFA) compared to historic baseline	1	1	2
Percent of the productive DFA that has >30% of area in 0-20 year age class in a given landscape unit	2	2	20/27
Aspatial modeling of old seral stages [old growth] at the landscape and variant level.	3	3	1/20
Number of units (as defined below) where inadequate old growth (as defined below) exists.	4	3	
Number of opportunities for WIWAG to participate in the West Island Timberlands (WIT) Old Growth Management Area (OGMA) planning process.	5		
Percent of area harvested using Variable Retention (VR)	6	5	7
Forest Ecosystem Network	7	6	
Stand level retention in all cutblocks as percent of total cutblock area	8	7	6
Number of at-risk species in the DFA for which management programs exist as identified in the FDP.	9	8/9	8
Number of identified species at-risk in the DFA	10	9	9
Sensitive Ecosystem Inventory	11		
Existence of a habitat management program for identified species of special interest (includes a list)	12	10	10
Annual percent of opening areas in permanent access structures	13	11	15
Operationally-caused fire damage by area	14	12	16
Area harvested as percent of the total productive forest area	15	13	17
Area harvested as percent of the total productive forest area in each Landscape unit for last 5 years for those areas greater than 10,000 hectares.	16	13	
Area of operationally-related windthrow	17	14	18
Area of slides originating in harvested areas or roads	18	15	19
Area out of conformance with free growing objectives	19	16	29
Equivalent years of Not Sufficiently Reforested (NSR) as 5-year rolling average	20	19	40
Area out of conformance with regeneration delay obligations	21		
% productive forest area in the DFA converted to non-forest use.	22		
The number of rare, endangered or otherwise significant features destroyed by harvest activity.	23	20	
Openings harvested in which soil disturbance exceeds pre-harvest level as determined by a post harvest assessment.	24	21	35
Percent of stream length of S4 fish streams buffered \geq 15 meters in areas harvested annually.	25	23	21
Percent of stream length of S4 non-fish streams buffered \geq 15 meters in areas harvested annually.	26	23	21
Percent of stream length of S5 streams buffered \geq 15 meters in areas harvested annually.	27	23	21
Percent of S6 streams with a \geq 15 meter buffer in areas harvested annually	28	24	21
Percent of openings harvested where reserve zones (as per table attached) are not maintained (steam crossings are excluded)	29		
Provide ranking and trend line for watersheds in the DFA	30		
Change in area of water bodies	31	27	39

Location: EMS/SFM/2003/sfm_plan_2003-05_appV_indicators_over_time.xls

Revised: July 23, 2003

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Check the WIT, EMS Website for the most up to date version.

	2003-05	2002	2001-1999
Enhance the long term uptake and storage of carbon	32	28	
Forest management practices continue to provide opportunities for NTFP harvesting	33		
Annual harvest (5 year average) as percent of LTHL	34	30	36
Percent of harvesting adjacent to protected areas that is VR	35	32	46
Percent of park perimeter harvested within previous 5 years.	36		
Percent of roads from recreation road inventory that are maintained.	37	34	31/52
Percent of DFA covered by a recreational inventory	38	35	43
Number of hectares in which visual condition fails to meet Visual Quality Objectives	39	36	53
\$ of WIT wages, salaries, contracts compared to previous years	40	37	49
The portion of employment spending in Indicator 41 that is within the Alberni Clayoquot Region	41		
Employee and contractor (to include small bus, logging and silviculture contractors) jobs/cubic meter of fibre logged within the DFA.	42		
The portion of jobs in Indicator 42 that are within the Alberni Clayoquot Region	43		
Number of local (Alberni Clayoquot Region) processing jobs (including Coulson and Norske) that are associated with fibre from the DFA	44		
Total percent of Major Contractor non-wage spending within the Alberni Clayoquot Region as a % of total non-wage expenditures.	45		
Total % of Weyerhaeuser non-wage spending that is within the Alberni Clayoquot Region.	46	42	
Number of all contracts let and their subcontractors and the portion of those that live in the Alberni Clayoquot Region	47		
Annual harvest level compared to last 5 years	48	41	45
Conversations with the Advisory around conversion of 2nd growth fibre locally have taken place.	49		
Annual harvest compared to local log consumption that is provided by Weyerhaeuser.	50	43	
Total \$ spent on capitol improvements in Weyerhaeuser mill facilities.	51		
Number of First Nations that have requested a Cultural Heritage Resource contract vs. the number who have one	52	50	
% of surveys conducted out of the number requested	53	49	
First Nations information sharing and referrals program	54	51	60
Percent of blocks where agreement is reached around the management of Cultural Heritage Resource contracts.	55	53	58
Number of First Nations signing contracts.	56		
Contract \$ paid to all First Nations contractors compared to previous years.	57		
Percent of changes to operational plans as a result of responding to public comments.	58	54	56
The number of communication activities implemented compared to the communications plan list.	59		
Percent of planners oriented to red/blue list species annually	60	4	
Number of programs or presentations that target youth for forest awareness/information.	61		
Percent of workers that are trained/year in the First Nations Cultural Awareness Program.	62		

Location: EMS/SFM/2003/sfm_plan_2003-05_appV_indicators_over_time.xls

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